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# **Closure Report**

Marathon AGI State #2H Eddy County, New Mexico API ID # 30-015-34114 Incident # nkmw1102555534 / 2RP-582

# **Prepared For:**

EOG Resources 104 S. 4<sup>th</sup> Street Artesia, NM 88210

# **Prepared By:**

Talon/LPE 408 W. Texas Avenue Artesia, New Mexico 88210

December, 2022



#### **NMOCD**

506 W. Texas Ave Artesia, NM 88210

Subject: Closure Report

Marathon AGI State #2H Eddy County, New Mexico

API # 30-015-34114

Incident # nkmw1102555534 / 2RP-582

To Whom It May Concern,

EOG Resources contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced location. The incident description, soil sampling results, remedial actions and closure request are presented herein.

#### Site Information

The Marathon AGI State #2H is located approximately 12 miles west of Artesia, New Mexico. The legal location for this release is Unit Letter D, Section 33, Township 17 South and Range 24 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.79729 and -104.59979. A Site Location Map is presented in Appendix I.

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Services, the soil in this area is comprised of Reagan-Upton, 0 to 9 percent slopes. The referenced soil data is presented in Appendix II. Per the New Mexico Bureau of Geology and Mineral Resources, the local geology consists of the Piedmont alluvial deposits, Holocene to lower Pleistocene in age.



#### **Ground Water and Site Characterization**

The New Mexico Office of the State Engineer Database indicates the nearest reported depth to groundwater is 196 feet below ground surface (bgs). Further research of the Bureau of Land Management Karst data indicates that this site is situated within a low potential Karst area.

Approximate Dept	th to Groundwater	196 Feet/bgs
∐Yes⊠No	Within 300 feet of any continuously flowing watercoany other significant watercourse	urse or
☐Yes⊠No	Within 200 feet of any lakebed, sinkhole or a playa l	ake
□Yes ⊠No	Within 300 feet from an occupied permanent school, hospital, institution or church	residence,
□Yes ⊠No	Within 500 feet of a spring or a private, dome well used by less than five households for domestic watering purposes	
∐Yes ⊠No	Within 1000 feet of any freshwater well or spi	ring
□Yes ⊠No	Within incorporated municipal boundaries or municipal freshwater well field covered under a mun ordinance adopted pursuant to Section 3-2703 NMS	nicipal
∐Yes ⊠No	Within 300 feet of a wetland	
□Yes ⊠No	Within the area overlying a subsurface mine	
□Yes ⊠No	Within an unstable area	
□Yes ⊠No	Within a 100-year floodplain	



With no depth to water source available that meets New Mexico Oil Conservation Division's (NMOCD) criteria, the responsible party must therefore adhere to the cleanup criteria for this site is as follows; groundwater is less than 50 feet bgs, Table I, NMOCD Rule 19.15.29 NMAC.

Table I Closure Criteria for Soils Impacted by a Release								
Depth below horizontal extents of release to ground water less than 10,000 mg/l TDS	Constituent	Method	Limit					
≤ 50 feet	Total Chlorides	EPA 300.0 or SM4500 CI B	600 mg/kg					
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg					
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg					
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg					

#### **Incident Description**

During routine site clean-up activities and decommissioning of the facility, EOG personnel noted a historical spill had been reported on January 18, 2011 and will need to be addressed before final abandonment of site can be achieved. The C-141 submitted to the NMOCD, incident number nkmw1102555534, stated that an old production tank that had a small pin hole leak on the bottom releasing approximately 11 bbls of produced water with zero bbls recovered. The site map is presented in Appendix I.

#### Site Assessment

On October 31, 2022, Talon mobilized personnel to the site to conduct an initial site assessment. The impacted area was photographed, sampled utilizing a hand auger, and mapped. All soil samples were properly packaged, preserved, and transported to Eurofins laboratories via chain of custody for analysis of Total Chlorides (Method SM4500Cl-B), TPH (EPA Method 8015M), and volatile organics (BTEX, EPA Method 8021B). Sample locations are shown on the attached Figure 2 (Appendix I) and the results of our sampling event are presented on the following data table.



**Table 1** 10/31/2022 Soil sample Laboratory Results

Sample ID	Sample Date	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Chlorides mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC		50 mg/kg	10 mg/kg	DRO + GRO + MRO combined = 100 mg/kg			100 mg/kg	600 mg/kg	
S-1	10/31/2022	0-6" R	ND	ND	ND	ND	ND	ı	7700
S-2	10/31/2022	0-6" R	ND	ND	ND	ND	ND	-	4960
S-3	10/31/2022	0-6" R	ND	ND	ND	ND	ND	ı	224
S-4	10/31/2022	0-6" R	ND	ND	ND	ND	ND	1	48
S-5	10/31/2022	0-6" R	ND	ND	ND	ND	ND	-	ND
S-6	10/31/2022	0-6" R	ND	ND	ND	ND	ND	1	ND
S-7	10/31/2022	0-6" R	ND	ND	ND	ND	ND	-	16
S-8	10/31/2022	0-6" R	ND	ND	ND	ND	ND	1	ND
		ND =	Analyte	Not Detect	ed, R = R	Rock Refu	usal		

On November 9, 2022, based on the laboratory results from the initial site assessment and upon client authorization, Talon personnel and equipment mobilized to the site to continue delineation of the impacted area with backhoe. Test then trenches were advanced at the locations shown on figure 1, site assessment map. All soil samples were properly collected and preserved for transport to Eurofins Laboratories for analysis. The soil sample results from the laboratory are tabulated below. Grab sample locations are illustrated on Figure 3 (Appendix I).



**Table 2** 11/09/2022 Soil sample Laboratory Results

Sample ID	Sample Date	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Chlorides mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC		50 mg/kg	10 mg/kg	DRO + GRO + MRO combined = 100 mg/kg			100 mg/kg	600 mg/kg	
TT-1	11/9/2022	2'	ND	ND	ND	26	ND	26	145
TT-1	11/9/2022	4'	ND	ND	ND	23	ND	23	216
TT-2	11/9/2022	2'	ND	ND	ND	ND	ND	ı	224
TT-2	11/9/2022	4'	ND	ND	16.8	ND	ND	16.8	2150
TT-2	11/9/2022	8'	ND	ND	ND	20.1	ND	20.1	1260
TT-2	11/9/2022	10'	ND	ND	23.7	ND	ND	23.7	1680
TT-3	11/9/2022	2'	ND	ND	ND	37.8	ND	37.8	34.6
TT-3	11/9/2022	4'	ND	ND	ND	33.4	ND	33.4	42.9
TT-4	11/9/2022	2'	ND	ND	ND	22	ND	22	ND
TT-4	11/9/2022	4'	ND	ND	ND	21.8	ND	21.8	35.7
		ND:	= Analyte	Not Detec	ted, TT=	Test Tre	nch		

On November 14, 2022, Talon returned to the site to continue excavations and sampling activities. All soil samples were properly collected and preserved for transport to Eurofins Laboratories for analysis. The soil sample results from the laboratory are tabulated below. Grab sample locations are illustrated on Figure 1 (Appendix I).

**Table 3** 11/14/2022 Soil sample Laboratory Results

Sample ID	Sample Date	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Chlorides mg/kg
	Table 1 Clo a 19.15.29 NN		50 mg/kg	10 mg/kg	_	+ GRO + led = 100	_	100 mg/kg	600 mg/kg
TT-2 /S-9	11/14/2022	12'	ND	ND	ND	26	ND	26	771
TT-2 /S-9	11/14/2022	16'	ND	ND	ND	23	ND	23	641
TT-2 /S-9	11/14/2022	17'	ND	ND	ND	ND	ND	ND	628
	ND = Analyte Not Detected, TT = Test Trench, TT-2 reclassified as S-9								



Returning to the site November 17, 2022 Talon personnel excavated depth and sidewalls to find the edge of the impacted soils. All soil samples retrieved on a composite basis, properly contained, preserved and transported to Eurofins Environment Testing for confirmation. The results are recapped below. The sample positions are illustrated on Figure 2 (Appendix I).

**Table 4** 11/17/2022 Confirmation sample Laboratory Results

Sample ID	Sample Date	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Chlorides mg/kg
	D Table 1 Cl		50	10		+ GRO +	_	100	600
Criter	<u>ia 19.15.29 N</u>	MAC	mg/kg	mg/kg	combin	<u>red = 100</u>	mg/kg	mg/kg	mg/kg
C-1	11/17/2022	20'	ND	ND	ND	20.2	ND	20.2	906
SWW	11/17/2022	4'	ND	ND	21.6	ND	ND	21.6	265
SWN	11/17/2022	4'	ND	ND	23.1	ND	ND	23.1	1260
SWE	11/17/2022	4'	ND	ND	33.0	ND	ND	33.0	124
SWS	11/17/2022	4'	ND	ND	24.5	ND	ND	24.5	14.9
C-2	11/17/2022	0-6"	ND	ND	17.7	ND	ND	17.7	1080
	B A I 1 - I					<u> </u>	4: 014		A / 11

ND = Analyte Not Detected, R = Rock Refusal, C= Confirmation, SW = Side Wall

On December 12, 2022, following the receipt of analytical results, Talon returned to the site to continue remediation efforts. The excavation in the vicinity of sample location of C-1 was advanced to 22' bgs. The excavations at c-2 were advanced to 2' bgs. Sidewalls were advanced as need in order to obtain confirmation samples as in accordance with the NMOCD closure criteria.



**Table 5**12/7/2022 Confirmation sample Laboratory Results

Sample ID	Sample Date	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Chlorides mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC		50 mg/kg	10 mg/kg	DRO + GRO + MRO combined = 100 mg/kg			100 mg/kg	600 mg/kg	
C-1	12/07/2022	22'	ND	ND	41.1	ND	ND	41.1	201
SWN	12/14/2022	4'	ND	ND	ND	ND	ND	ND	80.6
C-2	12/07/2022	2"	ND	ND	26.7	ND	ND	26.7	38.9
SWN-1	12/07/2022	1'	ND	ND	38.9	ND	ND	38.9	210
SWE-1	12/07/2022	1'	ND	ND	40.6	ND	ND	40.6	317
SWS-1	12/07/2022	1'	ND	ND	31.8	ND	ND	31.8	277
SWW-1	12/07/2022	1'	ND	ND	32.5	ND	ND	32.5	329
N	D = Analyte	Not Dete	cted, R =	Rock Refu	usal, C=	Confirma	ation, SW	/ = Side \	Wall

### **Remedial Actions**

- The impacted area in the vicinity of confirmation sample C-1was horizontally and vertically delineated utilizing a backhoe to a depth of 22' bgs. based on the lab results from C-1.
- The impacted areas around C-2 were excavated to depths of 2' bgs and sidewall samples were collected at depth of 1' bgs Lab data shows the area was remediated in accordance with NMOCD Table I criteria.
- Background and sidewall samples were obtained in order to confirm horizontal delineation and has been achieved.
- All contaminated soil was transported to Lea Land, LLC, a NMOCD approved solid waste disposal facility.
- The excavated areas were backfilled with clean caliche, machine compacted, and restored to grade.



### Closure

Based on this site characterization, remedial actions completed, and analytical results, we request that no further actions be required and that closure with regard to this incident be granted.

Should you have any questions or if further information is required, please do not hesitate to contact our office at 575-746-8768.

Respectfully submitted,

Chad Honolo

Talon/LPE

Chad Hensley

**Environmental Project Manager** 

Attachments:

Appendix I Site Plans

Appendix II Groundwater Data, Soil Survey
Appendix III Photographic Documentation

Appendix IV Laboratory Data



# **Appendix I**

Site Maps



TALON

Drafted: 11/29/2022 1 in = 30 ft Drafted By: JAI EOG Resources Marathon AGI State 2H
Eddy County, NM
Figure 1
Site Assessment Map



TALON

1 in = 30 ft

Eddy County, NM Figure 2 Confirmation Map Drafted By: JAI



# **Appendix II**

Groundwater Data, Soil Survey, & Wetlands Map



# New Mexico Office of the State Engineer

# Water Column/Average Depth to Water

(A CLW#### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.) (R=POD has been replaced, O=orphaned, C=the file is

closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

		POD													
		Sub-			Q									V	Vater
POD Number	Code	basin	County	64	16	4	Sec	Tws	Rng	X	Y	DistanceDe	othWellDep	othWater Co	olumn
<u>RA 02674</u>		RA	XX	1	1	3	04	18S	24E	537345	3626582*	2306	228		
RA 10992 POD1		RA	ED		2	3	30	17S	24E	534648	3629660	2927	900		
<u>RA 07252</u>		RA	ED	1	1	1	26	17S	24E	540545	3630629*	3534	370	290	80
<u>RA 07104</u>		RA	ED		3	3	23	17S	24E	540645	3630932*	3776	336	200	136
<u>RA 07163</u>		RA	СН		2	2	25	17S	23E	533778	3630463*	4016	55	40	15
<u>RA 08145</u>		RA	ED	1	1	4	08	18S	24E	536547	3624972*	4020	500		
<u>RA 04728</u>		RA	ED			3	23	17S	24E	540846	3631133*	4055	385	368	17
<u>RA 04247</u>		RA	СН			1	36	17S	23E	532794	3628649*	4682	555		
<u>RA 05474</u>		RA	ED	1	1	2	16	18S	24E	538166	3624180*	4756	600	516	84
<u>RA 08780</u>		RA	ED	4	3	3	14	17S	24E	540733	3632441*	4825	425	320	105
RA 10980 POD1		RA	ED	3	4	2	18	17S	24E	535275	3633187 🌕	4830	600		
RA 10721		RA	ED	1	3	2	23	17S	24E	541346	3631843*	4874	534	394	140
<u>RA 07846</u>		RA	ED			1	15	17S	24E	539213	3633533*	4963	540	455	85
RA 07614		RA	ED	3	1	2	23	17S	24E	541344	3632046*	4999	395	310	85

Average Depth to Water:

**321 feet** 

Minimum Depth:

40 feet

Maximum Depth:

516 feet

Record Count: 14

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

**Easting (X):** 537471 **Northing (Y):** 3628885 **Radius:** 5000

\*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.

10/26/22 8:27 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



# New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number** 

Q64 Q16 Q4 Sec Tws Rng

 $\mathbf{X}$ 

26 17S 24E

540545 3630629\*

**Driller License:** 

749

RA 07252

**Driller Company:** 

HUGHES, SAMUEL DALE

**Driller Name:** 

HUGHES, SAMUEL DALE

**Drill Finish Date:** 02/29/1984

Plug Date:

**Drill Start Date: Log File Date:** 

12/02/1983 03/06/1984

7.00

**PCW Rcv Date:** 

Shallow

Pipe Discharge Size:

Source: Estimated Yield: 1 GPM

**Pump Type: Casing Size:** 

Depth Well:

370 feet

Depth Water:

290 feet

Water Bearing Stratifications:

**Top Bottom Description** 

65

70 Sandstone/Gravel/Conglomerate

295

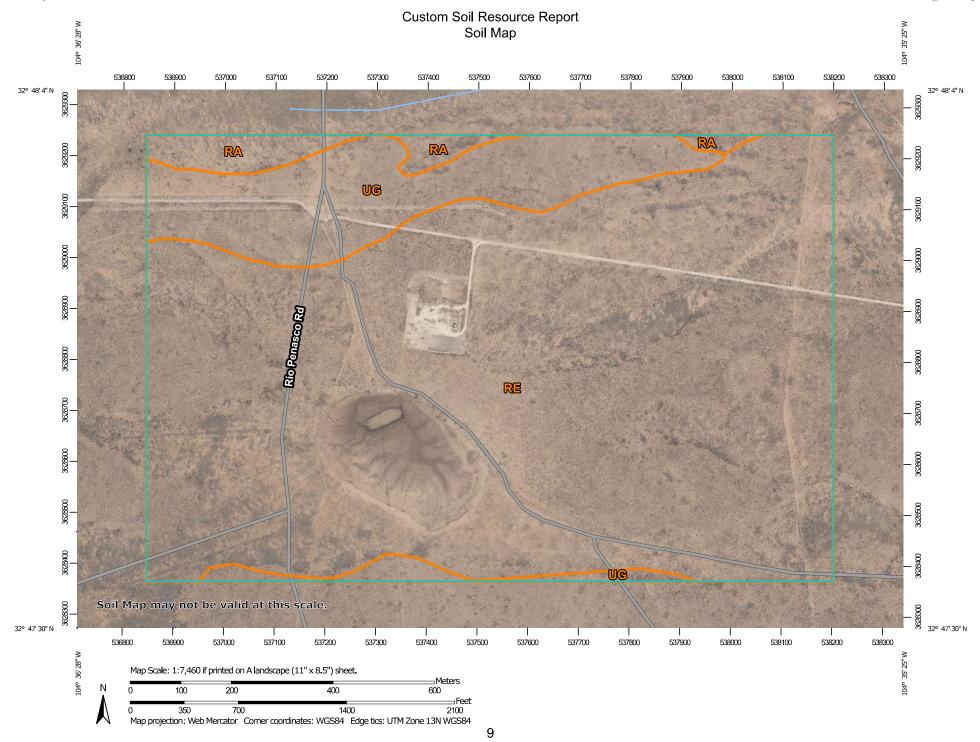
310 Other/Unknown

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, or suitability for any particular purpose of the data.

10/26/22 8:27 AM

POINT OF DIVERSION SUMMARY

<sup>\*</sup>UTM location was derived from PLSS - see Help



#### Custom Soil Resource Report

#### MAP LEGEND

#### Area of Interest (AOI)

Area of Interest (AOI)

#### Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

#### **Special Point Features**

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**Blowout** 

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area Stony Spot

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Very Stony Spot

0

Wet Spot Other

Δ

Special Line Features

#### **Water Features**

Streams and Canals

#### Transportation

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Rails

Interstate Highways

US Routes

Major Roads

 $\sim$ 

Local Roads

#### Background

Aerial Photography

#### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eddy Area, New Mexico Survey Area Data: Version 18, Sep 8, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 27, 2020—Feb 28, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

### **Eddy Area, New Mexico**

### RA—Reagan loam, 0 to 3 percent slopes

#### **Map Unit Setting**

National map unit symbol: 1w5c Elevation: 1,100 to 4,400 feet

Mean annual precipitation: 7 to 14 inches

Mean annual air temperature: 60 to 70 degrees F

Frost-free period: 200 to 240 days

Farmland classification: Farmland of statewide importance

#### **Map Unit Composition**

Reagan and similar soils: 98 percent *Minor components*: 2 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Reagan**

#### Setting

Landform: Fan remnants, alluvial fans Landform position (three-dimensional): Rise

Down-slope shape: Convex, linear

Across-slope shape: Linear

Parent material: Alluvium and/or eolian deposits

#### Typical profile

H1 - 0 to 8 inches: loam H2 - 8 to 60 inches: loam

#### Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high

(0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum content: 40 percent

Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

#### Interpretive groups

Land capability classification (irrigated): 2e Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: B

Ecological site: R070BC007NM - Loamy

Hydric soil rating: No

#### **Minor Components**

#### **Atoka**

Percent of map unit: 1 percent

Received by OCD: 12/27/2022 9:18:32 AM

#### Custom Soil Resource Report

Ecological site: R070BC007NM - Loamy

Hydric soil rating: No

#### Upton

Percent of map unit: 1 percent

Ecological site: R070BC025NM - Shallow

Hydric soil rating: No

### RE—Reagan-Upton association, 0 to 9 percent slopes

#### **Map Unit Setting**

National map unit symbol: 1w5d Elevation: 1,100 to 5,400 feet

Mean annual precipitation: 6 to 14 inches

Mean annual air temperature: 60 to 64 degrees F

Frost-free period: 180 to 240 days

Farmland classification: Farmland of statewide importance

#### **Map Unit Composition**

Reagan and similar soils: 70 percent Upton and similar soils: 25 percent Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Reagan**

#### Setting

Landform: Fan remnants, alluvial fans
Landform position (three-dimensional): Rise

Down-slope shape: Convex, linear

Across-slope shape: Linear

Parent material: Alluvium and/or eolian deposits

#### Typical profile

H1 - 0 to 8 inches: loam H2 - 8 to 60 inches: loam

#### Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high

(0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum content: 40 percent

Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

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# Interpretive groups

Land capability classification (irrigated): 2e Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: B

Ecological site: R042CY153NM - Loamy

Hydric soil rating: No

#### **Description of Upton**

#### Setting

Landform: Ridges, fans

Landform position (three-dimensional): Side slope, rise

Down-slope shape: Convex Across-slope shape: Convex

Parent material: Residuum weathered from limestone

#### Typical profile

H1 - 0 to 9 inches: gravelly loam H2 - 9 to 13 inches: gravelly loam H3 - 13 to 21 inches: cemented

H4 - 21 to 60 inches: very gravelly loam

#### Properties and qualities

Slope: 0 to 9 percent

Depth to restrictive feature: 7 to 20 inches to petrocalcic

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high

(0.01 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum content: 75 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: Very low (about 1.4 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: R042CY159NM - Shallow Loamy

Hydric soil rating: No

### **Minor Components**

#### Atoka

Percent of map unit: 3 percent

Ecological site: R070BC007NM - Loamy

Hydric soil rating: No

#### Pima

Percent of map unit: 2 percent

Ecological site: R070BC017NM - Bottomland

Hydric soil rating: No

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### UG—Upton gravelly loam, 0 to 9 percent slopes

#### **Map Unit Setting**

National map unit symbol: 1w64 Elevation: 1,100 to 4,400 feet

Mean annual precipitation: 7 to 15 inches

Mean annual air temperature: 60 to 70 degrees F

Frost-free period: 200 to 240 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

*Upton and similar soils:* 96 percent *Minor components:* 4 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Upton**

#### Setting

Landform: Ridges, fans

Landform position (three-dimensional): Side slope, rise

Down-slope shape: Convex Across-slope shape: Convex

Parent material: Residuum weathered from limestone

#### Typical profile

H1 - 0 to 9 inches: gravelly loam H2 - 9 to 13 inches: gravelly loam H3 - 13 to 21 inches: cemented H4 - 21 to 60 inches: very gravelly loam

#### Properties and qualities

Slope: 0 to 9 percent

Depth to restrictive feature: 7 to 20 inches to petrocalcic

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high

(0.01 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum content: 75 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: Very low (about 1.4 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

#### Custom Soil Resource Report

Ecological site: R070BC025NM - Shallow

Hydric soil rating: No

### **Minor Components**

#### Reagan

Percent of map unit: 1 percent

Ecological site: R070BC007NM - Loamy

Hydric soil rating: No

#### Atoka

Percent of map unit: 1 percent

Ecological site: R070BC007NM - Loamy

Hydric soil rating: No

#### Atoka

Percent of map unit: 1 percent

Ecological site: R070BC007NM - Loamy

Hydric soil rating: No

#### Upton

Percent of map unit: 1 percent

Ecological site: R070BC025NM - Shallow

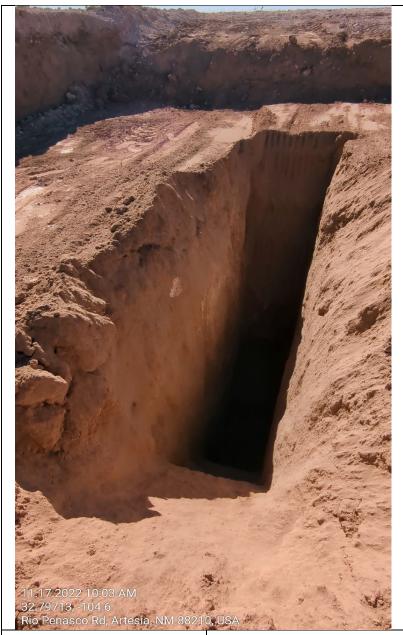
Hydric soil rating: No



# **Appendix III**

Photographic Documentation

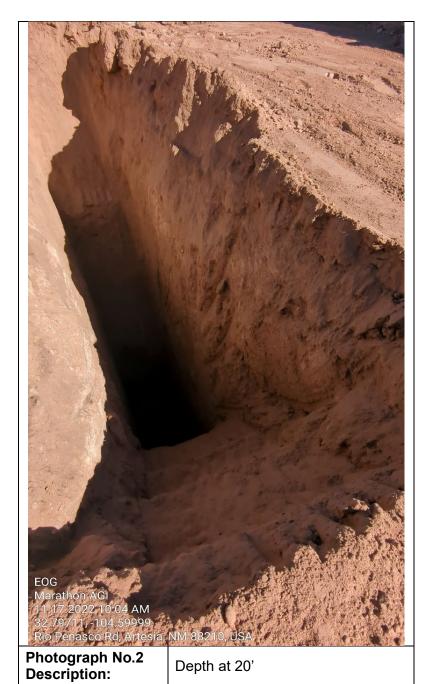




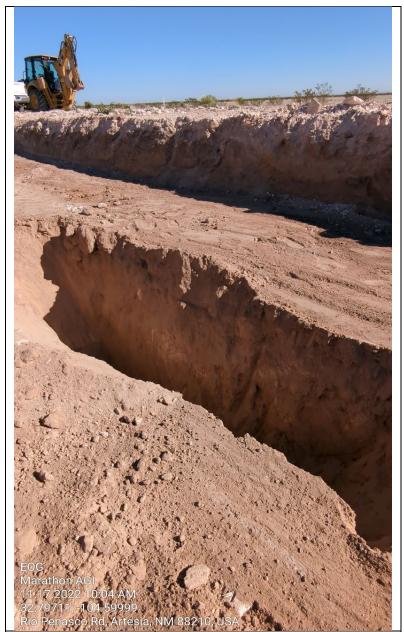
Photograph No.1 Description:

Depth 17'









Photograph No.3 Description:

6' around excavation for backhoe to reach 20'





Photograph No.3 Description:

Location after backfill



# **Appendix IV**

Laboratory Data

**Environment Testing** 

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Chad Hensley Talon/LPE 408 W. Texas St. Artesia New Mexico 88210 Generated 11/21/2022 6:30:49 PM

## **JOB DESCRIPTION**

Marathon AGI State 2 SDG NUMBER 700438.303.01

### **JOB NUMBER**

890-3428-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220



Client: Talon/LPE Laboratory Job ID: 890-3428-1
Project/Site: Marathon AGI State 2 SDG: 700438.303.01

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**Qualifier Description** 

### **Definitions/Glossary**

Client: Talon/LPE Job ID: 890-3428-1 Project/Site: Marathon AGI State 2

SDG: 700438.303.01

#### **Qualifiers**

#### **GC VOA** Qualifier

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

GC Semi VC	DA CONTRACTOR CONTRACT
Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.
HPLC/IC	
Qualifier	Qualifier Description

Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
n	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)

LOD	Ellille of Detection (Bob/Bob)
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
NAI.	Minimum Laurel (Diamin)

Indicates the analyte was analyzed for but not detected.

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

QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)

DI .	Departing Limit or Degreeted Limit (Dedicabeniets)
KL	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

**Eurofins Carlsbad** 

#### **Case Narrative**

Client: Talon/LPE

Project/Site: Marathon AGI State 2

Job ID: 890-3428-1

SDG: 700438.303.01

Job ID: 890-3428-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-3428-1

#### Receipt

The samples were received on 11/10/2022 2:30 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 11.0°C

#### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: TT-1 (890-3428-1), TT-1 (890-3428-2), TT-2 (890-3428-3), TT-2 (890-3428-4), TT-2 (890-3428-5), TT-2 (890-3428-6), TT-3 (890-3428-7), TT-3 (890-3428-8), TT-4 (890-3428-9) and TT-4 (890-3428-10).

#### GC VOA

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-39922 and analytical batch 880-39930 was outside the upper control limits.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-39696 and analytical batch 880-39930 was outside the upper control limits.

Method 8021B: The method blank for preparation batch 880-39922 and analytical batch 880-39930 contained m-Xylene & p-Xylene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8021B: LCS biased low. Since only an acceptable LCS or LCSD is required per the method, the data has been qualified and reported.(LCS 880-39696/1-A)

Method 8021B: The method blank for preparation batch 880-39696 and analytical batch 880-39930 contained m-Xylene & p-Xylene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

#### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: (LCSD 880-39418/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: TT-2 (890-3428-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD\_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-39418 and analytical batch 880-39385 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28).

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

#### HPLC/IC

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

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Matrix: Solid

Lab Sample ID: 890-3428-1

### **Client Sample Results**

Client: Talon/LPE Job ID: 890-3428-1

Project/Site: Marathon AGI State 2 SDG: 700438.303.01

**Client Sample ID: TT-1** Date Collected: 11/09/22 08:42 Date Received: 11/10/22 14:30

Sample Depth: 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000387	U	0.00201	0.000387	mg/Kg		11/16/22 10:57	11/17/22 02:29	
Toluene	0.000975	J	0.00201	0.000459	mg/Kg		11/16/22 10:57	11/17/22 02:29	
Ethylbenzene	0.00157	J	0.00201	0.000568	mg/Kg		11/16/22 10:57	11/17/22 02:29	
m-Xylene & p-Xylene	<0.00102	U	0.00402	0.00102	mg/Kg		11/16/22 10:57	11/17/22 02:29	
o-Xylene	0.000569	J	0.00201	0.000346	mg/Kg		11/16/22 10:57	11/17/22 02:29	
Xylenes, Total	<0.00102	U	0.00402	0.00102	mg/Kg		11/16/22 10:57	11/17/22 02:29	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	101		70 - 130				11/16/22 10:57	11/17/22 02:29	
1,4-Difluorobenzene (Surr)	109		70 - 130				11/16/22 10:57	11/17/22 02:29	
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	0.00311	J	0.00402	0.00102	mg/Kg			11/17/22 14:53	
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (	GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	26.0	J	50.0	15.0	mg/Kg			11/15/22 13:49	
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	26.0	J	50.0	15.0	mg/Kg		11/14/22 10:22	11/15/22 02:18	
Diesel Range Organics (Over C10-C28)	<15.0	U *1	50.0	15.0	mg/Kg		11/14/22 10:22	11/15/22 02:18	
Oll Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		11/14/22 10:22	11/15/22 02:18	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	108		70 - 130				11/14/22 10:22	11/15/22 02:18	
o-Terphenyl	120		70 - 130				11/14/22 10:22	11/15/22 02:18	
Method: MCAWW 300.0 - Anions	, Ion Chromato	ography - So	oluble						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chlorido	145		5.01	0.206	ma/Ka			11/15/22 23:44	

**Client Sample ID: TT-1** 

Date Collected: 11/09/22 08:47 Date Received: 11/10/22 14:30

Sample Depth: 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U *- *1	0.00199	0.000383	mg/Kg		11/16/22 10:35	11/19/22 11:01	1
Toluene	< 0.000454	U *- *1	0.00199	0.000454	mg/Kg		11/16/22 10:35	11/19/22 11:01	1
Ethylbenzene	< 0.000563	U *- *1	0.00199	0.000563	mg/Kg		11/16/22 10:35	11/19/22 11:01	1
m-Xylene & p-Xylene	0.00180	J *- *1 B	0.00398	0.00101	mg/Kg		11/16/22 10:35	11/19/22 11:01	1
o-Xylene	< 0.000343	U *- *1	0.00199	0.000343	mg/Kg		11/16/22 10:35	11/19/22 11:01	1
Xylenes, Total	0.00180	J *- *1 B	0.00398	0.00101	mg/Kg		11/16/22 10:35	11/19/22 11:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				11/16/22 10:35	11/19/22 11:01	

Chloride 5.01 11/15/22 23:44 145 0.396 mg/Kg

> Lab Sample ID: 890-3428-2 Matrix: Solid

### **Client Sample Results**

Client: Talon/LPE Job ID: 890-3428-1 Project/Site: Marathon AGI State 2 SDG: 700438.303.01

**Client Sample ID: TT-1** Lab Sample ID: 890-3428-2 Date Collected: 11/09/22 08:47 Matrix: Solid Date Received: 11/10/22 14:30

Sample Depth: 4

Method: SW846 8021B - Volatile	Organic Compounds	(GC)	(Continued)
mother of the court of the country	organic compounds	1/	( Continuou)

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1.4-Difluorobenzene (Surr)	101	70 - 130	11/16/22 10:35	11/19/22 11:01	1

Mothod: TAL SOF	Total RTFY - Tota	I BTEX Calculation
Method. IAL SOI	TOTAL DIEX - TOTA	I DIEX Calculation

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total BTFX	0.00180 J	0.00398	0.00101 mg/Kg			11/21/22 18:12	1

Method: SW846 8015 NM - Diese	L Danna Ornaniaa (DDO) (C	$\sim$
- Niethod: Syvoan bulls Nivi - Diese	i Rande Ordanics (DRO) (G	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	23.3	J	49.9	15.0	mg/Kg			11/15/22 13:49	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	23.3	J	49.9	15.0	mg/Kg		11/14/22 10:22	11/15/22 02:39	1
Diesel Range Organics (Over C10-C28)	<15.0	U *1	49.9	15.0	mg/Kg		11/14/22 10:22	11/15/22 02:39	1
Oll Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		11/14/22 10:22	11/15/22 02:39	1

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	118	70 - 130	11/14/22 10:22	11/15/22 02:39	1
o-Terphenyl	130	70 - 130	11/14/22 10:22	11/15/22 02:39	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	216		4.99	0.394	mg/Kg			11/16/22 00:01	1

**Client Sample ID: TT-2** Lab Sample ID: 890-3428-3

Date Collected: 11/09/22 08:51 Date Received: 11/10/22 14:30

Sample Depth: 2

	 	 	 _	_	_	-	

Welliou. Syvo46 6021B - Volati	ne Organic Comp	ounus (GC	)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U *- *1	0.00199	0.000383	mg/Kg		11/16/22 10:35	11/19/22 12:46	1
Toluene	< 0.000453	U *- *1	0.00199	0.000453	mg/Kg		11/16/22 10:35	11/19/22 12:46	1
Ethylbenzene	< 0.000562	U *- *1	0.00199	0.000562	mg/Kg		11/16/22 10:35	11/19/22 12:46	1
m-Xylene & p-Xylene	0.00188	J *- *1 B	0.00398	0.00100	mg/Kg		11/16/22 10:35	11/19/22 12:46	1
o-Xylene	< 0.000342	U *- *1	0.00199	0.000342	mg/Kg		11/16/22 10:35	11/19/22 12:46	1
Xylenes, Total	0.00188	J *- *1 B	0.00398	0.00100	mg/Kg		11/16/22 10:35	11/19/22 12:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130				11/16/22 10:35	11/19/22 12:46	1

		-•				
4-Bromofluorobenzene (Surr)	97		70 - 130	11/16/22 10:35	11/19/22 12:46	1
1,4-Difluorobenzene (Surr)	92		70 - 130	11/16/22 10:35	11/19/22 12:46	1

#### **Method: TAL SOP Total BTEX - Total BTEX Calculation**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00188	J	0.00398	0.00100	mg/Kg			11/21/22 18:12	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC	Method:	: SW846 8015 N	M - Diesel Rang	e Organics	(DRO)	(GC
---	---------	----------------	-----------------	------------	-------	-----

Analyte	Result	Qualifier	RL	MDL U	Init	D	Prepared	Analyzed	Dil Fac
Total TPH	16.8	J	49.9	15.0 m	ng/Kg			11/15/22 13:49	1

**Eurofins Carlsbad** 

Matrix: Solid

### **Client Sample Results**

Client: Talon/LPE Job ID: 890-3428-1 Project/Site: Marathon AGI State 2 SDG: 700438.303.01

**Client Sample ID: TT-2** 

Lab Sample ID: 890-3428-3 Date Collected: 11/09/22 08:51 Date Received: 11/10/22 14:30

Matrix: Solid

11/16/22 00:07

Sample Depth: 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	16.8	J	49.9	15.0	mg/Kg		11/14/22 10:22	11/15/22 03:00	1
Diesel Range Organics (Over C10-C28)	<15.0	U *1	49.9	15.0	mg/Kg		11/14/22 10:22	11/15/22 03:00	1
Oll Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		11/14/22 10:22	11/15/22 03:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130				11/14/22 10:22	11/15/22 03:00	1
o-Terphenyl	113		70 <sub>-</sub> 130				11/14/22 10:22	11/15/22 03:00	1

**Client Sample ID: TT-2** Lab Sample ID: 890-3428-4

4.95

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Date Collected: 11/09/22 08:56 Matrix: Solid

0.391 mg/Kg

Date Received: 11/10/22 14:30

Sample Depth: 4

Chloride

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000387	U *- *1	0.00201	0.000387	mg/Kg		11/16/22 10:35	11/19/22 13:12	1
Toluene	< 0.000459	U *- *1	0.00201	0.000459	mg/Kg		11/16/22 10:35	11/19/22 13:12	1
Ethylbenzene	<0.000568	U *- *1	0.00201	0.000568	mg/Kg		11/16/22 10:35	11/19/22 13:12	1
m-Xylene & p-Xylene	0.00197	J *- *1 B	0.00402	0.00102	mg/Kg		11/16/22 10:35	11/19/22 13:12	1
o-Xylene	< 0.000346	U *- *1	0.00201	0.000346	mg/Kg		11/16/22 10:35	11/19/22 13:12	1
Xylenes, Total	0.00197	J *- *1 B	0.00402	0.00102	mg/Kg		11/16/22 10:35	11/19/22 13:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130				11/16/22 10:35	11/19/22 13:12	1
1,4-Difluorobenzene (Surr)	94		70 - 130				11/16/22 10:35	11/19/22 13:12	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00197	J	0.00402	0.00102	mg/Kg			11/21/22 18:12	1
-									
Method: SW846 8015 NM - Diese			•						
Analyte	Result	Qualifier	RL	MDL		<u>D</u>	Prepared	Analyzed	Dil Fac
		Qualifier	•	MDL 15.0		<u>D</u>	Prepared	Analyzed 11/15/22 13:49	Dil Fac
Analyte	Result 20.1	Qualifier J	<b>RL</b> 50.0			<u>D</u>	Prepared		
Analyte Total TPH	Result 20.1 sel Range Orga	Qualifier J	<b>RL</b> 50.0		mg/Kg	D_	Prepared Prepared		
Analyte Total TPH  Method: SW846 8015B NM - Dies	Result 20.1 sel Range Orga	Qualifier  J  nics (DRO)  Qualifier	RL 50.0	15.0	mg/Kg			11/15/22 13:49	1
Analyte Total TPH  Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10	Result 20.1 sel Range Orga	Qualifier  J  nics (DRO)  Qualifier  J	(GC) RL	15.0 MDL 15.0	mg/Kg		Prepared	11/15/22 13:49  Analyzed	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result 20.1 sel Range Orga Result 20.1	Qualifier  J  nics (DRO)  Qualifier  J	(GC) RL 50.0	15.0 MDL 15.0	mg/Kg  Unit mg/Kg		Prepared 11/14/22 10:22	11/15/22 13:49  Analyzed  11/15/22 03:21	Dil Fac
Analyte Total TPH  Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result 20.1 sel Range Orga Result 20.1	Qualifier J nics (DRO) Qualifier J U *1	(GC) RL 50.0	15.0 MDL 15.0 15.0	mg/Kg  Unit mg/Kg		Prepared 11/14/22 10:22	11/15/22 13:49  Analyzed  11/15/22 03:21	Dil Fac
Analyte Total TPH  Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result 20.1  sel Range Orga Result 20.1  <15.0	Qualifier J nics (DRO) Qualifier J U*1	(GC) RL 50.0 50.0	15.0 MDL 15.0 15.0	mg/Kg  Unit mg/Kg  mg/Kg		Prepared 11/14/22 10:22 11/14/22 10:22	Analyzed 11/15/22 03:21 11/15/22 03:21	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 20.1  sel Range Orga Result 20.1  <15.0  <15.0	Qualifier J nics (DRO) Qualifier J U*1	RL 50.0 (GC) RL 50.0 50.0	15.0 MDL 15.0 15.0	mg/Kg  Unit mg/Kg  mg/Kg		Prepared 11/14/22 10:22 11/14/22 10:22 11/14/22 10:22	Analyzed 11/15/22 03:21 11/15/22 03:21 11/15/22 03:21	1 Dil Fac 1 1

**Eurofins Carlsbad** 

### **Client Sample Results**

Client: Talon/LPE Job ID: 890-3428-1 Project/Site: Marathon AGI State 2 SDG: 700438.303.01

**Client Sample ID: TT-2** 

Date Collected: 11/09/22 08:56 Date Received: 11/10/22 14:30

Sample Depth: 4

Lab Sample ID: 890-3428-4 Matrix: Solid

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble Dil Fac Analyte Result Qualifier RL MDL Unit D Prepared Analyzed 25.2 11/16/22 00:24 Chloride 1.99 mg/Kg 2150

Client Sample ID: TT-2 Lab Sample ID: 890-3428-5 **Matrix: Solid** 

Date Collected: 11/09/22 10:20 Date Received: 11/10/22 14:30

Sample Depth: 8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.000385	U *- *1	0.00200	0.000385	mg/Kg		11/16/22 10:35	11/19/22 13:38	
Toluene	< 0.000456	U *- *1	0.00200	0.000456	mg/Kg		11/16/22 10:35	11/19/22 13:38	
Ethylbenzene	< 0.000565	U *- *1	0.00200	0.000565	mg/Kg		11/16/22 10:35	11/19/22 13:38	
m-Xylene & p-Xylene	0.00183	J *- *1 B	0.00400	0.00101	mg/Kg		11/16/22 10:35	11/19/22 13:38	
o-Xylene	< 0.000344	U *- *1	0.00200	0.000344	mg/Kg		11/16/22 10:35	11/19/22 13:38	
Xylenes, Total	0.00183	J *- *1 B	0.00400	0.00101	mg/Kg		11/16/22 10:35	11/19/22 13:38	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	125		70 - 130				11/16/22 10:35	11/19/22 13:38	
1,4-Difluorobenzene (Surr)	99		70 - 130				11/16/22 10:35	11/19/22 13:38	
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	0.00183	J	0.00400	0.00101	mg/Kg			11/21/22 18:12	
Method: SW846 8015 NM - Diese Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
									Dilla
Total TPH	19.0	J	50.0	15.0	mg/Kg			11/15/22 13:49	
				15.0	mg/Kg				
Method: SW846 8015B NM - Dies	sel Range Orga			15.0 <b>MDL</b>			Prepared		,
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	sel Range Orga	nics (DRO) Qualifier	(GC)			D	Prepared 11/14/22 10:22	11/15/22 13:49	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	sel Range Orga Result	nics (DRO) Qualifier J	(GC)	MDL 15.0	Unit	<u>D</u>		11/15/22 13:49  Analyzed	Dil Fa
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	sel Range Orga Result 19.0	nics (DRO) Qualifier J U*1	(GC) RL 50.0	MDL 15.0	Unit mg/Kg	<u>D</u>	11/14/22 10:22	11/15/22 13:49  Analyzed  11/15/22 03:42	Dil Fa
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	sel Range Orga Result 19.0 <15.0	Oualifier  U *1	(GC) RL 50.0	MDL 15.0	Unit mg/Kg mg/Kg	<u>D</u>	11/14/22 10:22	Analyzed 11/15/22 03:42 11/15/22 03:42	Dil Fac
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	sel Range Orga Result 19.0 <15.0	nics (DRO) Qualifier J U*1	(GC)  RL  50.0  50.0	MDL 15.0	Unit mg/Kg mg/Kg	<u>D</u>	11/14/22 10:22 11/14/22 10:22 11/14/22 10:22	Analyzed 11/15/22 03:42 11/15/22 03:42 11/15/22 03:42	Dil Fa
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   19.0     <15.0     %Recovery	nics (DRO) Qualifier J U*1	(GC)  RL  50.0  50.0  Limits	MDL 15.0	Unit mg/Kg mg/Kg	<u>D</u>	11/14/22 10:22 11/14/22 10:22 11/14/22 10:22 Prepared	Analyzed 11/15/22 13:49  Analyzed 11/15/22 03:42 11/15/22 03:42 Analyzed	Dil Fa
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  Method: MCAWW 300.0 - Anions	Name	Qualifier  U*1  U  Qualifier	(GC)  RL  50.0  50.0  50.0  Limits  70 - 130  70 - 130	MDL 15.0	Unit mg/Kg mg/Kg	<u>D</u>	11/14/22 10:22 11/14/22 10:22 11/14/22 10:22 Prepared 11/14/22 10:22	Analyzed 11/15/22 03:42 11/15/22 03:42 11/15/22 03:42 Analyzed 11/15/22 03:42	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	Result   19.0	Qualifier  U*1  U  Qualifier	(GC)  RL  50.0  50.0  50.0  Limits  70 - 130  70 - 130	MDL 15.0	Unit mg/Kg mg/Kg mg/Kg	<u>D</u>	11/14/22 10:22 11/14/22 10:22 11/14/22 10:22 Prepared 11/14/22 10:22	Analyzed 11/15/22 03:42 11/15/22 03:42 11/15/22 03:42 Analyzed 11/15/22 03:42	Dil Fac

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Matrix: Solid

Lab Sample ID: 890-3428-6

# **Client Sample Results**

Client: Talon/LPE

Job ID: 890-3428-1

Project/Site: Marathon AGI State 2

SDG: 700438 303 01

Project/Site: Marathon AGI State 2 SDG: 700438.303.01

Client Sample ID: TT-2
Date Collected: 11/09/22 10:24

Date Received: 11/10/22 14:30

Sample Depth: 10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000386	U *- *1	0.00200	0.000386	mg/Kg		11/16/22 10:35	11/19/22 14:03	
Toluene	< 0.000457	U *- *1	0.00200	0.000457	mg/Kg		11/16/22 10:35	11/19/22 14:03	1
Ethylbenzene	<0.000566	U *- *1	0.00200	0.000566	mg/Kg		11/16/22 10:35	11/19/22 14:03	
m-Xylene & p-Xylene	0.00184	J *- *1 B	0.00401	0.00101	mg/Kg		11/16/22 10:35	11/19/22 14:03	1
o-Xylene	< 0.000345	U *- *1	0.00200	0.000345	mg/Kg		11/16/22 10:35	11/19/22 14:03	1
Xylenes, Total	0.00184	J *- *1 B	0.00401	0.00101	mg/Kg		11/16/22 10:35	11/19/22 14:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130				11/16/22 10:35	11/19/22 14:03	1
1,4-Difluorobenzene (Surr)	92		70 - 130				11/16/22 10:35	11/19/22 14:03	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00184	J	0.00401	0.00101	mg/Kg			11/21/22 18:12	1
		•			5 5				
- -	l Range Organ				3' 3				
Method: SW846 8015 NM - Diese Analyte				MDL		D	Prepared	Analyzed	Dil Fac
: Method: SW846 8015 NM - Diese		ics (DRO) (C	GC)	MDL		<u>D</u>	Prepared	Analyzed 11/15/22 13:49	
Method: SW846 8015 NM - Diese Analyte	Result 23.7	ics (DRO) (Gualifier	RL 49.9	MDL	Unit	<u>D</u>	Prepared		
Method: SW846 8015 NM - Diese Analyte Total TPH	Result 23.7 sel Range Orga	ics (DRO) (Gualifier	RL 49.9	MDL	Unit mg/Kg	D_	Prepared Prepared		1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result 23.7 sel Range Orga	ics (DRO) (( Qualifier J  nnics (DRO) Qualifier	RL 49.9	<b>MDL</b> 15.0	Unit mg/Kg	_ =	<u> </u>	11/15/22 13:49	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	Result 23.7 sel Range Orga	ics (DRO) (( Qualifier J  nnics (DRO) Qualifier J	RL 49.9 (GC)	MDL 15.0	Unit mg/Kg	_ =	Prepared	11/15/22 13:49 Analyzed	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 23.7 sel Range Orga Result 23.7	ics (DRO) (( Qualifier J enics (DRO) Qualifier J U*1	(GC)  RL  49.9  (GC)  RL  49.9	MDL 15.0 MDL 15.0	Unit mg/Kg  Unit mg/Kg	_ =	Prepared 11/14/22 10:22	11/15/22 13:49  Analyzed  11/15/22 04:04	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Dies	Result 23.7 sel Range Orga Result 23.7 <15.0	ics (DRO) (( Qualifier J enics (DRO) Qualifier J U*1	(GC)  RL  49.9  (BC)  RL  49.9  49.9	MDL 15.0 MDL 15.0	Unit mg/Kg  Unit mg/Kg mg/Kg	_ =	Prepared 11/14/22 10:22 11/14/22 10:22	Analyzed 11/15/22 04:04 11/15/22 04:04	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	Result 23.7 sel Range Orga Result 23.7 <15.0 <15.0	ics (DRO) (( Qualifier J enics (DRO) Qualifier J U*1	(GC)  RL  49.9  49.9  49.9  49.9	MDL 15.0 MDL 15.0	Unit mg/Kg  Unit mg/Kg mg/Kg	_ =	Prepared 11/14/22 10:22 11/14/22 10:22	Analyzed 11/15/22 04:04 11/15/22 04:04 11/15/22 04:04	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)	Result   23.7	ics (DRO) (( Qualifier J enics (DRO) Qualifier J U*1	GC)  RL 49.9  (GC)  RL 49.9  49.9  49.9 <i>Limits</i>	MDL 15.0 MDL 15.0	Unit mg/Kg  Unit mg/Kg mg/Kg	_ =	Prepared 11/14/22 10:22 11/14/22 10:22 11/14/22 10:22 Prepared	Analyzed 11/15/22 13:49  Analyzed 11/15/22 04:04 11/15/22 04:04  Analyzed	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	Result   23.7	ics (DRO) (( Qualifier  J  unics (DRO) Qualifier  J  U*1  U  Qualifier	GC)  RL 49.9  49.9  49.9  49.9  Limits 70 - 130 70 - 130	MDL 15.0 MDL 15.0	Unit mg/Kg  Unit mg/Kg mg/Kg	_ =	Prepared 11/14/22 10:22 11/14/22 10:22 11/14/22 10:22 Prepared 11/14/22 10:22	Analyzed 11/15/22 04:04 11/15/22 04:04 11/15/22 04:04 Analyzed 11/15/22 04:04	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	Result   23.7	ics (DRO) (( Qualifier  J  unics (DRO) Qualifier  J  U*1  U  Qualifier	GC)  RL 49.9  49.9  49.9  49.9  Limits 70 - 130 70 - 130	MDL 15.0 MDL 15.0	Unit mg/Kg  Unit mg/Kg mg/Kg mg/Kg	_ =	Prepared 11/14/22 10:22 11/14/22 10:22 11/14/22 10:22 Prepared 11/14/22 10:22	Analyzed 11/15/22 04:04 11/15/22 04:04 11/15/22 04:04 Analyzed 11/15/22 04:04	Dil Fac

**Client Sample ID: TT-3** 

Date Collected: 11/09/22 09:00

Date Received: 11/10/22 14:30

Sample Depth: 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000389	U *- *1	0.00202	0.000389	mg/Kg		11/16/22 10:35	11/19/22 14:29	1
Toluene	<0.000461	U *- *1	0.00202	0.000461	mg/Kg		11/16/22 10:35	11/19/22 14:29	1
Ethylbenzene	< 0.000571	U *- *1	0.00202	0.000571	mg/Kg		11/16/22 10:35	11/19/22 14:29	1
m-Xylene & p-Xylene	0.00186	J *- *1 B	0.00404	0.00102	mg/Kg		11/16/22 10:35	11/19/22 14:29	1
o-Xylene	< 0.000347	U *- *1	0.00202	0.000347	mg/Kg		11/16/22 10:35	11/19/22 14:29	1
Xylenes, Total	0.00186	J *- *1 B	0.00404	0.00102	mg/Kg		11/16/22 10:35	11/19/22 14:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130				11/16/22 10:35	11/19/22 14:29	1

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Lab Sample ID: 890-3428-7

Matrix: Solid

2

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10

12

14

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4.404.400

## Client Sample Results

Job ID: 890-3428-1 Client: Talon/LPE Project/Site: Marathon AGI State 2 SDG: 700438.303.01

Client Sample ID: TT-3

Date Collected: 11/09/22 09:00 Date Received: 11/10/22 14:30

Sample Depth: 2

Lab Sample ID: 890-3428-7

Matrix: Solid

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

%Recovery Qualifier Limits Prepared Surrogate Analyzed Dil Fac 70 - 130 11/16/22 10:35 1,4-Difluorobenzene (Surr) 103 11/19/22 14:29

**Method: TAL SOP Total BTEX - Total BTEX Calculation** 

Analyte Result Qualifier RL MDL Unit D Analyzed Dil Fac Prepared 0.00186 0.00404 0.00102 mg/Kg 11/21/22 18:12 **Total BTEX** 

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

Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac **Total TPH** 50.0 15.0 mg/Kg 11/15/22 13:49 37.8

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

Result Qualifier Analyte RL MDL Unit D Prepared Analyzed Dil Fac 11/15/22 04:25 **Gasoline Range Organics** 19.9 50.0 15.0 mg/Kg 11/14/22 10:22 (GRO)-C6-C10 **Diesel Range Organics (Over** 50.0 15.0 mg/Kg 11/14/22 10:22 11/15/22 04:25 17.9 J\*1 C10-C28) Oll Range Organics (Over C28-C36) <15.0 U 50.0 15.0 mg/Kg 11/14/22 10:22 11/15/22 04:25

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1-Chlorooctane 102 70 - 130 11/14/22 10:22 11/15/22 04:25 11/15/22 04:25 109 70 - 130 11/14/22 10:22 o-Terphenyl

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac 4.96 0.392 11/16/22 00:41 Chloride 34.6 mg/Kg

Lab Sample ID: 890-3428-8 Client Sample ID: TT-3

Date Collected: 11/09/22 09:03

Date Received: 11/10/22 14:30

Sample Depth: 4

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

MDL Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac Benzene <0.000383 U \*- \*1 0.00199 0.000383 mg/Kg 11/16/22 10:35 11/19/22 14:55 Toluene <0.000454 U\*-\*1 0.00199 0.000454 11/16/22 10:35 11/19/22 14:55 mg/Kg Ethylbenzene <0.000563 U \*- \*1 0.00199 0.000563 11/16/22 10:35 11/19/22 14:55 mg/Kg 0.00398 11/19/22 14:55 0.00101 mg/Kg 11/16/22 10:35 m-Xylene & p-Xylene 0.00179 J\*-\*1 B o-Xylene <0.000343 U \*- \*1 0.00199 0.000343 mg/Kg 11/16/22 10:35 11/19/22 14:55 0.00398 0.00101 mg/Kg 11/16/22 10:35 11/19/22 14:55 **Xylenes, Total** 0.00179 J\*-\*1 B

%Recovery Qualifier Limits Dil Fac Surrogate Prepared Analyzed 70 - 130 11/16/22 10:35 11/19/22 14:55 4-Bromofluorobenzene (Surr) 111 1,4-Difluorobenzene (Surr) 70 - 130 11/16/22 10:35 11/19/22 14:55

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac 0.00398 11/21/22 18:12 **Total BTEX** 0.00179 0.00101 mg/Kg

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

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac **Total TPH** 49.9 15.0 mg/Kg 11/15/22 13:49 33.4

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**Matrix: Solid** 

Matrix: Solid

Lab Sample ID: 890-3428-8

Analyzed

11/16/22 00:47

# **Client Sample Results**

Client: Talon/LPE Job ID: 890-3428-1
Project/Site: Marathon AGI State 2 SDG: 700438.303.01

**Client Sample ID: TT-3** 

Date Collected: 11/09/22 09:03 Date Received: 11/10/22 14:30

Sample Depth: 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	33.4	J	49.9	15.0	mg/Kg		11/14/22 10:22	11/15/22 04:46	1
Diesel Range Organics (Over C10-C28)	<15.0	U *1	49.9	15.0	mg/Kg		11/14/22 10:22	11/15/22 04:46	1
Oll Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		11/14/22 10:22	11/15/22 04:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130				11/14/22 10:22	11/15/22 04:46	1
o-Terphenyl	114		70 - 130				11/14/22 10:22	11/15/22 04:46	1

Client Sample ID: TT-4

Date Collected: 11/09/22 09:16

Lab Sample ID: 890-3428-9

Matrix: Solid

RL

5.00

MDL Unit

0.395 mg/Kg

D

Prepared

Result Qualifier

42.9

Date Received: 11/10/22 14:30

Sample Depth: 2

Analyte

Chloride

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U *- *1	0.00199	0.000383	mg/Kg		11/16/22 10:35	11/19/22 15:20	1
Toluene	< 0.000453	U *- *1	0.00199	0.000453	mg/Kg		11/16/22 10:35	11/19/22 15:20	1
Ethylbenzene	< 0.000562	U *- *1	0.00199	0.000562	mg/Kg		11/16/22 10:35	11/19/22 15:20	1
m-Xylene & p-Xylene	0.00179	J *- *1 B	0.00398	0.00100	mg/Kg		11/16/22 10:35	11/19/22 15:20	1
o-Xylene	< 0.000342	U *- *1	0.00199	0.000342	mg/Kg		11/16/22 10:35	11/19/22 15:20	1
Xylenes, Total	0.00179	J *- *1 B	0.00398	0.00100	mg/Kg		11/16/22 10:35	11/19/22 15:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130				11/16/22 10:35	11/19/22 15:20	1
1,4-Difluorobenzene (Surr)	82		70 - 130				11/16/22 10:35	11/19/22 15:20	1
Analyte Total BTEX	Result 0.00179	Qualifier	RL 0.00398	0.00100	Unit mg/Kg	D	Prepared	Analyzed 11/21/22 18:12	Dil Fac
				0.00100	mg/rtg			11/21/22 10.12	ı
Method: SW846 8015 NM - Diese	el Range Organ			0.00100 <b>MDL</b>		D	Prepared	Analyzed	
Method: SW846 8015 NM - Diese Analyte Total TPH	el Range Organ	ics (DRO) (	GC)			<u>D</u>	Prepared		
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Dies	el Range Organ Result 22.0 sel Range Orga	ics (DRO) ( Qualifier J	GC)  RL 49.9	<b>MDL</b> 15.0	Unit mg/Kg			Analyzed 11/15/22 13:49	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte	el Range Organ Result 22.0 sel Range Orga Result	ics (DRO) (Qualifier J nics (DRO) Qualifier	GC)  RL  49.9  (GC)  RL	MDL 15.0 MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 11/15/22 13:49 Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH  Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics	el Range Organ Result 22.0 sel Range Orga	ics (DRO) (Qualifier J nics (DRO) Qualifier	GC)  RL 49.9	<b>MDL</b> 15.0	Unit mg/Kg			Analyzed 11/15/22 13:49	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 22.0 sel Range Orga Result	ics (DRO) ( Qualifier J  nics (DRO) Qualifier J	GC)  RL  49.9  (GC)  RL	MDL 15.0	Unit mg/Kg		Prepared	Analyzed 11/15/22 13:49 Analyzed	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 22.0 sel Range Orga Result 22.0	ics (DRO) ( Qualifier J  nics (DRO) Qualifier J  U*1	(GC)  RL 49.9  (BC)  RL 49.9	MDL 15.0 MDL 15.0	Unit mg/Kg  Unit mg/Kg		Prepared 11/14/22 10:22	Analyzed 11/15/22 13:49  Analyzed 11/15/22 05:07	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 22.0 sel Range Orga Result 22.0 <15.0	ics (DRO) ( Qualifier J  nics (DRO) Qualifier J  U*1	GC)  RL 49.9  (GC)  RL 49.9  49.9	MDL 15.0 MDL 15.0	Unit mg/Kg  Unit mg/Kg mg/Kg		Prepared 11/14/22 10:22 11/14/22 10:22	Analyzed 11/15/22 13:49  Analyzed 11/15/22 05:07 11/15/22 05:07	Dil Fac  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 22.0 sel Range Orga Result 22.0 <15.0 <15.0	ics (DRO) ( Qualifier J  nics (DRO) Qualifier J  U*1	GC)  RL 49.9  (GC)  RL 49.9  49.9  49.9	MDL 15.0 MDL 15.0	Unit mg/Kg  Unit mg/Kg mg/Kg		Prepared 11/14/22 10:22 11/14/22 10:22 11/14/22 10:22	Analyzed 11/15/22 13:49  Analyzed 11/15/22 05:07 11/15/22 05:07	Dil Fac  Dil Fac  1

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Job ID: 890-3428-1

Matrix: Solid

Lab Sample ID: 890-3428-9

Client: Talon/LPE Project/Site: Marathon AGI State 2 SDG: 700438.303.01

Client Sample ID: TT-4

Date Collected: 11/09/22 09:16 Date Received: 11/10/22 14:30

Sample Depth: 2

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.392	U	4.96	0.392	mg/Kg			11/16/22 00:52	1

**Client Sample ID: TT-4** Lab Sample ID: 890-3428-10 Matrix: Solid

Date Collected: 11/09/22 09:19 Date Received: 11/10/22 14:30

Sample Depth: 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000384	U *- *1	0.00200	0.000384	mg/Kg		11/16/22 10:35	11/19/22 15:46	-
Toluene	< 0.000455	U *- *1	0.00200	0.000455	mg/Kg		11/16/22 10:35	11/19/22 15:46	
Ethylbenzene	< 0.000564	U *- *1	0.00200	0.000564	mg/Kg		11/16/22 10:35	11/19/22 15:46	
m-Xylene & p-Xylene	0.00180	J *- *1 B	0.00399	0.00101	mg/Kg		11/16/22 10:35	11/19/22 15:46	
o-Xylene	< 0.000343	U *- *1	0.00200	0.000343	mg/Kg		11/16/22 10:35	11/19/22 15:46	
Xylenes, Total	0.00180	J *- *1 B	0.00399	0.00101	mg/Kg		11/16/22 10:35	11/19/22 15:46	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	90		70 - 130				11/16/22 10:35	11/19/22 15:46	
1,4-Difluorobenzene (Surr)	93		70 - 130				11/16/22 10:35	11/19/22 15:46	
Method: SW846 8015 NM - Diese Analyte		CS (DRO) (C Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Analyte Total TPH	Result		RL 49.8	MDL 14.9	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 11/15/22 13:49	Dil Fa
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Analyte Gasoline Range Organics (GRO)-C6-C10			• •	MDL 14.9	Unit mg/Kg	<u>D</u>	Prepared 11/14/22 10:22	Analyzed 11/15/22 05:29	
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	J	RL	14.9		<u>D</u>	<u>.</u>		
Gasoline Range Organics	Result 21.8	<b>J</b> U *1	RL 49.8	14.9	mg/Kg	<u> </u>	11/14/22 10:22	11/15/22 05:29	
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result 21.8 <14.9	<b>J</b> U*1 U	49.8 49.8	14.9	mg/Kg	<u>D</u>	11/14/22 10:22	11/15/22 05:29	Dil Fac
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result   21.8   <14.9   <14.9	<b>J</b> U*1 U	49.8 49.8 49.8	14.9	mg/Kg	<u>D</u>	11/14/22 10:22 11/14/22 10:22 11/14/22 10:22	11/15/22 05:29 11/15/22 05:29 11/15/22 05:29	

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	35.7		4.98	0.393	mg/Kg			11/16/22 00:58	1

# **Surrogate Summary**

Client: Talon/LPE Job ID: 890-3428-1
Project/Site: Marathon AGI State 2 SDG: 700438.303.01

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3428-1	TT-1	101	109	
890-3428-2	TT-1	115	101	
890-3428-3	TT-2	97	92	
890-3428-4	TT-2	102	94	
890-3428-5	TT-2	125	99	
890-3428-6	TT-2	102	92	
890-3428-7	TT-3	109	103	
890-3428-8	TT-3	111	94	
890-3428-9	TT-4	109	82	
890-3428-10	TT-4	90	93	
LCS 880-39696/1-A	Lab Control Sample	92	88	
LCS 880-39713/1-A	Lab Control Sample	85	106	
LCSD 880-39696/2-A	Lab Control Sample Dup	121	101	
LCSD 880-39713/2-A	Lab Control Sample Dup	92	97	
MB 880-39259/5-A	Method Blank	77	104	
MB 880-39696/5-A	Method Blank	66 S1-	89	
MB 880-39713/5-A	Method Blank	81	100	
MB 880-39922/5-A	Method Blank	63 S1-	94	
Surrogate Legend				
BFB = 4-Bromofluorobenze	ne (Surr)			
DFBZ = 1,4-Difluorobenzen	·			

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

Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits
		1CO1	OTPH1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
90-3428-1	TT-1	108	120	
90-3428-2	TT-1	118	130	
90-3428-3	TT-2	104	113	
90-3428-4	TT-2	120	133 S1+	
90-3428-5	TT-2	100	109	
90-3428-6	TT-2	102	108	
90-3428-7	TT-3	102	109	
90-3428-8	TT-3	105	114	
90-3428-9	TT-4	104	112	
90-3428-10	TT-4	113	120	
.CS 880-39418/2-A	Lab Control Sample	97	110	
.CSD 880-39418/3-A	Lab Control Sample Dup	115	135 S1+	
MB 880-39418/1-A	Method Blank	89	97	

1CO = 1-Chlorooctane OTPH = o-Terphenyl

**Eurofins Carlsbad** 

Released to Imaging: 2/3/2023 7:32:20 AM

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Prep Type: Total/NA

Client: Talon/LPE Job ID: 890-3428-1 SDG: 700438.303.01 Project/Site: Marathon AGI State 2

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-39259/5-A

Analysis Batch: 39686

**Matrix: Solid** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 39259

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		11/10/22 15:16	11/16/22 13:25	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		11/10/22 15:16	11/16/22 13:25	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		11/10/22 15:16	11/16/22 13:25	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		11/10/22 15:16	11/16/22 13:25	1
o-Xylene	< 0.000344	U	0.00200	0.000344	mg/Kg		11/10/22 15:16	11/16/22 13:25	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		11/10/22 15:16	11/16/22 13:25	1
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Surrogate	%Recovery Qualifie	r Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77	70 - 130	11/10/22 15:16	11/16/22 13:25	1
1,4-Difluorobenzene (Surr)	104	70 - 130	11/10/22 15:16	11/16/22 13:25	1

Lab Sample ID: MB 880-39696/5-A

Matrix: Solid

Analysis Batch: 39930

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 39696

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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		11/16/22 10:35	11/19/22 06:32	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		11/16/22 10:35	11/19/22 06:32	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		11/16/22 10:35	11/19/22 06:32	1
m-Xylene & p-Xylene	0.001805	J	0.00400	0.00101	mg/Kg		11/16/22 10:35	11/19/22 06:32	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		11/16/22 10:35	11/19/22 06:32	1
Xylenes, Total	0.001805	J	0.00400	0.00101	mg/Kg		11/16/22 10:35	11/19/22 06:32	1

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Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	66	S1-	70 - 130	11/16/22 10:35	11/19/22 06:32	1
1,4-Difluorobenzene (Surr)	89		70 - 130	11/16/22 10:35	11/19/22 06:32	1

Lab Sample ID: LCS 880-39696/1-A

**Matrix: Solid** 

Analysis Batch: 39930

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 39696

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.02233	*_	mg/Kg		22	70 - 130	
Toluene	0.100	0.02593	*_	mg/Kg		26	70 - 130	
Ethylbenzene	0.100	0.02451	*-	mg/Kg		25	70 - 130	
m-Xylene & p-Xylene	0.200	0.05600	*_	mg/Kg		28	70 - 130	
o-Xylene	0.100	0.03046	*-	mg/Kg		30	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	92	70 _ 130
1.4-Difluorobenzene (Surr)	88	70 - 130

Lab Sample ID: LCSD 880-39696/2-A

Matrix: Solid

Analysis Batch: 39930

Client Sample ID: Lab	<b>Control Sample Dup</b>
	Prop Type: Total/NA

Prep Type: Total/NA

Prep Batch: 39696

	<b>Spike</b>	LCSD LCSD				%Rec		RPD
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1046 *1	mg/Kg		105	70 - 130	130	35

Client: Talon/LPE Job ID: 890-3428-1 Project/Site: Marathon AGI State 2 SDG: 700438.303.01

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

Lab Sample ID: LCSD 880-39696/2-A

**Matrix: Solid** 

Analysis Batch: 39930

Client Sample ID: Lab	Control Sample Dup
	Prop Type: Total/NA

Prep Type: Total/NA Prep Batch: 39696

Spike LCSD LCSD **RPD** Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit Toluene 0.100 0.09291 \*1 93 70 - 130 35 mg/Kg 113 Ethylbenzene 0.100 0.09366 mg/Kg 94 70 - 130 117 35 0.200 m-Xylene & p-Xylene 0.2040 \*1 70 - 130 35 mg/Kg 102 114 o-Xylene 0.100 0.09928 \*1 mg/Kg 99 70 - 130 106 35

LCSD LCSD

Surrogate	%Recovery (	Qualifier	Limits
4-Bromofluorobenzene (Surr)	121		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: MB 880-39713/5-A Client Sample ID: Method Blank

**Matrix: Solid** 

Analysis Batch: 39686

Prep Type: Total/NA

Prep Batch: 39713

мв мв Analyte Result Qualifier MDL Unit Prepared Analyzed Dil Fac Benzene <0.000385 U 0.00200 0.000385 11/16/22 10:57 11/17/22 00:59 mg/Kg Toluene <0.000456 U 0.00200 0.000456 11/16/22 10:57 11/17/22 00:59 mg/Kg Ethylbenzene 0.00200 11/16/22 10:57 11/17/22 00:59 <0.000565 U 0.000565 mg/Kg 0.00400 0.00101 mg/Kg 11/16/22 10:57 11/17/22 00:59 m-Xylene & p-Xylene <0.00101 U o-Xylene <0.000344 U 0.00200 0.000344 mg/Kg 11/16/22 10:57 11/17/22 00:59 <0.00101 U 0.00400 0.00101 mg/Kg Xylenes, Total 11/16/22 10:57 11/17/22 00:59

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepare	ed	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130	11/16/22 1	0:57 1	11/17/22 00:59	1
1.4-Difluorobenzene (Surr)	100		70 - 130	11/16/22 1	0:57 1	11/17/22 00:59	1

Lab Sample ID: LCS 880-39713/1-A

**Matrix: Solid** 

Analysis Batch: 39686

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 39713

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08679		mg/Kg		87	70 - 130	
Toluene	0.100	0.09007		mg/Kg		90	70 - 130	
Ethylbenzene	0.100	0.08826		mg/Kg		88	70 - 130	
m-Xylene & p-Xylene	0.200	0.1618		mg/Kg		81	70 - 130	
o-Xylene	0.100	0.08011		mg/Kg		80	70 - 130	

LCS LCS

Surrogate	%Recovery (	Qualifier	Limits
4-Bromofluorobenzene (Surr)	85		70 - 130
1.4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: LCSD 880-39713/2-A

**Matrix: Solid** 

Analysis Batch: 39686

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 39713

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08832		mg/Kg		88	70 - 130	2	35
Toluene	0.100	0.09197		mg/Kg		92	70 - 130	2	35
Ethylbenzene	0.100	0.09209		mg/Kg		92	70 - 130	4	35

Client: Talon/LPE Job ID: 890-3428-1
Project/Site: Marathon AGI State 2 SDG: 700438.303.01

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

Lab Sample ID: LCSD 880-39713/2-A

Matrix: Solid Analysis Batch: 39686

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 39713

LCSD LCSD Spike %Rec **RPD** Added Result Qualifier Unit %Rec Limits **RPD** Limit Analyte D 0.200 0.1686 84 70 - 130 35 m-Xylene & p-Xylene mg/Kg 4 0.08300 o-Xylene 0.100 mg/Kg 83 70 - 130 35

 LCSD
 LCSD

 %Recovery
 Qualifier
 Limits

 92
 70 - 130

 97
 70 - 130

Lab Sample ID: MB 880-39922/5-A Client Sample ID: Method Blank

**Matrix: Solid** 

Surrogate

Analysis Batch: 39930

MB MB

Prep Type: Total/NA

Prep Batch: 39922

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Benzene <0.000385 0.00200 0.000385 mg/Kg 11/18/22 12:17 11/18/22 17:10 Toluene <0.000456 U 0.00200 0.000456 mg/Kg 11/18/22 12:17 11/18/22 17:10 Ethylbenzene <0.000565 U 0.00200 0.000565 mg/Kg 11/18/22 12:17 11/18/22 17:10 m-Xylene & p-Xylene 11/18/22 12:17 11/18/22 17:10 0.001798 J 0.00400 0.00101 mg/Kg o-Xylene <0.000344 U 0.00200 0.000344 mg/Kg 11/18/22 12:17 11/18/22 17:10 0.00400 11/18/22 12:17 11/18/22 17:10 Xylenes, Total 0.001798 .1 0.00101 mg/Kg

MR MR Qualifier Limits Prepared Analyzed Dil Fac Surrogate %Recovery 4-Bromofluorobenzene (Surr) 63 S1-70 - 130 11/18/22 12:17 11/18/22 17:10 1,4-Difluorobenzene (Surr) 70 - 130 11/18/22 12:17 11/18/22 17:10 94

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

Lab Sample ID: MB 880-39418/1-A

Matrix: Solid

Analysis Batch: 39385

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 39418

мв мв Result Qualifier RL MDL Unit D Prepared Dil Fac Analyte Analyzed <15.0 U 50.0 15.0 11/14/22 10:22 11/14/22 20:35 Gasoline Range Organics mg/Kg (GRO)-C6-C10 11/14/22 20:35 Diesel Range Organics (Over <15.0 U 50.0 11/14/22 10:22 15.0 mg/Kg C10-C28) OII Range Organics (Over C28-C36) <15.0 U 50.0 15.0 mg/Kg 11/14/22 10:22 11/14/22 20:35

70 - 130

 Surrogate
 %Recovery 1-Chlorooctane
 Qualifier 2-130
 Limits 7-130

 Prepared
 Analyzed
 Dil Fac

 11/14/22 10:22
 11/14/22 20:35
 1

 11/14/22 10:22
 11/14/22 20:35
 1

Lab Sample ID: LCS 880-39418/2-A

97

Analysis Batch: 39385

o-Terphenyl

**Matrix: Solid** 

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

Prep Batch: 39418

LCS LCS %Rec Spike Analyte Added Result Qualifier Unit %Rec Limits 1000 860.5 86 70 - 130 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 886.1 mg/Kg 89 70 - 130 C10-C28)

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Job ID: 890-3428-1

Client: Talon/LPE Project/Site: Marathon AGI State 2 SDG: 700438.303.01

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

Lab Sample ID: LCS 880-39418/2-A Client Sample ID: Lab Control Sample

**Matrix: Solid** Prep Type: Total/NA Analysis Batch: 39385 Prep Batch: 39418

	LCS LCS	
Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	97	70 - 130
o-Terphenyl	110	70 - 130

Lab Sample ID: LCSD 880-39418/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** Prep Type: Total/NA Analysis Batch: 39385 Prep Batch: 39418

-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	889.3		mg/Kg		89	70 - 130	3	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1112	*1	mg/Kg		111	70 - 130	23	20
C10-C28)									

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	135	S1+	70 - 130

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## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-39447/1-A Client Sample ID: Method Blank

**Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 39640

Analyte Result Qualifier RL MDL Unit D Dil Fac Prepared Analyzed Chloride <0.395 U 5.00 11/15/22 22:08 0.395 mg/Kg

Lab Sample ID: LCS 880-39447/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 39640

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit %Rec Limits Chloride 250 263.6 mg/Kg 105 90 - 110

Lab Sample ID: LCSD 880-39447/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 39640

Spike LCSD LCSD %Rec RPD Result Qualifier Added Analyte Unit %Rec Limits RPD Limit Chloride 250 262.6 105 90 - 110 20 mg/Kg

Lab Sample ID: 890-3428-1 MS Client Sample ID: TT-1

**Matrix: Solid Prep Type: Soluble** Analysis Batch: 39640

Spike MS MS %Rec Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 251 145 383.2 mg/Kg 90 - 110

Client: Talon/LPE Job ID: 890-3428-1
Project/Site: Marathon AGI State 2 SDG: 700438.303.01

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-3428-1 MSD

Matrix: Solid

Client Sample ID: TT-1

Prep Type: Soluble

Analysis Batch: 39640

•	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	145		251	395.3		mg/Kg		100	90 - 110	3	20

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# **QC Association Summary**

Client: Talon/LPE Job ID: 890-3428-1
Project/Site: Marathon AGI State 2 SDG: 700438.303.01

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Pre	рв	atch	: ১৬	259

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-39259/5-A	Method Blank	Total/NA	Solid	5035	

#### Analysis Batch: 39686

<b>Lab Sample ID</b> 890-3428-1	Client Sample ID	Prep Type Total/NA	Matrix Solid	Method 8021B	Prep Batch 39713
MB 880-39259/5-A	Method Blank	Total/NA	Solid	8021B	39259
MB 880-39713/5-A	Method Blank	Total/NA	Solid	8021B	39713
LCS 880-39713/1-A	Lab Control Sample	Total/NA	Solid	8021B	39713
LCSD 880-39713/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	39713

#### Prep Batch: 39696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3428-2	TT-1	Total/NA	Solid	5035	
890-3428-3	TT-2	Total/NA	Solid	5035	
890-3428-4	TT-2	Total/NA	Solid	5035	
890-3428-5	TT-2	Total/NA	Solid	5035	
890-3428-6	TT-2	Total/NA	Solid	5035	
890-3428-7	TT-3	Total/NA	Solid	5035	
890-3428-8	TT-3	Total/NA	Solid	5035	
890-3428-9	TT-4	Total/NA	Solid	5035	
890-3428-10	TT-4	Total/NA	Solid	5035	
MB 880-39696/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-39696/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-39696/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

#### Prep Batch: 39713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3428-1	TT-1	Total/NA	Solid	5035	
MB 880-39713/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-39713/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-39713/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

#### Analysis Batch: 39836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3428-1	TT-1	Total/NA	Solid	Total BTEX	
890-3428-2	TT-1	Total/NA	Solid	Total BTEX	
890-3428-3	TT-2	Total/NA	Solid	Total BTEX	
890-3428-4	TT-2	Total/NA	Solid	Total BTEX	
890-3428-5	TT-2	Total/NA	Solid	Total BTEX	
890-3428-6	TT-2	Total/NA	Solid	Total BTEX	
890-3428-7	TT-3	Total/NA	Solid	Total BTEX	
890-3428-8	TT-3	Total/NA	Solid	Total BTEX	
890-3428-9	TT-4	Total/NA	Solid	Total BTEX	
890-3428-10	TT-4	Total/NA	Solid	Total BTEX	

#### Prep Batch: 39922

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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-39922/5-A	Method Blank	Total/NA	Solid	5035	

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# **QC Association Summary**

Client: Talon/LPE Job ID: 890-3428-1 Project/Site: Marathon AGI State 2 SDG: 700438.303.01

#### **GC VOA**

#### Analysis Batch: 39930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3428-2	TT-1	Total/NA	Solid	8021B	39696
890-3428-3	TT-2	Total/NA	Solid	8021B	39696
890-3428-4	TT-2	Total/NA	Solid	8021B	39696
890-3428-5	TT-2	Total/NA	Solid	8021B	39696
890-3428-6	TT-2	Total/NA	Solid	8021B	39696
890-3428-7	TT-3	Total/NA	Solid	8021B	39696
890-3428-8	TT-3	Total/NA	Solid	8021B	39696
890-3428-9	TT-4	Total/NA	Solid	8021B	39696
890-3428-10	TT-4	Total/NA	Solid	8021B	39696
MB 880-39696/5-A	Method Blank	Total/NA	Solid	8021B	39696
MB 880-39922/5-A	Method Blank	Total/NA	Solid	8021B	39922
LCS 880-39696/1-A	Lab Control Sample	Total/NA	Solid	8021B	39696
LCSD 880-39696/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	39696

#### **GC Semi VOA**

#### Analysis Batch: 39385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3428-1	TT-1	Total/NA	Solid	8015B NM	39418
890-3428-2	TT-1	Total/NA	Solid	8015B NM	39418
890-3428-3	TT-2	Total/NA	Solid	8015B NM	39418
890-3428-4	TT-2	Total/NA	Solid	8015B NM	39418
890-3428-5	TT-2	Total/NA	Solid	8015B NM	39418
890-3428-6	TT-2	Total/NA	Solid	8015B NM	39418
890-3428-7	TT-3	Total/NA	Solid	8015B NM	39418
890-3428-8	TT-3	Total/NA	Solid	8015B NM	39418
890-3428-9	TT-4	Total/NA	Solid	8015B NM	39418
890-3428-10	TT-4	Total/NA	Solid	8015B NM	39418
MB 880-39418/1-A	Method Blank	Total/NA	Solid	8015B NM	39418
LCS 880-39418/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	39418
LCSD 880-39418/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	39418

#### Prep Batch: 39418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3428-1	TT-1	Total/NA	Solid	8015NM Prep	
890-3428-2	TT-1	Total/NA	Solid	8015NM Prep	
890-3428-3	TT-2	Total/NA	Solid	8015NM Prep	
890-3428-4	TT-2	Total/NA	Solid	8015NM Prep	
890-3428-5	TT-2	Total/NA	Solid	8015NM Prep	
890-3428-6	TT-2	Total/NA	Solid	8015NM Prep	
890-3428-7	TT-3	Total/NA	Solid	8015NM Prep	
890-3428-8	TT-3	Total/NA	Solid	8015NM Prep	
890-3428-9	TT-4	Total/NA	Solid	8015NM Prep	
890-3428-10	TT-4	Total/NA	Solid	8015NM Prep	
MB 880-39418/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-39418/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-39418/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 39622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3428-1	TT-1	Total/NA	Solid	8015 NM	

# **QC Association Summary**

Client: Talon/LPE Job ID: 890-3428-1
Project/Site: Marathon AGI State 2 SDG: 700438.303.01

GC Semi VOA (Continued)

**Analysis Batch: 39622 (Continued)** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3428-2	TT-1	Total/NA	Solid	8015 NM	
890-3428-3	TT-2	Total/NA	Solid	8015 NM	
890-3428-4	TT-2	Total/NA	Solid	8015 NM	
890-3428-5	TT-2	Total/NA	Solid	8015 NM	
890-3428-6	TT-2	Total/NA	Solid	8015 NM	
890-3428-7	TT-3	Total/NA	Solid	8015 NM	
890-3428-8	TT-3	Total/NA	Solid	8015 NM	
890-3428-9	TT-4	Total/NA	Solid	8015 NM	
890-3428-10	TT-4	Total/NA	Solid	8015 NM	

**HPLC/IC** 

Leach Batch: 39447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3428-1	TT-1	Soluble	Solid	DI Leach	_
890-3428-2	TT-1	Soluble	Solid	DI Leach	
890-3428-3	TT-2	Soluble	Solid	DI Leach	
890-3428-4	TT-2	Soluble	Solid	DI Leach	
890-3428-5	TT-2	Soluble	Solid	DI Leach	
890-3428-6	TT-2	Soluble	Solid	DI Leach	
890-3428-7	TT-3	Soluble	Solid	DI Leach	
890-3428-8	TT-3	Soluble	Solid	DI Leach	
890-3428-9	TT-4	Soluble	Solid	DI Leach	
890-3428-10	TT-4	Soluble	Solid	DI Leach	
MB 880-39447/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-39447/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-39447/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3428-1 MS	TT-1	Soluble	Solid	DI Leach	
890-3428-1 MSD	TT-1	Soluble	Solid	DI Leach	

Analysis Batch: 39640

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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3428-1	TT-1	Soluble	Solid	300.0	39447
890-3428-2	TT-1	Soluble	Solid	300.0	39447
890-3428-3	TT-2	Soluble	Solid	300.0	39447
890-3428-4	TT-2	Soluble	Solid	300.0	39447
890-3428-5	TT-2	Soluble	Solid	300.0	39447
890-3428-6	TT-2	Soluble	Solid	300.0	39447
890-3428-7	TT-3	Soluble	Solid	300.0	39447
890-3428-8	TT-3	Soluble	Solid	300.0	39447
890-3428-9	TT-4	Soluble	Solid	300.0	39447
890-3428-10	TT-4	Soluble	Solid	300.0	39447
MB 880-39447/1-A	Method Blank	Soluble	Solid	300.0	39447
LCS 880-39447/2-A	Lab Control Sample	Soluble	Solid	300.0	39447
LCSD 880-39447/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	39447
890-3428-1 MS	TT-1	Soluble	Solid	300.0	39447
890-3428-1 MSD	TT-1	Soluble	Solid	300.0	39447

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Job ID: 890-3428-1

Client: Talon/LPE Project/Site: Marathon AGI State 2 SDG: 700438.303.01

**Client Sample ID: TT-1** Lab Sample ID: 890-3428-1

Date Collected: 11/09/22 08:42 Matrix: Solid Date Received: 11/10/22 14:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	39713	11/16/22 10:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39686	11/17/22 02:29	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			39836	11/17/22 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			39622	11/15/22 13:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	39418	11/14/22 10:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39385	11/15/22 02:18	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	39447	11/14/22 11:41	KS	EET MID
Soluble	Analysis	300.0		1			39640	11/15/22 23:44	CH	EET MID

**Client Sample ID: TT-1** Lab Sample ID: 890-3428-2

Date Collected: 11/09/22 08:47 Matrix: Solid Date Received: 11/10/22 14:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	39696	11/16/22 10:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39930	11/19/22 11:01	SM	EET MID
Total/NA	Analysis	Total BTEX		1			39836	11/21/22 18:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			39622	11/15/22 13:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	39418	11/14/22 10:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39385	11/15/22 02:39	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	39447	11/14/22 11:41	KS	EET MID
Soluble	Analysis	300.0		1			39640	11/16/22 00:01	CH	EET MID

**Client Sample ID: TT-2** Lab Sample ID: 890-3428-3

Date Collected: 11/09/22 08:51 **Matrix: Solid** Date Received: 11/10/22 14:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	39696	11/16/22 10:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39930	11/19/22 12:46	SM	EET MID
Total/NA	Analysis	Total BTEX		1			39836	11/21/22 18:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			39622	11/15/22 13:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	39418	11/14/22 10:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39385	11/15/22 03:00	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	39447	11/14/22 11:41	KS	EET MID
Soluble	Analysis	300.0		1			39640	11/16/22 00:07	CH	EET MID

**Client Sample ID: TT-2** Lab Sample ID: 890-3428-4

Date Collected: 11/09/22 08:56 **Matrix: Solid** Date Received: 11/10/22 14:30

	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	39696	11/16/22 10:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39930	11/19/22 13:12	SM	EET MID
Total/NA	Analysis	Total BTEX		1			39836	11/21/22 18:12	SM	EET MID

## **Lab Chronicle**

Client: Talon/LPE Job ID: 890-3428-1 Project/Site: Marathon AGI State 2 SDG: 700438.303.01

**Client Sample ID: TT-2** 

Lab Sample ID: 890-3428-4 Date Collected: 11/09/22 08:56

Matrix: Solid

Date Received: 11/10/22 14:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			39622	11/15/22 13:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	39418	11/14/22 10:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39385	11/15/22 03:21	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	39447	11/14/22 11:41	KS	EET MID
Soluble	Analysis	300.0		5			39640	11/16/22 00:24	CH	EET MID

**Client Sample ID: TT-2** Lab Sample ID: 890-3428-5

Date Collected: 11/09/22 10:20 **Matrix: Solid** 

Date Received: 11/10/22 14:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	39696	11/16/22 10:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39930	11/19/22 13:38	SM	EET MID
Total/NA	Analysis	Total BTEX		1			39836	11/21/22 18:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			39622	11/15/22 13:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	39418	11/14/22 10:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39385	11/15/22 03:42	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	39447	11/14/22 11:41	KS	EET MID
Soluble	Analysis	300.0		5			39640	11/16/22 00:30	CH	EET MID

**Client Sample ID: TT-2** Lab Sample ID: 890-3428-6 Date Collected: 11/09/22 10:24 **Matrix: Solid** 

Date Received: 11/10/22 14:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	39696	11/16/22 10:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39930	11/19/22 14:03	SM	EET MID
Total/NA	Analysis	Total BTEX		1			39836	11/21/22 18:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			39622	11/15/22 13:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	39418	11/14/22 10:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39385	11/15/22 04:04	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	39447	11/14/22 11:41	KS	EET MID
Soluble	Analysis	300.0		5			39640	11/16/22 00:35	CH	EET MID

**Client Sample ID: TT-3** Lab Sample ID: 890-3428-7

Date Collected: 11/09/22 09:00 Date Received: 11/10/22 14:30

Released to Imaging: 2/3/2023 7:32:20 AM

	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	39696	11/16/22 10:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39930	11/19/22 14:29	SM	EET MID
Total/NA	Analysis	Total BTEX		1			39836	11/21/22 18:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			39622	11/15/22 13:49	SM	EET MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.01 g 1 uL	10 mL 1 uL	39418 39385	11/14/22 10:22 11/15/22 04:25	DM SM	EET MID EET MID

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**Matrix: Solid** 

Client: Talon/LPE

Project/Site: Marathon AGI State 2

Job ID: 890-3428-1

SDG: 700438.303.01

**Client Sample ID: TT-3** 

Date Collected: 11/09/22 09:00 Date Received: 11/10/22 14:30

Lab Sample ID: 890-3428-7

**Matrix: Solid** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	39447	11/14/22 11:41	KS	EET MID
Soluble	Analysis	300.0		1			39640	11/16/22 00:41	CH	EET MID

**Client Sample ID: TT-3** Lab Sample ID: 890-3428-8

Date Collected: 11/09/22 09:03 Date Received: 11/10/22 14:30

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	39696	11/16/22 10:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39930	11/19/22 14:55	SM	EET MID
Total/NA	Analysis	Total BTEX		1			39836	11/21/22 18:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			39622	11/15/22 13:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	39418	11/14/22 10:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39385	11/15/22 04:46	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	39447	11/14/22 11:41	KS	EET MID
Soluble	Analysis	300.0		1			39640	11/16/22 00:47	CH	EET MID

**Client Sample ID: TT-4** Lab Sample ID: 890-3428-9

Date Collected: 11/09/22 09:16 Date Received: 11/10/22 14:30

Matrix: Solid

**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	39696	11/16/22 10:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39930	11/19/22 15:20	SM	EET MID
Total/NA	Analysis	Total BTEX		1			39836	11/21/22 18:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			39622	11/15/22 13:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	39418	11/14/22 10:22	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39385	11/15/22 05:07	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	39447	11/14/22 11:41	KS	EET MID
Soluble	Analysis	300.0		1			39640	11/16/22 00:52	CH	EET MID

Client Sample ID: TT-4 Lab Sample ID: 890-3428-10

Date Collected: 11/09/22 09:19 Date Received: 11/10/22 14:30

Batch Dil Initial Final Batch Batch Prepared Prep Type Method Run Factor Amount Amount Number or Analyzed Analyst Type Lab 5035 39696 Total/NA Prep 5.01 g 5 mL 11/16/22 10:35 MNR **EET MID** Total/NA Analysis 8021B 1 5 mL 5 mL 39930 11/19/22 15:46 SM **EET MID** Total/NA Total BTEX Analysis 39836 11/21/22 18:12 SM EET MID 1 Total/NA Analysis 8015 NM 39622 11/15/22 13:49 SM **EET MID** Prep Total/NA 39418 8015NM Prep 10.04 q 10 mL 11/14/22 10:22 DM **EET MID** Total/NA Analysis 8015B NM 1 uL 1 uL 39385 11/15/22 05:29 SM **EET MID** Soluble Leach DI Leach 5.02 g 50 mL 39447 11/14/22 11:41 KS **EET MID** 

39640

11/16/22 00:58

CH

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**EET MID** 

Analysis

300.0

Soluble

#### **Lab Chronicle**

Client: Talon/LPE

Project/Site: Marathon AGI State 2

Job ID: 890-3428-1 SDG: 700438.303.01

Laboratory References:

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

# **Accreditation/Certification Summary**

Client: Talon/LPE Job ID: 890-3428-1
Project/Site: Marathon AGI State 2 SDG: 700438.303.01

Laboratoru Eurofina Midland

# **Laboratory: Eurofins Midland**Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23
The following analytes are i	ncluded in this report, but the laboratory is not ce	rtified by the governing authority. This list ma	av include analytes for wh

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

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

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## **Method Summary**

Client: Talon/LPE Job ID: 890-3428-1
Project/Site: Marathon AGI State 2 SDG: 700438.303.01

Method **Method Description** Protocol Laboratory 8021B Volatile Organic Compounds (GC) SW846 EET MID **Total BTEX Calculation** Total BTEX 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 MCAWW **EET MID** 5035 SW846 **EET MID** Closed System Purge and Trap 8015NM Prep Microextraction SW846 EET MID DI Leach Deionized Water Leaching Procedure ASTM **EET MID** 

#### **Protocol References:**

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

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# **Sample Summary**

Client: Talon/LPE

Project/Site: Marathon AGI State 2

Job ID: 890-3428-1

SDG: 700438.303.01

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3428-1	TT-1	Solid	11/09/22 08:42	11/10/22 14:30	2
890-3428-2	TT-1	Solid	11/09/22 08:47	11/10/22 14:30	4
890-3428-3	TT-2	Solid	11/09/22 08:51	11/10/22 14:30	2
890-3428-4	TT-2	Solid	11/09/22 08:56	11/10/22 14:30	4
890-3428-5	TT-2	Solid	11/09/22 10:20	11/10/22 14:30	8
890-3428-6	TT-2	Solid	11/09/22 10:24	11/10/22 14:30	10
890-3428-7	TT-3	Solid	11/09/22 09:00	11/10/22 14:30	2
890-3428-8	TT-3	Solid	11/09/22 09:03	11/10/22 14:30	4
890-3428-9	TT-4	Solid	11/09/22 09:16	11/10/22 14:30	2
890-3428-10	TT-4	Solid	11/09/22 09:19	11/10/22 14:30	4

Circle Method(s) and Metal(s) to be analyzed

Total 200.7 / 6010

200.8 / 6020:

8RCRA 13PPM Texas 11 Al Sb As

TCLP / SPLP 6010: 8RCRA

Sb As Ba

Cd Cr Co

Cu Pb Mn Mo Ni Se Ag TI U

Ва

Be B Cd Be

Ca Cr Co

Cu Fe Pb Mg Mn Mo

Z.

Se Ag Hg:

SiO<sub>2</sub> Na Sr TI Sn U V 1631 / 245.1 / 7470 / 7471

Zn

Soil So

11/9/2022

9:19 9:16

Grab/

Grab/

Grab/

11/9/2022

11-4

11-2 11-2 TT-2 TT-2 1-1

Soil Soil Soil Soil Matrix

17-3

Soil Soil

11/9/2022 11/9/2022 11/9/2022 11/9/2022 11/9/2022

9:00

Grab/

10:24 10:20 8:56

10 œ

Grab/ Grab/

#

13 14 15

eurofins Xenco **Environment Testing** 

# Chain of Custody

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

Work Order No:

Work Order Comments  Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐  State of Project:  Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐	
Work Order Comments  Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐  State of Project:	Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV
Work Order Comments  Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐	State of Project:
Work Order Comments	Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund [
	Work Order Comments

		0		•	
		4			
		5	1100 20 1436	(1/04(1/1))	Church/
Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)

NaOH+Ascorbic Acid: SAPC Zn Acetate+NaOH: Zn Na2S2O3: NaSO3 NaHSO<sub>4</sub>: NABIS H3PO4: HP

Sample Comments

SAMPLE RECEIPT

amples Received Intact:

No

Yes No

Wet ice:

Yes

8

**Parameters** 

MMOO

0

890-3428 Chain of Custody

Correction Factor: Thermometer ID:

ample Custody Seals:

Yes Yes Yes Temp Blank:

No No / N/A

Corrected Temperature: Temperature Reading:

OD

Date

Time

Depth

Grab/

Comp

Cont # of

BTEX

TPH

Sampled

Sample Identification

7-1

11/9/2022 Sampled

8:42

11/9/2022

8:51 8:47

Grab/ Grab/ Grab/ Grab/ ooler Custody Seals:

Sampler's Name:

Chad Hensley

Eddy

Due Date:

Routine

Rush

Pres.

ANALYSIS REQUEST

HCL: HC H<sub>2</sub>S0<sub>4</sub>: H<sub>2</sub>

NaOH: Na

HNO3: HN

Cool: Coo None: NO

МеОН: Ме DI Water: H<sub>2</sub>O Preservative Codes

Turn Around

Chensley@talonlpe.com

City, State ZIP:

TAT starts the day received by the lab, if received by 4:30pm

roject Number roject Name: Phone: City, State ZIP:

575.746.8768 Artesia, NM 88210 408 W. Texas Ave

Marathon AGI State 2

700438.303.01

Company Name

Chad Hensley Talon LPE

Bill to: (if different)

EOG

Company Name

ddress:

11/21/2022

# **Login Sample Receipt Checklist**

Client: Talon/LPE Job Number: 890-3428-1 SDG Number: 700438.303.01

List Source: Eurofins Carlsbad

Login Number: 3428 List Number: 1 Creator: Clifton, Cloe

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

# **Login Sample Receipt Checklist**

Client: Talon/LPE Job Number: 890-3428-1 SDG Number: 700438.303.01

**List Source: Eurofins Midland** 

Login Number: 3428 List Number: 2 List Creation: 11/14/22 08:39 AM

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	

Released to Imaging: 2/3/2023 7:32:20 AM

<6mm (1/4").

# **Eurofins Carlsbad**

# **Job Notes**

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

# **Authorization**

Generated 11/21/2022 6:30:49 PM

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

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

**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Chad Hensley Talon/LPE 408 W. Texas St. Artesia, New Mexico 88210 Generated 11/28/2022 4:15:56 PM

# **JOB DESCRIPTION**

Marathon AGI State 2H SDG NUMBER 700438.303.01

# **JOB NUMBER**

890-3499-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220



# **Eurofins Carlsbad**

# **Job Notes**

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

# **Authorization**

Generated 11/28/2022 4:15:56 PM

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

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

Released to Imaging: 2/3/2023 7:32:20 AM

Companies

11/28/2022

Client: Talon/LPE Laboratory Job ID: 890-3499-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

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## **Definitions/Glossary**

Client: Talon/LPE Job ID: 890-3499-1 Project/Site: Marathon AGI State 2H

SDG: 700438.303.01

#### **Qualifiers**

**GC VOA** Qualifier

LCS and/or LCSD is outside acceptance limits, low biased.

\*1 LCS/LCSD RPD exceeds control limits.

**Qualifier Description** 

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

S1-Surrogate recovery exceeds control limits, low biased. Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description** Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

S1+ Surrogate recovery exceeds control limits, high biased. U Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

#### **Glossary**

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery CFL Contains Free Liquid CFU Colony Forming Unit CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor** 

Detection Limit (DoD/DOE) DL

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) **EDL** LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

EPA recommended "Maximum Contaminant Level" MCL Minimum Detectable Activity (Radiochemistry) MDA MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit MI 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

Practical Quantitation Limit **PQL** 

**PRES** Presumptive **Quality Control** QC

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

**TNTC** Too Numerous To Count

#### Case Narrative

Client: Talon/LPE

Job ID: 890-3499-1 Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Job ID: 890-3499-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-3499-1

#### Receipt

The samples were received on 11/17/2022 2:27 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 2.0°C

#### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: S-9 (890-3499-1), S-9 (890-3499-2) and S-9 (890-3499-3).

#### GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCSD 880-40235/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: LCSD biased low. Since only an acceptable LCS is required per the method, the data has been qualified and reported. (LCSD 880-40235/2-A)

Method 8021B: The method blank for preparation batch 880-40235 and analytical batch 880-40267 contained m-Xylene & p-Xylene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

#### GC Semi VOA

Method 8015MOD NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-40185/2-A) and (LCSD 880-40185/3-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.

**Eurofins Carlsbad** 11/28/2022

# **Client Sample Results**

Client: Talon/LPE Job ID: 890-3499-1

Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Client Sample ID: S-9 Lab Sample ID: 890-3499-1 Date Collected: 11/14/22 10:01 Matrix: Solid

Date Received: 11/17/22 14:27

Sample Depth: 12 -									
Method: SW846 8021B - Volati Analyte	•	ounds (GC) Qualifier	) RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000381	U *- *1	0.00198	0.000381	mg/Kg		11/22/22 15:31	11/24/22 04:14	1
Toluene	<0.000451	U *- *1	0.00198	0.000451	mg/Kg		11/22/22 15:31	11/24/22 04:14	1
Ethylbenzene	<0.000559	U *- *1	0.00198	0.000559	mg/Kg		11/22/22 15:31	11/24/22 04:14	1
m-Xylene & p-Xylene	<0.00100	U *- *1	0.00396	0.00100	mg/Kg		11/22/22 15:31	11/24/22 04:14	1
o-Xylene	<0.000341	U *- *1	0.00198	0.000341	mg/Kg		11/22/22 15:31	11/24/22 04:14	1
Xylenes, Total	<0.00100	U *- *1	0.00396	0.00100	mg/Kg		11/22/22 15:31	11/24/22 04:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130				11/22/22 15:31	11/24/22 04:14	1
1,4-Difluorobenzene (Surr)	97		70 - 130				11/22/22 15:31	11/24/22 04:14	1
- Method: TAL SOP Total BTEX	- Total BTEX Cale	culation							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00396	0.00100	mg/Kg			11/28/22 14:50	1
- Method: SW846 8015 NM - Die	esel Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	39.3	J	49.9	15.0	mg/Kg			11/23/22 12:17	1
- Method: SW846 8015B NM - D	iesel Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	21.9	J	49.9	15.0	mg/Kg		11/22/22 09:47	11/22/22 10:59	1
Diesel Range Organics (Over	17.4	J	49.9	15.0	mg/Kg		11/22/22 09:47	11/22/22 10:59	1

1-Chlorooctane	81		70 - 130		11/22/22 09:47	11/22/22 10:59	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<15.0	U	49.9	15.0 mg/Kg	11/22/22 09:47	11/22/22 10:59	1
Diesel Range Organics (Over C10-C28)	17.4	J	49.9	15.0 mg/Kg	11/22/22 09:47	11/22/22 10:59	1

70 - 130

Method: MCAWW 300.0 - Anions, I	on Chromato	graphy - So	luble						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	771		4 98	0.393	ma/Ka			11/22/22 19:16	1

Lab Sample ID: 890-3499-2 Client Sample ID: S-9

Date Collected: 11/14/22 10:56 Date Received: 11/17/22 14:27

Sample Depth: 16

o-Terphenyl

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000384	U *- *1	0.00200	0.000384	mg/Kg		11/22/22 15:31	11/24/22 04:35	1
Toluene	< 0.000455	U *- *1	0.00200	0.000455	mg/Kg		11/22/22 15:31	11/24/22 04:35	1
Ethylbenzene	< 0.000564	U *- *1	0.00200	0.000564	mg/Kg		11/22/22 15:31	11/24/22 04:35	1
m-Xylene & p-Xylene	<0.00101	U *- *1	0.00399	0.00101	mg/Kg		11/22/22 15:31	11/24/22 04:35	1
o-Xylene	< 0.000343	U *- *1	0.00200	0.000343	mg/Kg		11/22/22 15:31	11/24/22 04:35	1
Xylenes, Total	<0.00101	U *- *1	0.00399	0.00101	mg/Kg		11/22/22 15:31	11/24/22 04:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				11/22/22 15:31	11/24/22 04:35	1

**Eurofins Carlsbad** 

11/22/22 09:47

11/22/22 10:59

**Matrix: Solid** 

Client: Talon/LPE Job ID: 890-3499-1 Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Client Sample ID: S-9 Lab Sample ID: 890-3499-2

Date Collected: 11/14/22 10:56 Matrix: Solid Date Received: 11/17/22 14:27

Sample Depth: 16

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

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	105	70 - 130	11/22/22 15:31	11/24/22 04:35	1

Mothod: TAI	SOP Total BTEX	- Total BTEX	Calculation
I WELLIOU. IAL	. SUP TULAT BIEN	- IUlai BIEA	Calculation

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101 U	0.00399	0.00101 mg/Kg			11/28/22 14:50	1

Mathed CMO4C CO4E NM Discal Dance Occasion (DI	201	1001	
Method: SW846 8015 NM - Diesel Range Organics (DI	くしょいし	((36.)	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	27.3	J	49.8	14.9	mg/Kg			11/23/22 12:17	1

	Mothod: SW046 904ED NM Diocol Dan	go Organico (DBO) (CC)	v
ı	Method: SW846 8015B NM - Diesel Ran	ge Organics (DRO) (GC)	,

		, ,	· /						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	27.3	J	49.8	14.9	mg/Kg		11/22/22 09:47	11/22/22 12:04	1
Diesel Range Organics (Over C10-C28)	<14.9	U	49.8	14.9	mg/Kg		11/22/22 09:47	11/22/22 12:04	1
Oll Range Organics (Over C28-C36)	<14.9	U	49.8	14.9	mg/Kg		11/22/22 09:47	11/22/22 12:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	81	70 - 130	11/22/22 09:47	11/22/22 12:04	1
o-Terphenyl	96	70 - 130	11/22/22 09:47	11/22/22 12:04	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	ı	Prepared	Analyzed	Dil Fac
Chloride	641		4.95	0.391	mg/Kg				11/22/22 19:21	1

Client Sample ID: S-9 Lab Sample ID: 890-3499-3

Date Collected: 11/14/22 11:49 Date Received: 11/17/22 14:27

Sample Depth: 17

Mothodi CIMOAC 0004D	Valatila Organia Compounda (CC)

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000382	U *- *1	0.00198	0.000382	mg/Kg		11/22/22 15:31	11/24/22 04:55	1
Toluene	< 0.000452	U *- *1	0.00198	0.000452	mg/Kg		11/22/22 15:31	11/24/22 04:55	1
Ethylbenzene	< 0.000561	U *- *1	0.00198	0.000561	mg/Kg		11/22/22 15:31	11/24/22 04:55	1
m-Xylene & p-Xylene	<0.00100	U *- *1	0.00397	0.00100	mg/Kg		11/22/22 15:31	11/24/22 04:55	1
o-Xylene	< 0.000341	U *- *1	0.00198	0.000341	mg/Kg		11/22/22 15:31	11/24/22 04:55	1
Xylenes, Total	<0.00100	U *- *1	0.00397	0.00100	mg/Kg		11/22/22 15:31	11/24/22 04:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130				11/22/22 15:31	11/24/22 04:55	1
1,4-Difluorobenzene (Surr)	111		70 - 130				11/22/22 15:31	11/24/22 04:55	1

4-Bromofluorobenzene (Surr)	123	70 - 130	11/22/22 15:31 11/24/22	04:55 1
1,4-Difluorobenzene (Surr)	111	70 - 130	11/22/22 15:31 11/24/22	04:55 1
_				

#### **Method: TAL SOP Total BTEX - Total BTEX Calculation**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00397	0.00100	mg/Kg			11/28/22 14:50	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	)	Prepared	Analyzed	Dil Fac
Total TPH	38.6	J	49.9	15.0	mg/Kg				11/23/22 12:17	1

**Eurofins Carlsbad** 

Matrix: Solid

# **Client Sample Results**

Client: Talon/LPE Job ID: 890-3499-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Client Sample ID: S-9

Lab Sample ID: 890-3499-3

Date Collected: 11/14/22 11:49

Matrix: Solid

Date Received: 11/17/22 14:27

Sample Depth: 17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	38.6	J	49.9	15.0	mg/Kg		11/22/22 09:47	11/22/22 12:26	1
Diesel Range Organics (Over	<15.0	U	49.9	15.0	mg/Kg		11/22/22 09:47	11/22/22 12:26	1
C10-C28)									
OII Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		11/22/22 09:47	11/22/22 12:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130				11/22/22 09:47	11/22/22 12:26	1
o-Terphenyl	109		70 - 130				11/22/22 09:47	11/22/22 12:26	1
Method: MCAWW 300.0 - Anions	, Ion Chromato	ography - S	oluble						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
, <b></b>									

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# **Surrogate Summary**

Client: Talon/LPE Job ID: 890-3499-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Rec
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3499-1	S-9	121	97	
890-3499-2	S-9	110	105	
890-3499-3	S-9	123	111	
LCS 880-40235/1-A	Lab Control Sample	108	78	
LCSD 880-40235/2-A	Lab Control Sample Dup	37 S1-	30 S1-	
MB 880-40235/5-A	Method Blank	106	95	
MB 880-40278/5-A	Method Blank	99	97	

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

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limit
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
90-3499-1	S-9	81	97	
390-3499-1 MS	S-9	96	101	
390-3499-1 MSD	S-9	113	118	
390-3499-2	S-9	81	96	
390-3499-3	S-9	99	109	
CS 880-40185/2-A	Lab Control Sample	163 S1+	190 S1+	
CSD 880-40185/3-A	Lab Control Sample Dup	157 S1+	180 S1+	
/IB 880-40185/1-A	Method Blank	108	126	

**Surrogate Legend** 

1CO = 1-Chlorooctane

Released to Imaging: 2/3/2023 7:32:20 AM

OTPH = o-Terphenyl

Client: Talon/LPE Job ID: 890-3499-1 SDG: 700438.303.01 Project/Site: Marathon AGI State 2H

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

Lab Sample ID: MB 880-40235/5-A

**Matrix: Solid** 

Analysis Batch: 40267

Client Sample ID: Method Blank

Prep Type: Total/NA

h: 40235

		Prep Batch
MB MB		

0.000385	mg/Kg		11/22/22 15:31	11/23/22 23:23	
			11/22/22 10.01	11/23/22 23:23	1
0.000456	mg/Kg		11/22/22 15:31	11/23/22 23:23	1
0.000565	mg/Kg		11/22/22 15:31	11/23/22 23:23	1
0.00101	mg/Kg		11/22/22 15:31	11/23/22 23:23	1
0.000344	mg/Kg		11/22/22 15:31	11/23/22 23:23	1
0.00101	mg/Kg		11/22/22 15:31	11/23/22 23:23	1
	0.000565 0.00101 0.000344	0.000456 mg/Kg 0.000565 mg/Kg 0.00101 mg/Kg 0.000344 mg/Kg 0.00101 mg/Kg	0.000565 mg/Kg 0.00101 mg/Kg 0.000344 mg/Kg	0.000565         mg/Kg         11/22/22 15:31           0.00101         mg/Kg         11/22/22 15:31           0.000344         mg/Kg         11/22/22 15:31	0.000565         mg/Kg         11/22/22 15:31         11/23/22 23:23           0.00101         mg/Kg         11/22/22 15:31         11/23/22 23:23           0.000344         mg/Kg         11/22/22 15:31         11/23/22 23:23

MB MB

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	_	11/22/22 15:31	11/23/22 23:23	1
1,4-Difluorobenzene (Surr)	95		70 - 130		11/22/22 15:31	11/23/22 23:23	1

Lab Sample ID: LCS 880-40235/1-A

Matrix: Solid

Analysis Batch: 40267

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40235

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1100	-	mg/Kg		110	70 - 130	
Toluene	0.100	0.1004		mg/Kg		100	70 - 130	
Ethylbenzene	0.100	0.09891		mg/Kg		99	70 - 130	
m-Xylene & p-Xylene	0.200	0.2004		mg/Kg		100	70 - 130	
o-Xylene	0.100	0.1165		mg/Kg		117	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	78		70 - 130

Lab Sample ID: LCSD 880-40235/2-A

Matrix: Solid

Analysis Batch: 40267

<b>Client San</b>	iple ID: La	ab Contro	I Sample	Dup
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**Prep Type: Total/NA** Prep Batch: 40235

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.03559	*- *1	mg/Kg		36	70 - 130	102	35
Toluene	0.100	0.03773	*- *1	mg/Kg		38	70 - 130	91	35
Ethylbenzene	0.100	0.03854	*- *1	mg/Kg		39	70 - 130	88	35
m-Xylene & p-Xylene	0.200	0.07074	*- *1	mg/Kg		35	70 - 130	96	35
o-Xylene	0.100	0.03879	*- *1	mg/Kg		39	70 - 130	100	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits			
4-Bromofluorobenzene (Surr)	37	S1-	70 - 130			
1 4-Difluorobenzene (Surr)	30	S1-	70 130			

Lab Sample ID: MB 880-40278/5-A

Matrix: Solid

Analysis Batch: 40267

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40278

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		11/23/22 10:41	11/23/22 12:41	1
Toluene	< 0.000456	U	0.00200	0.000456	ma/Ka		11/23/22 10:41	11/23/22 12:41	1

Client: Talon/LPE Job ID: 890-3499-1 SDG: 700438.303.01 Project/Site: Marathon AGI State 2H

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

Lab Sample ID: MB 880-40278/5-A

**Matrix: Solid** 

Analysis Batch: 40267

Prep Type: Total/NA

Prep Batch: 40278

ı		IVID	IVID							
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		11/23/22 10:41	11/23/22 12:41	1
	m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		11/23/22 10:41	11/23/22 12:41	1
	o-Xylene	< 0.000344	U	0.00200	0.000344	mg/Kg		11/23/22 10:41	11/23/22 12:41	1
	Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		11/23/22 10:41	11/23/22 12:41	1
		MP	MR							

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99	70 - 130	11/23/22 10:41	11/23/22 12:41	1
1,4-Difluorobenzene (Surr)	97	70 - 130	11/23/22 10:41	11/23/22 12:41	1

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

Lab Sample ID: MB 880-40185/1-A

**Matrix: Solid** 

Analysis Batch: 40170

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40185

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		11/22/22 08:09	11/22/22 08:21	
Diesel Range Organics (Over C10-C28)	<15.0	U	50.0	15.0	mg/Kg		11/22/22 08:09	11/22/22 08:21	•
Oll Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		11/22/22 08:09	11/22/22 08:21	,

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130	11/22/22 08:09	11/22/22 08:21	1
o-Terphenyl	126		70 - 130	11/22/22 08:09	11/22/22 08:21	1

Lab Sample ID: LCS 880-40185/2-A

**Matrix: Solid** 

**Analysis Batch: 40170** 

Client Sample ID: Lab Control Sample	Client	Sample	ID: Lab	Control	Sample
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**Prep Type: Total/NA** 

Prep Batch: 40185

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	816.2		mg/Kg		82	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	988.2		mg/Kg		99	70 - 130	
C10-C28)								

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	163	S1+	70 - 130
o-Terphenyl	190	S1+	70 - 130

Lab Sample ID: LCSD 880-40185/3-A

**Matrix: Solid** 

**Analysis Batch: 40170** 

Client Sample	ID: Lal	b Control	Sampl	e Dup
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Prep Type: Total/NA

Prep Batch: 40185

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	827.6		mg/Kg		83	70 - 130	1	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	925.3		mg/Kg		93	70 - 130	7	20
C10-C28)									

Lab Sample ID: LCSD 880-40185/3-A

**Matrix: Solid** 

Analysis Batch: 40170

Client: Talon/LPE Job ID: 890-3499-1 Project/Site: Marathon AGI State 2H SDG: 700438.303.01

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

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 40185

LCSD LCSD %Recovery Qualifier Surrogate Limits 1-Chlorooctane 157 S1+ 70 - 130 o-Terphenyl 180 S1+ 70 - 130

Lab Sample ID: 890-3499-1 MS Client Sample ID: S-9

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

**Analysis Batch: 40170** Prep Batch: 40185

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	21.9	J	999	865.2		mg/Kg		84	70 - 130	
Diesel Range Organics (Over C10-C28)	17.4	J	999	1010		mg/Kg		99	70 - 130	
	MS	MS								

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: 890-3499-1 MSD Client Sample ID: S-9 **Matrix: Solid** Prep Type: Total/NA

**Analysis Batch: 40170** Prep Batch: 40185

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	21.9	J	999	1028		mg/Kg		101	70 - 130	17	20
Diesel Range Organics (Over	17.4	J	999	1191		mg/Kg		117	70 - 130	16	20
C10-C28)											

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	113		70 - 130
o-Terphenyl	118		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40004/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 40156** 

<b>,</b>									
	MB	MB							
Analyte	Result	Qualifier	RL	MDL (	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.395	U	5.00	0.395 r	ma/Ka			11/22/22 16:43	1

Lab Sample ID: LCS 880-40004/2-A **Client Sample ID: Lab Control Sample** Matrix: Solid **Prep Type: Soluble** 

Analysis Batch: 40156

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	257.4		mg/Kg		103	90 - 110	

Client: Talon/LPE Job ID: 890-3499-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-40004/3-A

Client Sample ID: Lab Control Sample Dup
Matrix: Solid

Prep Type: Soluble

Analysis Batch: 40156

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	256.4		mg/Kg		103	90 - 110	0	20

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## **QC Association Summary**

Client: Talon/LPE Job ID: 890-3499-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

**GC VOA** 

Prep Batch: 40235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3499-1	S-9	Total/NA	Solid	5035	
890-3499-2	S-9	Total/NA	Solid	5035	
890-3499-3	S-9	Total/NA	Solid	5035	
MB 880-40235/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40235/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40235/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 40267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3499-1	S-9	Total/NA	Solid	8021B	40235
890-3499-2	S-9	Total/NA	Solid	8021B	40235
890-3499-3	S-9	Total/NA	Solid	8021B	40235
MB 880-40235/5-A	Method Blank	Total/NA	Solid	8021B	40235
MB 880-40278/5-A	Method Blank	Total/NA	Solid	8021B	40278
LCS 880-40235/1-A	Lab Control Sample	Total/NA	Solid	8021B	40235
LCSD 880-40235/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40235

Prep Batch: 40278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-40278/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 40474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3499-1	S-9	Total/NA	Solid	Total BTEX	
890-3499-2	S-9	Total/NA	Solid	Total BTEX	
890-3499-3	S-9	Total/NA	Solid	Total BTEX	

**GC Semi VOA** 

Analysis Batch: 40170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3499-1	S-9	Total/NA	Solid	8015B NM	40185
890-3499-2	S-9	Total/NA	Solid	8015B NM	40185
890-3499-3	S-9	Total/NA	Solid	8015B NM	40185
MB 880-40185/1-A	Method Blank	Total/NA	Solid	8015B NM	40185
LCS 880-40185/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40185
LCSD 880-40185/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40185
890-3499-1 MS	S-9	Total/NA	Solid	8015B NM	40185
890-3499-1 MSD	S-9	Total/NA	Solid	8015B NM	40185

Prep Batch: 40185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3499-1	S-9	Total/NA	Solid	8015NM Prep	
890-3499-2	S-9	Total/NA	Solid	8015NM Prep	
890-3499-3	S-9	Total/NA	Solid	8015NM Prep	
MB 880-40185/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40185/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40185/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3499-1 MS	S-9	Total/NA	Solid	8015NM Prep	
890-3499-1 MSD	S-9	Total/NA	Solid	8015NM Prep	

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# **QC Association Summary**

Client: Talon/LPE Job ID: 890-3499-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

GC Semi VOA

Analysis Batch: 40304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3499-1	S-9	Total/NA	Solid	8015 NM	
890-3499-2	S-9	Total/NA	Solid	8015 NM	
890-3499-3	S-9	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 40004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3499-1	S-9	Soluble	Solid	DI Leach	
890-3499-2	S-9	Soluble	Solid	DI Leach	
890-3499-3	S-9	Soluble	Solid	DI Leach	
MB 880-40004/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40004/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40004/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 40156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3499-1	S-9	Soluble	Solid	300.0	40004
890-3499-2	S-9	Soluble	Solid	300.0	40004
890-3499-3	S-9	Soluble	Solid	300.0	40004
MB 880-40004/1-A	Method Blank	Soluble	Solid	300.0	40004
LCS 880-40004/2-A	Lab Control Sample	Soluble	Solid	300.0	40004
LCSD 880-40004/3-A	Lab Control Sample Dun	Soluble	Solid	300.0	40004

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Job ID: 890-3499-1

Client: Talon/LPE Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Client Sample ID: S-9 Lab Sample ID: 890-3499-1

Date Collected: 11/14/22 10:01 Matrix: Solid Date Received: 11/17/22 14:27

	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	40235	11/22/22 15:31	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40267	11/24/22 04:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40474	11/28/22 14:50	SM	EET MID
Total/NA	Analysis	8015 NM		1			40304	11/23/22 12:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	40185	11/22/22 09:47	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40170	11/22/22 10:59	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	40004	11/21/22 16:10	СН	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40156	11/22/22 19:16	SMC	EET MID

Client Sample ID: S-9 Lab Sample ID: 890-3499-2 Matrix: Solid

Date Collected: 11/14/22 10:56 Date Received: 11/17/22 14:27

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	40235	11/22/22 15:31	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40267	11/24/22 04:35	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40474	11/28/22 14:50	SM	EET MID
Total/NA	Analysis	8015 NM		1			40304	11/23/22 12:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	40185	11/22/22 09:47	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40170	11/22/22 12:04	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	40004	11/21/22 16:10	СН	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40156	11/22/22 19:21	SMC	EET MIC

Client Sample ID: S-9 Lab Sample ID: 890-3499-3

Date Collected: 11/14/22 11:49 **Matrix: Solid** Date Received: 11/17/22 14:27

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	40235	11/22/22 15:31	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40267	11/24/22 04:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40474	11/28/22 14:50	SM	EET MID
Total/NA	Analysis	8015 NM		1			40304	11/23/22 12:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	40185	11/22/22 09:47	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40170	11/22/22 12:26	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	40004	11/21/22 16:10	СН	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40156	11/22/22 19:27	SMC	EET MID

Laboratory References:

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

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## **Accreditation/Certification Summary**

Client: Talon/LPE Job ID: 890-3499-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

#### **Laboratory: Eurofins Midland**

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

Authority	Pr	ogram	Identification Number	<b>Expiration Date</b>
Texas	NE	ELAP	T104704400-22-24	06-30-23
The following analytes	are included in this report, bu	it the laboratory is not certific	ed by the governing authority. This list ma	av include analytes for
the agency does not of	fer certification.	•	, , ,	.,
the agency does not of Analysis Method	fer certification .  Prep Method	Matrix	Analyte	-,
0 ,		Matrix Solid	Analyte Total TPH	

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#### **Method Summary**

Client: Talon/LPE Job ID: 890-3499-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Method **Method Description** Protocol Laboratory 8021B Volatile Organic Compounds (GC) SW846 EET MID **Total BTEX Calculation** Total BTEX 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 MCAWW **EET MID** 5035 SW846 **EET MID** Closed System Purge and Trap 8015NM Prep Microextraction SW846 EET MID DI Leach Deionized Water Leaching Procedure ASTM **EET MID** 

#### **Protocol References:**

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

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## **Sample Summary**

Client: Talon/LPE

Project/Site: Marathon AGI State 2H

Job ID: 890-3499-1

SDG: 700438.303.01

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3499-1	S-9	Solid	11/14/22 10:01	11/17/22 14:27	12
890-3499-2	S-9	Solid	11/14/22 10:56	11/17/22 14:27	16
890-3499-3	S-9	Solid	11/14/22 11:49	11/17/22 14:27	17

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Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Revised Date: 08/25/2020 Rev. 2020.2

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# Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

**Environment Testing** 

 www.xenco.com	
Work Order Comments	
Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐	
State of Project:	
Reporting: Level II  Level III PST/UST TRRP Level IV	
Deliverables: EDD ☐ ADaPT ☐ Other:	

City, State ZIP: /	Artesia, NM 88210		Cit	City, State ZIP:	_					Reporting: Li	ever II Level I	Reporting: Level II   Level II   Pol/Usi   IRRF   Level IV
	575.746.8768		Email: Ch	Email: Chensley@talonlpe.com	nipe.co	m				Deliverables: EDD	); EDD [	ADaPT Other:
Project Name:	Marathon AGI State 2H	tate 2H	Turn Around	ound					ANALYSIS REQUEST	REQUEST		Preservative Codes
Project Number:	700438.303.01		√Routine [		Pres. Code							None: NO DI Water: H <sub>2</sub> O
Project Location:	Eddy county		Due Date:									Cool: Cool MeOH: Me
Sampler's Name:	Chad Hensley		TAT starts the day received by	y received by					-	-	-	HCL: HC HNO <sub>3</sub> : HN
PO #:	N/A	)	the lab, if received by 4:30pm	d by 4:30pm	rs	-						H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> NaOH: Na
SAMPLE RECEIPT	Tema Blank:	(Yes)No	Wet ice:	Yes No	nete							H <sub>3</sub> PO <sub>4</sub> : HP
Samples Received Intact:	act: Yes No	Thermometer ID:	7	10001	aran							NaHSO <sub>4</sub> : NABIS
Cooler Custody Seals:	Yes No MA	Correction Factor:		10.0	Pa			_	890-3499 C	890-3499 Chain of Custody		Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>
Sample Custody Seals	Yes No WIA	Temperature Reading:		ام						Similar Sustany		Zn Acetate+NaOH: Zn
Total Containers:		Corrected Temperature:	perature:	0		_		_	<del>-</del> -		_	NaOH+Ascorbic Acid: SAPC
Sample Identification	fication Matrix	Date Sampled	Time D.	Depth Grab/	# of Cont	CL BTEX	TPH					Sample Comments
8-9	Soil	11/14/2022	10:01 12'	Grab/		×	×		-			
S-9	Soil	11/14/2022	10:56 16'	Grab/		×	×		-			
S-9	Soil	11/14/2022	11:49 17	' Grab/		×	×					
	Soil				_	×	×					
	Soil				_	×	×					
	Soil				_	×	×					
	Soil				_	×	×	-				
	Soil					*	* *					
	Soil					×	×					
	Soil				-	×	×	-				
Total 200.7 / 6010	0 200.8 / 6020:	8RCRA	13PPM	Texas 11 Al Sb As Ba Be	Al Sb	As Ba	Ве В	Cd Ca	Cr Co Cu Fe Pl	0	Ni K Se Ag	Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Tl Sn U V Zn
Circle Method(s) and	Circle Method(s) and Metal(s) to be analyzed	zed	TCLP / SPLP 6010: 8RCRA	6010: 8RC	и	Sb As I	Ba Be	Cd Cr Co	o Cu Pb Mn Mc	Ni Se Ag	TI U Hg	Hg: 1631 / 245.1 / 7470 / 7471
Notice: Signature of this do	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions	of samples constitut	tes a valid purcha	se order from cli	ent comp	any to Eu	ırofins Xı	nco, its affilia	tes and subcontracto	ors. It assigns standa	ird terms and condi	itions
of Service. Eurofins Xenco of Eurofins Xenco. A minin	of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the chefin a sound a commission of service. Eurofins Xenco, A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	st of samples and sn applied to each pro	ject and a charge	of \$5 for each sa	imple sub	mitted to	Eurofine	Xenco, but n	ot analyzed. These te	erms will be enforced	ns will be enforced unless previously negotia	regotiated.

Project Manager: Company Name:

Chad Hensley

Bill to: (if different) Company Name: Address:

Jermey Haas

EOG

408 W. Texas Ave. Talon LPE

Work Order No:

## **Login Sample Receipt Checklist**

Client: Talon/LPE Job Number: 890-3499-1

SDG Number: 700438.303.01

Login Number: 3499 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

#### **Login Sample Receipt Checklist**

Client: Talon/LPE Job Number: 890-3499-1 SDG Number: 700438.303.01

**List Source: Eurofins Midland** 

Login Number: 3499 List Number: 2 List Creation: 11/21/22 08:46 AM

Creator: Rodriguez, Leticia

<6mm (1/4").

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	

**Eurofins Carlsbad** Released to Imaging: 2/3/2023 7:32:20 AM

**Environment Testing** 

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Chad Hensley Talon/LPE 408 W. Texas St. Artesia, New Mexico 88210

Generated 11/30/2022 9:58:19 AM

**JOB DESCRIPTION** 

Marathon AGI State 2H SDG NUMBER 700438.303.01

**JOB NUMBER** 

890-3500-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Released to Imaging: 2/3/2023 7:32:20 AM

# **Eurofins Carlsbad**

## **Job Notes**

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

## **Authorization**

Generated 11/30/2022 9:58:19 AM

Authorized for release by Jessica Kramer, Project Manager <u>Jessica.Kramer@et.eurofinsus.com</u> (432)704-5440 2

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Client: Talon/LPE Laboratory Job ID: 890-3500-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

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#### **Definitions/Glossary**

Client: Talon/LPE Job ID: 890-3500-1 Project/Site: Marathon AGI State 2H

SDG: 700438.303.01

#### **Qualifiers**

**GC VOA** 

Qualifier **Qualifier Description** Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U Indicates the analyte was analyzed for but not detected.

#### **GC Semi VOA**

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

#### HPLC/IC

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

Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE) MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry) Method Detection Limit MDL

MLMinimum 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)

RLReporting Limit or Requested Limit (Radiochemistry)

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

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**Eurofins Carlsbad** 

#### **Case Narrative**

Job ID: 890-3500-1 Client: Talon/LPE

Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Job ID: 890-3500-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-3500-1

#### Receipt

The samples were received on 11/17/2022 2:27 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 2.0°C

#### GC VOA

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

#### GC Semi VOA

Method 8015MOD NM: The method blank for preparation batch 880-40341 and analytical batch 880-40260 contained Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-40341/2-A) and (LCSD 880-40341/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD NM: The surrogate recovery for the blank associated with preparation batch 880-40341 and analytical batch 880-40260 was outside the upper control limits.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: SWE (890-3500-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: SWW (890-3500-6). 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

Method 300\_ORGFM\_28D: The matrix spike duplicate (MSD) recoveries for preparation batch 880-40005 and analytical batch 880-40250 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.

## **Client Sample Results**

Client: Talon/LPE Job ID: 890-3500-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Project/Site. Marathon AGI State 2n

Client Sample ID: C-1

Date Collected: 11/17/22 10:09

Matrix: Solid

Date Received: 11/17/22 14:27

Sample Depth: 20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.000384	U	0.00200	0.000384	mg/Kg		11/28/22 14:18	11/29/22 17:35	
Toluene	<0.000455	U	0.00200	0.000455	mg/Kg		11/28/22 14:18	11/29/22 17:35	
Ethylbenzene	< 0.000564	U	0.00200	0.000564	mg/Kg		11/28/22 14:18	11/29/22 17:35	
m-Xylene & p-Xylene	<0.00101	U	0.00399	0.00101	mg/Kg		11/28/22 14:18	11/29/22 17:35	
o-Xylene	0.000591	J	0.00200	0.000343	mg/Kg		11/28/22 14:18	11/29/22 17:35	
Xylenes, Total	<0.00101	U	0.00399	0.00101	mg/Kg		11/28/22 14:18	11/29/22 17:35	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	85		70 - 130				11/28/22 14:18	11/29/22 17:35	
1,4-Difluorobenzene (Surr)	117		70 - 130				11/28/22 14:18	11/29/22 17:35	
Method: TAL SOP Total BTEX - 1	otal BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Method: SW846 8015 NM - Diese			GC)	MDL	Unit	D	Drangrad	Anglyzad	Dil Fa
Analyte		Qualifier				— <u> </u>	Prepared	Analyzed	
Total TPH	20.2	J	49.9	15.0	mg/Kg			11/28/22 12:39	
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDI	Unit	D	Drongrad		
				MIDE			Prepared	Analyzed	Dil Fa
	<15.0	U	49.9	15.0	mg/Kg		11/23/22 14:58	Analyzed 11/24/22 00:00	
(GRO)-C6-C10  Diesel Range Organics (Over	<15.0 20.2				mg/Kg		<u>.</u>		
(GRO)-C6-C10  Diesel Range Organics (Over C10-C28)		JB	49.9	15.0 15.0		5	11/23/22 14:58	11/24/22 00:00	
(GRO)-C6-C10  Diesel Range Organics (Over C10-C28)  Oll Range Organics (Over C28-C36)	20.2	<b>J B</b> U	49.9	15.0 15.0	mg/Kg		11/23/22 14:58	11/24/22 00:00	
(GRO)-C6-C10  Diesel Range Organics (Over C10-C28)  Oll Range Organics (Over C28-C36)  Surrogate	<b>20.2</b> <15.0	<b>J B</b> U	49.9 49.9 49.9	15.0 15.0	mg/Kg		11/23/22 14:58 11/23/22 14:58 11/23/22 14:58	11/24/22 00:00 11/24/22 00:00 11/24/22 00:00	Dil Fa
(GRO)-C6-C10  Diesel Range Organics (Over C10-C28)  Oll Range Organics (Over C28-C36)  Surrogate  1-Chlorooctane	20.2 <15.0 %Recovery	<b>J B</b> U	49.9 49.9 49.9 <b>Limits</b>	15.0 15.0	mg/Kg		11/23/22 14:58 11/23/22 14:58 11/23/22 14:58 Prepared	11/24/22 00:00 11/24/22 00:00 11/24/22 00:00 Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10  Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl  Method: MCAWW 300.0 - Anions	20.2 <15.0 **Recovery 114 115	J B U Qualifier	49.9 49.9 49.9  Limits 70 - 130 70 - 130	15.0 15.0	mg/Kg		11/23/22 14:58 11/23/22 14:58 11/23/22 14:58 Prepared 11/23/22 14:58	11/24/22 00:00 11/24/22 00:00 11/24/22 00:00 Analyzed 11/24/22 00:00	Dil Fa
(GRO)-C6-C10  Diesel Range Organics (Over C10-C28)  Oll Range Organics (Over C28-C36)  Surrogate  1-Chlorooctane o-Terphenyl	20.2 <15.0  **Recovery 114 115 s, lon Chromato	J B U Qualifier	49.9 49.9 49.9  Limits 70 - 130 70 - 130	15.0 15.0	mg/Kg		11/23/22 14:58 11/23/22 14:58 11/23/22 14:58 Prepared 11/23/22 14:58	11/24/22 00:00 11/24/22 00:00 11/24/22 00:00 Analyzed 11/24/22 00:00	Dil Fa

Client Sample ID: C-2 Lab Sample ID: 890-3500-2

Date Collected: 11/17/22 10:31 Date Received: 11/17/22 14:27

Sample Depth: 0 - 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		11/28/22 14:18	11/29/22 17:56	1
Toluene	<0.000454	U	0.00199	0.000454	mg/Kg		11/28/22 14:18	11/29/22 17:56	1
Ethylbenzene	< 0.000563	U	0.00199	0.000563	mg/Kg		11/28/22 14:18	11/29/22 17:56	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		11/28/22 14:18	11/29/22 17:56	1
o-Xylene	< 0.000343	U	0.00199	0.000343	mg/Kg		11/28/22 14:18	11/29/22 17:56	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		11/28/22 14:18	11/29/22 17:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				11/28/22 14:18	11/29/22 17:56	1

**Eurofins Carlsbad** 

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Matrix: Solid

#### Client Sample Results

Job ID: 890-3500-1 Client: Talon/LPE

Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Client Sample ID: C-2 Lab Sample ID: 890-3500-2 Date Collected: 11/17/22 10:31 Matrix: Solid

Date Received: 11/17/22 14:27 Sample Depth: 0 - 6

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

%Recovery Qualifier Limits Prepared Surrogate Analyzed Dil Fac 70 - 130 11/28/22 14:18 1,4-Difluorobenzene (Surr) 116 11/29/22 17:56

**Method: TAL SOP Total BTEX - Total BTEX Calculation** 

Analyte Result Qualifier RL MDL Unit D Analyzed Dil Fac Prepared Total BTEX <0.00101 0.00398 0.00101 mg/Kg 11/30/22 09:51

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

Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac **Total TPH** 49.9 15.0 mg/Kg 11/28/22 12:39 17.7

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

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac <15.0 U Gasoline Range Organics 49.9 15.0 mg/Kg 11/23/22 14:58 11/24/22 00:21 (GRO)-C6-C10 49.9 15.0 mg/Kg 11/23/22 14:58 11/24/22 00:21 **Diesel Range Organics (Over** 17.7 JB C10-C28) OII Range Organics (Over C28-C36) <15.0 U 49.9 15.0 mg/Kg 11/23/22 14:58 11/24/22 00:21

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1-Chlorooctane 111 70 - 130 11/23/22 14:58 11/24/22 00:21 114 70 - 130 11/23/22 14:58 11/24/22 00:21 o-Terphenyl

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac 4.96 0.392 11/23/22 11:07 Chloride 1080 mg/Kg

Lab Sample ID: 890-3500-3 **Client Sample ID: SWN** 

Date Collected: 11/17/22 10:29

Date Received: 11/17/22 14:27

Sample Depth: 4

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

MDL Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac Benzene <0.000383 U 0.00199 0.000383 mg/Kg 11/28/22 14:18 11/29/22 18:16 Toluene <0.000453 U 0.00199 0.000453 11/28/22 14:18 11/29/22 18:16 mg/Kg Ethylbenzene <0.000562 U 0.00199 0.000562 11/28/22 14:18 11/29/22 18:16 mg/Kg 0.00398 11/29/22 18:16 m-Xylene & p-Xylene <0.00100 U 0.00100 mg/Kg 11/28/22 14:18 o-Xylene <0.000342 U 0.00199 0.000342 mg/Kg 11/28/22 14:18 11/29/22 18:16 Xylenes, Total <0.00100 U 0.00398 0.00100 mg/Kg 11/28/22 14:18 11/29/22 18:16

%Recovery Qualifier Limits Dil Fac Surrogate Prepared Analyzed 70 - 130 4-Bromofluorobenzene (Surr) 91 11/28/22 14:18 11/29/22 18:16 1,4-Difluorobenzene (Surr) 121 70 - 130 11/28/22 14:18 11/29/22 18:16

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Total BTEX <0.00100 0.00398 0.00100 11/30/22 09:51 mg/Kg

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

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac **Total TPH** 49.9 15.0 mg/Kg 11/28/22 12:39 23.1

**Eurofins Carlsbad** 

**Matrix: Solid** 

Client: Talon/LPE Job ID: 890-3500-1 Project/Site: Marathon AGI State 2H SDG: 700438.303.01

**Client Sample ID: SWN** Lab Sample ID: 890-3500-3

Date Collected: 11/17/22 10:29 Matrix: Solid Date Received: 11/17/22 14:27

Sample Depth: 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	23.1	J B	49.9	15.0	mg/Kg		11/23/22 14:58	11/24/22 00:43	1
Diesel Range Organics (Over C10-C28)	<15.0	U	49.9	15.0	mg/Kg		11/23/22 14:58	11/24/22 00:43	1
Oll Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		11/23/22 14:58	11/24/22 00:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130				11/23/22 14:58	11/24/22 00:43	1
o-Terphenyl	114		70 - 130				11/23/22 14:58	11/24/22 00:43	1
Method: MCAWW 300.0 - Anions	, Ion Chromato	graphy - So	oluble						
Analyte	Dogult	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

**Client Sample ID: SWE** Lab Sample ID: 890-3500-4 **Matrix: Solid** 

25.0

1.98 mg/Kg

Date Collected: 11/17/22 10:19 Date Received: 11/17/22 14:27

Chloride

Sample Depth: 4

1260

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000387	U	0.00201	0.000387	mg/Kg		11/28/22 14:18	11/29/22 18:37	1
Toluene	< 0.000459	U	0.00201	0.000459	mg/Kg		11/28/22 14:18	11/29/22 18:37	1
Ethylbenzene	<0.000568	U	0.00201	0.000568	mg/Kg		11/28/22 14:18	11/29/22 18:37	1
m-Xylene & p-Xylene	<0.00102	U	0.00402	0.00102	mg/Kg		11/28/22 14:18	11/29/22 18:37	1
o-Xylene	< 0.000346	U	0.00201	0.000346	mg/Kg		11/28/22 14:18	11/29/22 18:37	1
Xylenes, Total	<0.00102	U	0.00402	0.00102	mg/Kg		11/28/22 14:18	11/29/22 18:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 _ 130				11/28/22 14:18	11/29/22 18:37	1
1,4-Difluorobenzene (Surr)	112		70 - 130				11/28/22 14:18	11/29/22 18:37	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00402	0.00102	mg/Kg			11/30/22 09:51	1
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	33.0	J	49.8	14.9	mg/Kg			11/28/22 12:39	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	33.0	JB	49.8	14.9	mg/Kg		11/23/22 14:58	11/24/22 01:05	1
Diesel Range Organics (Over C10-C28)	<14.9	U	49.8	14.9	mg/Kg		11/23/22 14:58	11/24/22 01:05	1
Oll Range Organics (Over C28-C36)	<14.9	U	49.8	14.9	mg/Kg		11/23/22 14:58	11/24/22 01:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	135	S1+	70 - 130				11/23/22 14:58	11/24/22 01:05	1

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11/23/22 11:15

#### **Client Sample Results**

Client: Talon/LPE Job ID: 890-3500-1 Project/Site: Marathon AGI State 2H SDG: 700438.303.01

**Client Sample ID: SWE** Lab Sample ID: 890-3500-4 Date Collected: 11/17/22 10:19

Matrix: Solid

Sample Depth: 4

Method: MCAWW 300.0 - Anions, lo	on Chromato	graphy - Sol	uble						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	124		5.03	0.397	mg/Kg			11/23/22 11:22	1

**Client Sample ID: SWS** Lab Sample ID: 890-3500-5

Date Collected: 11/17/22 10:22

Date Received: 11/17/22 14:27

Date Received: 11/17/22 14:27

Sample Depth: 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		11/28/22 14:18	11/29/22 18:57	
Toluene	<0.000454	U	0.00199	0.000454	mg/Kg		11/28/22 14:18	11/29/22 18:57	
Ethylbenzene	< 0.000563	U	0.00199	0.000563	mg/Kg		11/28/22 14:18	11/29/22 18:57	
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		11/28/22 14:18	11/29/22 18:57	
o-Xylene	< 0.000343	U	0.00199	0.000343	mg/Kg		11/28/22 14:18	11/29/22 18:57	
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		11/28/22 14:18	11/29/22 18:57	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	84		70 - 130				11/28/22 14:18	11/29/22 18:57	
1,4-Difluorobenzene (Surr)	109		70 - 130				11/28/22 14:18	11/29/22 18:57	1
Method: TAL SOP Total BTEX - T	otal BTEX Cal	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00398	0.00101	mg/Kg			11/30/22 09:51	
Method: SW846 8015 NM - Diese Analyte Total TPH	•	Qualifier	RL 49.8	MDL 14.9	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 11/28/22 12:39	Dil Fac
Method: SW846 8015B NM - Dies	ol Pango Orga	nice (DPO)	(GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	24.5	J B	49.8	14.9	mg/Kg		11/23/22 14:58	11/24/22 01:27	1
Diesel Range Organics (Over C10-C28)	<14.9	U	49.8	14.9	mg/Kg		11/23/22 14:58	11/24/22 01:27	1
Oll Range Organics (Over C28-C36)	<14.9	U	49.8	14.9	mg/Kg		11/23/22 14:58	11/24/22 01:27	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	125		70 - 130				11/23/22 14:58	11/24/22 01:27	
o-Terphenyl	128		70 - 130				11/23/22 14:58	11/24/22 01:27	
Method: MCAWW 300.0 - Anions	, Ion Chromato	ography - So	oluble						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
=							•	-	

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11/23/22 11:29

5.05

0.399 mg/Kg

14.9

Matrix: Solid

Chloride

## **Client Sample Results**

Client: Talon/LPE Job ID: 890-3500-1

Project/Site: Marathon AGI State 2H SDG: 700438.303.01

**Client Sample ID: SWW** Lab Sample ID: 890-3500-6 Date Collected: 11/17/22 10:15 Matrix: Solid Date Received: 11/17/22 14:27

Sample Depth: 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		11/28/22 14:18	11/29/22 19:18	1
Toluene	< 0.000454	U	0.00199	0.000454	mg/Kg		11/28/22 14:18	11/29/22 19:18	1
Ethylbenzene	< 0.000563	U	0.00199	0.000563	mg/Kg		11/28/22 14:18	11/29/22 19:18	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		11/28/22 14:18	11/29/22 19:18	1
o-Xylene	< 0.000343	U	0.00199	0.000343	mg/Kg		11/28/22 14:18	11/29/22 19:18	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		11/28/22 14:18	11/29/22 19:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130				11/28/22 14:18	11/29/22 19:18	1
1,4-Difluorobenzene (Surr)	102		70 - 130				11/28/22 14:18	11/29/22 19:18	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00398	0.00101	mg/Kg			11/30/22 09:51	1
: Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL 15.0		D	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH	•	Qualifier	•		Unit mg/Kg	<u>D</u>	Prepared	Analyzed 11/28/22 12:39	Dil Fac
Analyte Total TPH	Result 21.6	Qualifier J	RL 49.9			<u>D</u>	Prepared		
Analyte Total TPH Method: SW846 8015B NM - Dies	Result 21.6 sel Range Orga	Qualifier J	RL 49.9		mg/Kg	D_	Prepared Prepared		
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result 21.6 sel Range Orga	Qualifier  J  nics (DRO)  Qualifier	RL 49.9	15.0 <b>MDL</b>	mg/Kg			11/28/22 12:39	1
Analyte Total TPH  Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result 21.6 sel Range Orga	Qualifier J nics (DRO) Qualifier J B	RL 49.9 (GC)	15.0 MDL 15.0	mg/Kg		Prepared	11/28/22 12:39  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 21.6 sel Range Orga Result 21.6	Qualifier J nics (DRO) Qualifier J B	(GC) RL 49.9	15.0 MDL 15.0 15.0	mg/Kg  Unit mg/Kg		Prepared 11/23/22 14:58	11/28/22 12:39  Analyzed  11/24/22 01:48	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 21.6  sel Range Orga Result 21.6  <15.0	Qualifier J nics (DRO) Qualifier J B U	(GC)  RL 49.9  49.9	15.0 MDL 15.0 15.0	mg/Kg  Unit mg/Kg  mg/Kg		Prepared 11/23/22 14:58 11/23/22 14:58	11/28/22 12:39  Analyzed  11/24/22 01:48  11/24/22 01:48	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 21.6  sel Range Orga Result 21.6  <15.0  <15.0	Qualifier J nics (DRO) Qualifier J B U U Qualifier	RL 49.9 (GC) RL 49.9 49.9	15.0 MDL 15.0 15.0	mg/Kg  Unit mg/Kg  mg/Kg		Prepared 11/23/22 14:58 11/23/22 14:58	Analyzed 11/24/22 01:48 11/24/22 01:48	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) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	Result   21.6	Qualifier J nics (DRO) Qualifier J B U U Qualifier	RL 49.9  (GC)  RL 49.9  49.9  49.9 <i>Limits</i>	15.0 MDL 15.0 15.0	mg/Kg  Unit mg/Kg  mg/Kg		Prepared 11/23/22 14:58 11/23/22 14:58 11/23/22 14:58 Prepared	Analyzed 11/24/22 01:48 11/24/22 01:48 11/24/22 01:48 Analyzed	Dil Fac  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) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	Result   21.6	Qualifier J  nics (DRO) Qualifier J B  U  U  Qualifier S1+ S1+	RL 49.9  (GC)  RL 49.9  49.9  49.9  Limits  70 - 130  70 - 130	15.0 MDL 15.0 15.0	mg/Kg  Unit mg/Kg  mg/Kg		Prepared 11/23/22 14:58 11/23/22 14:58 11/23/22 14:58 Prepared 11/23/22 14:58	Analyzed 11/24/22 01:48 11/24/22 01:48 11/24/22 01:48 Analyzed 11/24/22 01:48	1 Dil Fac 1 1 1 1 Dil Fac 1
Analyte	Result   21.6	Qualifier J  nics (DRO) Qualifier J B  U  U  Qualifier S1+ S1+	RL 49.9  (GC)  RL 49.9  49.9  49.9  Limits  70 - 130  70 - 130	15.0 MDL 15.0 15.0	mg/Kg  Unit mg/Kg mg/Kg mg/Kg		Prepared 11/23/22 14:58 11/23/22 14:58 11/23/22 14:58 Prepared 11/23/22 14:58	Analyzed 11/24/22 01:48 11/24/22 01:48 11/24/22 01:48 Analyzed 11/24/22 01:48	1 Dil Fac 1 1 1 1 Dil Fac 1

## **Surrogate Summary**

Job ID: 890-3500-1 Client: Talon/LPE Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Rec
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3500-1	C-1	85	117	
890-3500-2	C-2	101	116	
890-3500-3	SWN	91	121	
890-3500-4	SWE	98	112	
890-3500-5	SWS	84	109	
890-3500-6	SWW	78	102	
LCS 880-40470/1-A	Lab Control Sample	87	111	
LCSD 880-40470/2-A	Lab Control Sample Dup	83	107	
MB 880-40470/5-A	Method Blank	72	109	
Surrogate Legend				
BFB = 4-Bromofluorobenzene	e (Surr)			
DFBZ = 1,4-Difluorobenzene	(Surr)			

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

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

				trop types recent
_				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3500-1	C-1	114	115	
890-3500-2	C-2	111	114	
890-3500-3	SWN	110	114	
890-3500-4	SWE	135 S1+	137 S1+	
890-3500-5	SWS	125	128	
890-3500-6	SWW	131 S1+	134 S1+	
LCS 880-40341/2-A	Lab Control Sample	126	141 S1+	
LCSD 880-40341/3-A	Lab Control Sample Dup	122	136 S1+	
MB 880-40341/1-A	Method Blank	140 S1+	149 S1+	
Surrogate Legend				

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Client: Talon/LPE Job ID: 890-3500-1 Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40470/5-A

Lab Sample ID: LCS 880-40470/1-A

**Matrix: Solid** 

**Matrix: Solid** 

Analysis Batch: 40541

Analysis Batch: 40541

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40470

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		11/28/22 14:18	11/29/22 12:12	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		11/28/22 14:18	11/29/22 12:12	1
Ethylbenzene	< 0.000565	U	0.00200	0.000565	mg/Kg		11/28/22 14:18	11/29/22 12:12	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		11/28/22 14:18	11/29/22 12:12	1
o-Xylene	< 0.000344	U	0.00200	0.000344	mg/Kg		11/28/22 14:18	11/29/22 12:12	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		11/28/22 14:18	11/29/22 12:12	1

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		70 - 130	 11/28/22 14:18	11/29/22 12:12	1
1,4-Difluorobenzene (Surr)	109		70 - 130	11/28/22 14:18	11/29/22 12:12	1

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 40470

Prep Type: Total/NA

Prep Batch: 40470

35

Spike LCS LCS Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.09656 mg/Kg 97 70 - 130 Toluene 0.100 0.1057 mg/Kg 106 70 - 130 0.100 0.09986 100 Ethylbenzene mg/Kg 70 - 130 0.200 0.1780 89 70 - 130 m-Xylene & p-Xylene mg/Kg 0.100 0.08731 70 - 130 o-Xylene mg/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

Client Sample ID: Lab Control Sample Dup

70 - 130

86

**Matrix: Solid** 

Analyte

Benzene

Toluene

o-Xylene

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 40541

Lab Sample ID: LCSD 880-40470/2-A

LCSD LCSD RPD Spike %Rec Added Result Qualifier Unit %Rec Limits RPD Limit 0.09346 0.100 mg/Kg 93 70 - 130 3 35 0.100 0.1020 mg/Kg 102 70 - 130 4 35 0.100 0.09994 mg/Kg 100 70 - 130 0 35 0.200 0.1782 mg/Kg 89 70 - 130 0 35

mg/Kg

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	83		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

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0.100

0.08553

Client: Talon/LPE Job ID: 890-3500-1 SDG: 700438.303.01 Project/Site: Marathon AGI State 2H

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

Lab Sample ID: MB 880-40341/1-A

Lab Sample ID: LCS 880-40341/2-A

Lab Sample ID: LCSD 880-40341/3-A

**Matrix: Solid** 

**Matrix: Solid** 

Analysis Batch: 40260

Analysis Batch: 40260

**Matrix: Solid** Analysis Batch: 40260 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40341

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	24.85	J	50.0	15.0	mg/Kg		11/23/22 14:58	11/23/22 20:46	1
(GRO)-C6-C10									
Diesel Range Organics (Over	23.92	J	50.0	15.0	mg/Kg		11/23/22 14:58	11/23/22 20:46	1
C10-C28)									
OII Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		11/23/22 14:58	11/23/22 20:46	1
	440	440							
	MB	MB							

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	140	S1+	70 - 130	11/23/22 14:58	11/23/22 20:46	1
o-Terphenyl	149	S1+	70 - 130	11/23/22 14:58	11/23/22 20:46	1

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 40341

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	1000	981.4		mg/Kg		98	70 - 130	
Diesel Range Organics (Over C10-C28)	1000	1013		mg/Kg		101	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	126		70 - 130
o-Terphenyl	141	S1+	70 - 130

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 40341

_	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1015		mg/Kg		101	70 - 130	3	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	978.2		mg/Kg		98	70 - 130	3	20
C10-C28)									

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	136	S1+	70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40005/1-A Client Sample ID: Method Blank

Matrix: Solid **Prep Type: Soluble** Analysis Batch: 40250

	111.0	IIID							
Analyte	Result	Qualifier	RL	MDL U	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.395	U	5.00	0.395 n	mg/Kg			11/23/22 10:25	1

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Client: Talon/LPE Job ID: 890-3500-1 Project/Site: Marathon AGI State 2H

SDG: 700438.303.01

Client Sample ID: C-1

**Prep Type: Soluble** 

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-40005/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 40250

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Chloride 250 234.2 mg/Kg 94 90 - 110

Lab Sample ID: LCSD 880-40005/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 40250** 

Spike LCSD LCSD %Rec RPD Added Result Qualifier Limit Analyte Unit D %Rec Limits RPD Chloride 250 235.5 mg/Kg 90 - 110

Lab Sample ID: 890-3500-1 MS Client Sample ID: C-1 **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 40250

%Rec Sample Sample Spike MS MS Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 906 F1 249 1137 93 90 - 110 mg/Kg

Lab Sample ID: 890-3500-1 MSD

**Matrix: Solid** 

Analysis Batch: 40250

Spike MSD MSD RPD Sample Sample %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec RPD Limit Limits 1115 F1 Chloride 906 F1 249 84 90 - 110 20 mg/Kg

**Eurofins Carlsbad** 

# **QC Association Summary**

Client: Talon/LPE Job ID: 890-3500-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

#### **GC VOA**

#### Prep Batch: 40470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3500-1	C-1	Total/NA	Solid	5035	
890-3500-2	C-2	Total/NA	Solid	5035	
890-3500-3	SWN	Total/NA	Solid	5035	
890-3500-4	SWE	Total/NA	Solid	5035	
890-3500-5	SWS	Total/NA	Solid	5035	
890-3500-6	SWW	Total/NA	Solid	5035	
MB 880-40470/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40470/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40470/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

#### Analysis Batch: 40541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3500-1	C-1	Total/NA	Solid	8021B	40470
890-3500-2	C-2	Total/NA	Solid	8021B	40470
890-3500-3	SWN	Total/NA	Solid	8021B	40470
890-3500-4	SWE	Total/NA	Solid	8021B	40470
890-3500-5	SWS	Total/NA	Solid	8021B	40470
890-3500-6	SWW	Total/NA	Solid	8021B	40470
MB 880-40470/5-A	Method Blank	Total/NA	Solid	8021B	40470
LCS 880-40470/1-A	Lab Control Sample	Total/NA	Solid	8021B	40470
LCSD 880-40470/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40470

#### Analysis Batch: 40668

Client Sample ID	Prep Type	Matrix	Method	Prep Batch
C-1	Total/NA	Solid	Total BTEX	
C-2	Total/NA	Solid	Total BTEX	
SWN	Total/NA	Solid	Total BTEX	
SWE	Total/NA	Solid	Total BTEX	
SWS	Total/NA	Solid	Total BTEX	
SWW	Total/NA	Solid	Total BTEX	
	C-1 C-2 SWN SWE SWS	C-1 Total/NA C-2 Total/NA SWN Total/NA SWE Total/NA SWS Total/NA	C-1         Total/NA         Solid           C-2         Total/NA         Solid           SWN         Total/NA         Solid           SWE         Total/NA         Solid           SWS         Total/NA         Solid	C-1 Total/NA Solid Total BTEX C-2 Total/NA Solid Total BTEX SWN Total/NA Solid Total BTEX SWE Total/NA Solid Total BTEX SWE Total/NA Solid Total BTEX SWS Total/NA Solid Total BTEX

#### **GC Semi VOA**

#### Analysis Batch: 40260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3500-1	C-1	Total/NA	Solid	8015B NM	40341
890-3500-2	C-2	Total/NA	Solid	8015B NM	40341
890-3500-3	SWN	Total/NA	Solid	8015B NM	40341
890-3500-4	SWE	Total/NA	Solid	8015B NM	40341
890-3500-5	sws	Total/NA	Solid	8015B NM	40341
890-3500-6	SWW	Total/NA	Solid	8015B NM	40341
MB 880-40341/1-A	Method Blank	Total/NA	Solid	8015B NM	40341
LCS 880-40341/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40341
LCSD 880-40341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40341

#### Prep Batch: 40341

<del>_</del>					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3500-1	C-1	Total/NA	Solid	8015NM Prep	
890-3500-2	C-2	Total/NA	Solid	8015NM Prep	
890-3500-3	SWN	Total/NA	Solid	8015NM Prep	
890-3500-4	SWE	Total/NA	Solid	8015NM Prep	

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## **QC Association Summary**

Client: Talon/LPE Job ID: 890-3500-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

#### GC Semi VOA (Continued)

#### Prep Batch: 40341 (Continued)

<b>Lab Sample ID</b> 890-3500-5	Client Sample ID SWS	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
				•	
890-3500-6	SWW	Total/NA	Solid	8015NM Prep	
MB 880-40341/1-A LCS 880-40341/2-A	Method Blank	Total/NA	Solid	8015NM Prep	
	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 40460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3500-1	C-1	Total/NA	Solid	8015 NM	
890-3500-2	C-2	Total/NA	Solid	8015 NM	
890-3500-3	SWN	Total/NA	Solid	8015 NM	
890-3500-4	SWE	Total/NA	Solid	8015 NM	
890-3500-5	SWS	Total/NA	Solid	8015 NM	
890-3500-6	SWW	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 40005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3500-1	C-1	Soluble	Solid	DI Leach	
890-3500-2	C-2	Soluble	Solid	DI Leach	
890-3500-3	SWN	Soluble	Solid	DI Leach	
890-3500-4	SWE	Soluble	Solid	DI Leach	
890-3500-5	SWS	Soluble	Solid	DI Leach	
890-3500-6	SWW	Soluble	Solid	DI Leach	
MB 880-40005/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40005/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40005/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3500-1 MS	C-1	Soluble	Solid	DI Leach	
890-3500-1 MSD	C-1	Soluble	Solid	DI Leach	

#### Analysis Batch: 40250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3500-1	C-1	Soluble	Solid	300.0	40005
890-3500-2	C-2	Soluble	Solid	300.0	40005
890-3500-3	SWN	Soluble	Solid	300.0	40005
890-3500-4	SWE	Soluble	Solid	300.0	40005
890-3500-5	SWS	Soluble	Solid	300.0	40005
890-3500-6	SWW	Soluble	Solid	300.0	40005
MB 880-40005/1-A	Method Blank	Soluble	Solid	300.0	40005
LCS 880-40005/2-A	Lab Control Sample	Soluble	Solid	300.0	40005
LCSD 880-40005/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40005
890-3500-1 MS	C-1	Soluble	Solid	300.0	40005
890-3500-1 MSD	C-1	Soluble	Solid	300.0	40005

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Client: Talon/LPE Job ID: 890-3500-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Client Sample ID: C-1 Lab Sample ID: 890-3500-1

Date Collected: 11/17/22 10:09

Date Received: 11/17/22 14:27

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			5.01 g	5 mL	40470	11/28/22 14:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40541	11/29/22 17:35	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40668	11/30/22 09:51	SM	EET MID
Total/NA	Analysis	8015 NM		1			40460	11/28/22 12:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	40341	11/23/22 14:58	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40260	11/24/22 00:00	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	40005	11/20/22 12:12	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40250	11/23/22 10:46	SMC	EET MID

Client Sample ID: C-2 Lab Sample ID: 890-3500-2

Date Collected: 11/17/22 10:31

Date Received: 11/17/22 14:27

Matrix: Solid

Dil Initial Final Batch Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Prep 5035 Total/NA 5.02 g 5 mL 40470 11/28/22 14:18 MNR EET MID Total/NA 8021B 11/29/22 17:56 **EET MID** Analysis 1 5 mL 5 mL 40541 MNR Total/NA Total BTEX 40668 11/30/22 09:51 Analysis SM **EET MID** 1 Total/NA Analysis 8015 NM 40460 11/28/22 12:39 SM **EET MID** Total/NA Prep 8015NM Prep 10.03 g 10 mL 40341 11/23/22 14:58 EET MID AM Total/NA Analysis 8015B NM 1 uL 1 uL 40260 11/24/22 00:21 SM **EET MID** Soluble Leach DI Leach 5.04 g 50 mL 40005 11/20/22 12:12 CH **EET MID** 

Client Sample ID: SWN Lab Sample ID: 890-3500-3

50 mL

50 mL

40250

11/23/22 11:07

SMC

**EET MID** 

Date Collected: 11/17/22 10:29 Matrix: Solid
Date Received: 11/17/22 14:27

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	40470	11/28/22 14:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40541	11/29/22 18:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40668	11/30/22 09:51	SM	EET MID
Total/NA	Analysis	8015 NM		1			40460	11/28/22 12:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	40341	11/23/22 14:58	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40260	11/24/22 00:43	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	40005	11/20/22 12:12	CH	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	40250	11/23/22 11:15	SMC	EET MID

Client Sample ID: SWE Lab Sample ID: 890-3500-4

Date Collected: 11/17/22 10:19 Matrix: Solid
Date Received: 11/17/22 14:27

	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	40470	11/28/22 14:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40541	11/29/22 18:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40668	11/30/22 09:51	SM	EET MID

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1/20/2022

Soluble

Analysis

300.0

Client: Talon/LPE Job ID: 890-3500-1 Project/Site: Marathon AGI State 2H SDG: 700438.303.01

**Client Sample ID: SWE** Lab Sample ID: 890-3500-4

Date Collected: 11/17/22 10:19 Matrix: Solid Date Received: 11/17/22 14:27

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	е Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	_		40460	11/28/22 12:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	40341	11/23/22 14:58	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40260	11/24/22 01:05	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	40005	11/20/22 12:12	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40250	11/23/22 11:22	SMC	EET MID

**Client Sample ID: SWS** Lab Sample ID: 890-3500-5

Date Collected: 11/17/22 10:22 Date Received: 11/17/22 14:27

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	40470	11/28/22 14:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40541	11/29/22 18:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40668	11/30/22 09:51	SM	EET MID
Total/NA	Analysis	8015 NM		1			40460	11/28/22 12:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	40341	11/23/22 14:58	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40260	11/24/22 01:27	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	40005	11/20/22 12:12	СН	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40250	11/23/22 11:29	SMC	EET MID

**Client Sample ID: SWW** Lab Sample ID: 890-3500-6

Date Collected: 11/17/22 10:15 Date Received: 11/17/22 14:27

	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	40470	11/28/22 14:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40541	11/29/22 19:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40668	11/30/22 09:51	SM	EET MID
Total/NA	Analysis	8015 NM		1			40460	11/28/22 12:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	40341	11/23/22 14:58	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40260	11/24/22 01:48	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	40005	11/20/22 12:12	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40250	11/23/22 11:51	SMC	EET MID

Laboratory References:

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

**Eurofins Carlsbad** 

**Matrix: Solid** 

**Matrix: Solid** 

## **Accreditation/Certification Summary**

Client: Talon/LPE Job ID: 890-3500-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

#### **Laboratory: Eurofins Midland**

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

Authority Texas		rogram ELAP	T104704400-22-24	Expiration Date 06-30-23
The following analyte the agency does not	•	ort, but the laboratory is r	ot certified by the governing authority.	This list may include analytes for
Analysis Method	Prep Method	Matrix	Analyte	
Analysis Method 8015 NM	Prep Method	Matrix Solid	Analyte Total TPH	

#### **Method Summary**

Client: Talon/LPE Job ID: 890-3500-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

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## **Sample Summary**

Client: Talon/LPE

Project/Site: Marathon AGI State 2H

Job ID: 890-3500-1

SDG: 700438.303.01

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3500-1	C-1	Solid	11/17/22 10:09	11/17/22 14:27	20
890-3500-2	C-2	Solid	11/17/22 10:31	11/17/22 14:27	0 - 6
890-3500-3	SWN	Solid	11/17/22 10:29	11/17/22 14:27	4
890-3500-4	SWE	Solid	11/17/22 10:19	11/17/22 14:27	4
890-3500-5	SWS	Solid	11/17/22 10:22	11/17/22 14:27	4
890-3500-6	SWW	Solid	11/17/22 10:15	11/17/22 14:27	4

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EL Paso, T	Xenco
Houston, TX	<b>Environment Testing</b>
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Chain of Custody
Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (916) 585-3443, Lubbock, TX (806) 794-1296

Work Order No:

Project Manager: CI	Chad Hensley Talon LPE	Bill to: (if different) Company Name:	ifferent) Jermey Haas	www.xenco.com	Page1of pmments ields  RRC  Superfund
	408 W. Texas Ave.	Address:		State of Project:	
te ZIP:	Artesia, NM 88210	City, State ZIP:		Reporting: Level II  Level III  PST/UST  TRRP	ST TRRP Level IV
		Email: Chensley@talonlpe.com	e.com	Deliverables: EDD ADaPT	Other:
Project Name:	Marathon AGI State 2H	Turn Around	ANALYSIS REQUEST	REQUEST	Preservative Codes
Project Number:	√ Rout	ne Rush Code		Zo	None: NO DI Water: H <sub>2</sub> O
Project Location:	Eddy county Due Date:			Co	Cool: Cool MeOH: Me
Sampler's Name:		TAT starts the day received by		HC HC	HCL: HC HNO3: HN
PO#				H <sub>2</sub> c	H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> NaOH: Na
SAMPLE RECEIPT	Temp B	Yes No		H <sub>3</sub> F	H <sub>3</sub> PO <sub>4</sub> : HP
Samples Received Intact:	Yes No Thermo	Ĭ		Na	NaHSO <sub>4</sub> : NABIS
Cooler Custody Seals:	Yes No NIA	L		Na.	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>
Sample Custody Seals:	No NIA		890-3500 Chain	of Custody	Zn Acetate+NaOH: Zn
Total Containers:				- Na	NaOH+Ascorbic Acid: SAPC
Sample Identification	ication Matrix Date Time	ed Depth Comp Cont	CL BTEX TPH		Sample Comments
C-1	Soil 11/17/2022 10:09	9 20' Comp 1	× × ×		
C-2	Soil 11/17/2022 10:31	0-6"	×		
NWS	Soil 11/17/2022 10:29	4.	×		
SWE	Soil 11/17/2022 10:19	4	×		
SWS	Soil 11/17/2022 10:22	4	×		
SWW	Soil 11/17/2022 10:15	4_	×		
	Soil		×		
	Soil		× ×		
	Soil		×		
	Soil		×		
Total 200.7 / 6010	200.8 / 6020: 8RCRA	13PPM Texas 11 Al Sb	As Ba Be B Cd Ca Cr Co Cu Fe	Pb Mg Mn Mo Ni K Se Ag SiO <sub>2</sub> Na S	Sr Tl Sn U V Zn
ircle Method(s) and	Circle Method(s) and Metal(s) to be analyzed TCLP	TCLP / SPLP 6010: 8RCRA Sb As Ba Be	Cd Cr Co Cu	Se Ag TI U	Hg: 1631 / 245.1 / 7470 / 7471
tice: Signature of this doc service. Eurofins Xenco w Eurofins Xenco. A minimu	ument and relinquishment of samples constitutes a valuable in the lable only for the cost of samples and shall not a um charge of \$85.00 will be applied to each project and	id purchase order from client c issume any responsibility for ar a charge of \$5 for each sample	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	ors. It assigns standard terms and conditions are due to circumstances beyond the control erms will be enforced unless previously negotiated.	
Relinquished by: (Signature)	(Signature) A Received by: (Signature)	gnature)	Date/Time Relinquished by: (Sign	gnature) Received by: (Signature)	Date/Time
Chy/	( John Ma)	11	1-17-22 1432		
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## **Login Sample Receipt Checklist**

Client: Talon/LPE Job Number: 890-3500-1

SDG Number: 700438.303.01

Login Number: 3500 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

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11/30/2022

#### **Login Sample Receipt Checklist**

Client: Talon/LPE Job Number: 890-3500-1 SDG Number: 700438.303.01

**List Source: Eurofins Midland** 

Login Number: 3500 List Number: 2 List Creation: 11/21/22 08:46 AM

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	

<6mm (1/4").

**Environment Testing** 

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Chad Hensley Talon/LPE 408 W. Texas St. Artesia, New Mexico 88210

Generated 12/9/2022 2:32:16 PM

**JOB DESCRIPTION** 

Marathon AGI State #1 SDG NUMBER 700438.303.01

**JOB NUMBER** 

890-3595-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

# **Eurofins Carlsbad**

## **Job Notes**

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

## **Authorization**

Generated 12/9/2022 2:32:16 PM

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

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

Client: Talon/LPE Laboratory Job ID: 890-3595-1 Project/Site: Marathon AGI State #1

SDG: 700438.303.01

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## **Definitions/Glossary**

Client: Talon/LPE Job ID: 890-3595-1 Project/Site: Marathon AGI State #1

SDG: 700438.303.01

### **Qualifiers**

**GC VOA** 

Qualifier **Qualifier Description** J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

S1-Surrogate recovery exceeds control limits, low biased. U Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier **Qualifier Description** 

В Compound was found in the blank and sample.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

S1+ Surrogate recovery exceeds control limits, high biased. U Indicates the analyte was analyzed for but not detected.

**HPLC/IC** 

Qualifier **Qualifier Description** 

U Indicates the analyte was analyzed for but not detected.

**Glossary** 

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery Contains Free Liquid **CFL** 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) Limit of Detection (DoD/DOE) LOD Limit of Quantitation (DoD/DOE) LOQ

MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

MDI Method Detection Limit ML Minimum Level (Dioxin) MPN Most Probable Number MQL Method Quantitation Limit

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

PQL **Practical Quantitation Limit** 

**PRES** Presumptive QC **Quality Control** 

**RER** Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

**TNTC** Too Numerous To Count

### **Case Narrative**

Client: Talon/LPE

Project/Site: Marathon AGI State #1

Job ID: 890-3595-1

SDG: 700438.303.01

Job ID: 890-3595-1

**Laboratory: Eurofins Carlsbad** 

**Narrative** 

Job Narrative 890-3595-1

### Receipt

The samples were received on 12/7/2022 1:28 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 5.0°C

### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: C-1 (890-3595-1), C-2 (890-3595-2), SWW-1 (890-3595-3), SWE-1 (890-3595-4), SWN-1 (890-3595-5) and SWS-1 (890-3595-6).

#### **GC VOA**

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-41354 and analytical batch 880-41352 was outside the control limits.

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

#### GC Semi VOA

Method 8015MOD NM: The surrogate recovery for the blank associated with preparation batch 880-41374 and analytical batch 880-41317 was outside the upper control limits.

Method 8015MOD\_NM: The method blank for preparation batch 880-41374 and analytical batch 880-41317 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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.

**Eurofins Carlsbad** 12/9/2022

# **Client Sample Results**

Client: Talon/LPE Job ID: 890-3595-1
Project/Site: Marathon AGI State #1 SDG: 700438.303.01

Project/Site: Maratinon AGI State #1

Client Sample ID: C-1

Date Collected: 12/07/22 08:01

Date Received: 12/07/22 13:28

Lab Sample ID: 890-3595-1

Matrix: Solid

Sample Depth: 22

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000386		0.00200	0.000386			12/08/22 10:50	12/08/22 15:39	1
Toluene	<0.000457		0.00200	0.000457			12/08/22 10:50	12/08/22 15:39	1
Ethylbenzene	<0.000566	U	0.00200	0.000566			12/08/22 10:50	12/08/22 15:39	1
m-Xylene & p-Xylene	<0.00101	U	0.00401	0.00101			12/08/22 10:50	12/08/22 15:39	1
o-Xylene	0.000451	J	0.00200	0.000345	mg/Kg		12/08/22 10:50	12/08/22 15:39	1
Xylenes, Total	<0.00101	U	0.00401	0.00101				12/08/22 15:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130				12/08/22 10:50	12/08/22 15:39	1
1,4-Difluorobenzene (Surr)	98		70 - 130				12/08/22 10:50	12/08/22 15:39	1
Method: TAL SOP Total BTEX	( - Total BTE	X Calculat	tion						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00401	0.00101	mg/Kg			12/08/22 17:01	1
Method: SW846 8015 NM - Die Analyte	_	Qualifier							
			DI DI	MDI	llnit	ח	Dronarod	Analyzod	Dil Fac
Total TPH	41.1		<b>RL</b> 50.0		Unit mg/Kg	D	Prepared	Analyzed 12/09/22 11:21	Dil Fac
Total TPH	41.1	J	50.0	15.0		<u>D</u>	Prepared		
Total TPH  Method: SW846 8015B NM - E	41.1 Diesel Range	J Organics	50.0 (DRO) (GC	15.0	mg/Kg		<u> </u>	12/09/22 11:21	1
Total TPH  Method: SW846 8015B NM - E  Analyte	41.1 Diesel Range Result	J Organics Qualifier	50.0 (DRO) (GC RL	15.0 ) MDL	mg/Kg Unit	<u>D</u>	Prepared	12/09/22 11:21  Analyzed	1 Dil Fac
Total TPH  Method: SW846 8015B NM - DANALYTE  Gasoline Range Organics	41.1 Diesel Range Result	J Organics Qualifier	50.0 (DRO) (GC	15.0 ) MDL	mg/Kg		<u> </u>	12/09/22 11:21	1
Total TPH  Method: SW846 8015B NM - DANIEL CANALYTE  Gasoline Range Organics (GRO)-C6-C10  Diesel Range Organics (Over	41.1 Diesel Range Result	Organics Qualifier J B	50.0 (DRO) (GC RL	15.0 ) MDL 15.0	mg/Kg Unit		Prepared 12/08/22 12:54	12/09/22 11:21  Analyzed	1 Dil Fac
Total TPH  Method: SW846 8015B NM - DANALYTE  Gasoline Range Organics (GRO)-C6-C10	41.1 Diesel Range Result 41.1	J  Organics Qualifier JB	50.0 (GC RL 50.0)	15.0 ) MDL 15.0	mg/Kg  Unit mg/Kg		Prepared 12/08/22 12:54 12/08/22 12:54	12/09/22 11:21  Analyzed 12/08/22 21:36	Dil Fac
Total TPH  Method: SW846 8015B NM - DANIEL CANALYTE  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	41.1 Diesel Range Result 41.1 <15.0	Organics Qualifier JB U	50.0 (GC RL 50.0)	15.0 ) MDL 15.0	mg/Kg  Unit mg/Kg mg/Kg		Prepared 12/08/22 12:54 12/08/22 12:54	12/09/22 11:21  Analyzed 12/08/22 21:36 12/08/22 21:36	Dil Fac
Method: SW846 8015B NM - DANIEL Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	41.1 Diesel Range Result 41.1 <15.0	Organics Qualifier JB U	50.0 (DRO) (GC RL 50.0 50.0 50.0	15.0 ) MDL 15.0	mg/Kg  Unit mg/Kg mg/Kg		Prepared 12/08/22 12:54 12/08/22 12:54 12/08/22 12:54	12/09/22 11:21  Analyzed 12/08/22 21:36 12/08/22 21:36 12/08/22 21:36	1 Dil Fac 1 1
Method: SW846 8015B NM - DANAILY CANAILY CANAI	41.1 Diesel Range Result 41.1 <15.0 <15.0  %Recovery	Organics Qualifier JB U	50.0  (DRO) (GC RL 50.0  50.0  50.0  Limits	15.0 ) MDL 15.0	mg/Kg  Unit mg/Kg mg/Kg		Prepared 12/08/22 12:54 12/08/22 12:54 12/08/22 12:54 Prepared 12/08/22 12:54	12/09/22 11:21  Analyzed 12/08/22 21:36 12/08/22 21:36 12/08/22 21:36  Analyzed	Dil Fac  1  1  Dil Fac
Total TPH  Method: SW846 8015B NM - Example Gasoline Range Organics (GRO)-C6-C10  Diesel Range Organics (Over C10-C28)  Oll Range Organics (Over C28-C36)  Surrogate  1-Chlorooctane	41.1 Diesel Range Result 41.1 <15.0 <15.0  *Recovery 109 129	J  Organics Qualifier JB  U  U  Qualifier	50.0  (DRO) (GC RL 50.0  50.0  50.0  Limits 70-130 70-130	15.0 ) MDL 15.0 15.0	mg/Kg  Unit mg/Kg mg/Kg		Prepared 12/08/22 12:54 12/08/22 12:54 12/08/22 12:54 Prepared 12/08/22 12:54	Analyzed 12/08/22 21:36 12/08/22 21:36 12/08/22 21:36 Analyzed 12/08/22 21:36	Dil Fac  1  1  Dil Fac

Client Sample ID: C-2

Date Collected: 12/07/22 08:07

Lab Sample ID: 890-3595-2

Matrix: Solid

5.00

0.395 mg/Kg

201

Date Received: 12/07/22 13:28

Sample Depth: 2

Chloride

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000384	U	0.00200	0.000384	mg/Kg		12/08/22 10:50	12/08/22 16:00	1
Toluene	<0.000455	U	0.00200	0.000455	mg/Kg		12/08/22 10:50	12/08/22 16:00	1
Ethylbenzene	< 0.000564	U	0.00200	0.000564	mg/Kg		12/08/22 10:50	12/08/22 16:00	1
m-Xylene & p-Xylene	<0.00101	U	0.00399	0.00101	mg/Kg		12/08/22 10:50	12/08/22 16:00	1
o-Xylene	0.000542	J	0.00200	0.000343	mg/Kg		12/08/22 10:50	12/08/22 16:00	1
Xylenes, Total	<0.00101	U	0.00399	0.00101	mg/Kg		12/08/22 10:50	12/08/22 16:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				12/08/22 10:50	12/08/22 16:00	1

**Eurofins Carlsbad** 

12/08/22 19:21

2

2

4

6

8

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12

1 /

Client: Talon/LPE Job ID: 890-3595-1 Project/Site: Marathon AGI State #1 SDG: 700438.303.01

Client Sample ID: C-2 Lab Sample ID: 890-3595-2

Date Collected: 12/07/22 08:07 **Matrix: Solid** Date Received: 12/07/22 13:28

Sample Depth: 2

Method: SW846 8021B -	<b>Volatile Organic Compounds</b>	(GC) (Continued)
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Surrogate	%Recovery Qualifier	Limits	Prepared Analyzed	Dil Fac
1.4-Difluorobenzene (Surr)	100	70 - 130	12/08/22 10:50 12/08/22 16:00	

### **Method: TAL SOP Total BTEX - Total BTEX Calculation**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00101	U	0.00399	0.00101	mg/Kg			12/08/22 17:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	26.7	J	49.9	15.0	mg/Kg			12/09/22 11:21	1

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	26.7 JB	49.9	15.0	mg/Kg		12/08/22 12:54	12/08/22 22:37	1
Diesel Range Organics (Over C10-C28)	<15.0 U	49.9	15.0	mg/Kg		12/08/22 12:54	12/08/22 22:37	1
Oll Range Organics (Over C28-C36)	<15.0 U	49.9	15.0	mg/Kg		12/08/22 12:54	12/08/22 22:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130	12/08/22 12:54	12/08/22 22:37	1
o-Terphenyl	124		70 - 130	12/08/22 12:54	12/08/22 22:37	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	38.9		5.04	0.398	mg/Kg			12/08/22 19:49	1

**Client Sample ID: SWW-1** Lab Sample ID: 890-3595-3 Matrix: Solid

Date Collected: 12/07/22 08:16 Date Received: 12/07/22 13:28

Sample Depth: 1

Method: SW846 8021B -	Volatile Organic	Compounds (GC)
INICIIIUU. SYVUTU UUZ ID -	Voiatile Organic	

	Tolumo Olguino	- opou	<b>35 (55)</b>						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000381	U	0.00198	0.000381	mg/Kg		12/08/22 10:50	12/08/22 16:20	1
Toluene	< 0.000451	U	0.00198	0.000451	mg/Kg		12/08/22 10:50	12/08/22 16:20	1
Ethylbenzene	< 0.000559	U	0.00198	0.000559	mg/Kg		12/08/22 10:50	12/08/22 16:20	1
m-Xylene & p-Xylene	<0.00100	U	0.00396	0.00100	mg/Kg		12/08/22 10:50	12/08/22 16:20	1
o-Xylene	< 0.000341	U	0.00198	0.000341	mg/Kg		12/08/22 10:50	12/08/22 16:20	1
Xylenes, Total	<0.00100	U	0.00396	0.00100	mg/Kg		12/08/22 10:50	12/08/22 16:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130				12/08/22 10:50	12/08/22 16:20	1
1 / Diffuorobenzone (Surr)	105		70 120				12/08/22 10:50	12/08/22 16:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	DII Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	12/08/22 10:50	12/08/22 16:20	1
1,4-Difluorobenzene (Surr)	105		70 - 130	12/08/22 10:50	12/08/22 16:20	1

### Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00396	0.00100	mg/Kg			12/08/22 17:01	1

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	32.5 J	49.9	15.0 mg/Kg			12/09/22 11:21	1

Matrix: Solid

**Matrix: Solid** 

Lab Sample ID: 890-3595-3

Lab Sample ID: 890-3595-4

Client: Talon/LPE Job ID: 890-3595-1 Project/Site: Marathon AGI State #1 SDG: 700438.303.01

**Client Sample ID: SWW-1** 

Date Collected: 12/07/22 08:16 Date Received: 12/07/22 13:28

Sample Depth: 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	32.5	JB	49.9	15.0	mg/Kg		12/08/22 12:54	12/08/22 22:57	1
Diesel Range Organics (Over C10-C28)	<15.0	U	49.9	15.0	mg/Kg		12/08/22 12:54	12/08/22 22:57	1
Oll Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		12/08/22 12:54	12/08/22 22:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130				12/08/22 12:54	12/08/22 22:57	1
o-Terphenyl	127		70 - 130				12/08/22 12:54	12/08/22 22:57	1

Method: MCAWW 300.0 - Anio	ns, Ion Chr	omatograp	hy - Solub	le					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	329		5.03	0.397	mg/Kg			12/08/22 19:56	1

**Client Sample ID: SWE-1** 

Date Collected: 12/07/22 08:11

Date Received: 12/07/22 13:28

Sample Depth: 1

Method: SW846 8021B - Volat	ile Organic	Compoun	ds (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000748	J	0.00202	0.000388	mg/Kg		12/08/22 10:50	12/08/22 16:41	1
Toluene	<0.000460	U	0.00202	0.000460	mg/Kg		12/08/22 10:50	12/08/22 16:41	1
Ethylbenzene	<0.000570	U	0.00202	0.000570	mg/Kg		12/08/22 10:50	12/08/22 16:41	1
m-Xylene & p-Xylene	<0.00102	U	0.00403	0.00102	mg/Kg		12/08/22 10:50	12/08/22 16:41	1
o-Xylene	0.000392	J	0.00202	0.000347	mg/Kg		12/08/22 10:50	12/08/22 16:41	1
Xylenes, Total	<0.00102	U	0.00403	0.00102	mg/Kg		12/08/22 10:50	12/08/22 16:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130				12/08/22 10:50	12/08/22 16:41	1
1,4-Difluorobenzene (Surr)	108		70 - 130				12/08/22 10:50	12/08/22 16:41	1
Method: TAL SOP Total BTEX	: Total BTE	X Calcula	tion						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00114	J	0.00403	0.00102	mg/Kg			12/08/22 17:01	1
Method: SW846 8015 NM - Die	esel Range (	Organics	(DRO) (GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	40.6	J	50.0	15.0	mg/Kg			12/09/22 11:21	1
Method: SW846 8015B NM - D	Diesel Range	Organics	s (DRO) (GC)						
Analyte	_	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	40.6	JB	50.0	15.0	mg/Kg		12/08/22 12:54	12/08/22 23:17	1
Diesel Range Organics (Over C10-C28)	<15.0	U	50.0	15.0	mg/Kg		12/08/22 12:54	12/08/22 23:17	1
OII Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		12/08/22 12:54	12/08/22 23:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130				12/08/22 12:54	12/08/22 23:17	1
o-Terphenyl	119		70 - 130				12/08/22 12:54	12/08/22 23:17	1

Client: Talon/LPE Job ID: 890-3595-1 Project/Site: Marathon AGI State #1 SDG: 700438.303.01

**Client Sample ID: SWE-1** Lab Sample ID: 890-3595-4

Date Collected: 12/07/22 08:11 **Matrix: Solid** Date Received: 12/07/22 13:28

Sample Depth: 1

Method: MCAWW 300.0 - Anions	, Ion Chr	omatograph	y - Soluble						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	317		5.05	0.399	mg/Kg			12/08/22 20:04	1

**Client Sample ID: SWN-1** Lab Sample ID: 890-3595-5 Matrix: Solid

Date Collected: 12/07/22 08:21 Date Received: 12/07/22 13:28

Sample Depth: 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		12/08/22 10:50	12/08/22 17:01	1
Toluene	<0.000454	U	0.00199	0.000454	mg/Kg		12/08/22 10:50	12/08/22 17:01	1
Ethylbenzene	< 0.000563	U	0.00199	0.000563	mg/Kg		12/08/22 10:50	12/08/22 17:01	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		12/08/22 10:50	12/08/22 17:01	1
o-Xylene	< 0.000343	U	0.00199	0.000343	mg/Kg		12/08/22 10:50	12/08/22 17:01	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		12/08/22 10:50	12/08/22 17:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	75		70 - 130				12/08/22 10:50	12/08/22 17:01	1
1.4-Difluorobenzene (Surr)	105		70 - 130				12/08/22 10:50	12/08/22 17:01	1

Method: IAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00398	0.00101	mg/Kg			12/09/22 12:20	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)								
	Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
	Total TPH	38.9 J	50.0	15.0 mg/Kg			12/09/22 11:21	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	38.9	JB	50.0	15.0	mg/Kg		12/08/22 12:54	12/08/22 23:37	1
Diesel Range Organics (Over C10-C28)	<15.0	U	50.0	15.0	mg/Kg		12/08/22 12:54	12/08/22 23:37	1
Oll Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		12/08/22 12:54	12/08/22 23:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130				12/08/22 12:54	12/08/22 23:37	1
o-Terphenyl	123		70 - 130				12/08/22 12:54	12/08/22 23:37	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	210		4.95	0.391	mg/Kg			12/08/22 20:12	1

Date Collected: 12/07/22 08:29

Client: Talon/LPE Job ID: 890-3595-1
Project/Site: Marathon AGI State #1 SDG: 700438.303.01

Client Sample ID: SWS-1 Lab San

Lab Sample ID: 890-3595-6

Matrix: Solid

Date Received: 12/07/22 13:28 Sample Depth: 1

Method: SW846 8021B - Volat Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.000384	U	0.00200	0.000384	mg/Kg		12/08/22 10:50	12/08/22 20:12	
Toluene	< 0.000455	U	0.00200	0.000455	mg/Kg		12/08/22 10:50	12/08/22 20:12	
Ethylbenzene	< 0.000564	U	0.00200	0.000564	mg/Kg		12/08/22 10:50	12/08/22 20:12	
m-Xylene & p-Xylene	<0.00101	U	0.00399	0.00101	mg/Kg		12/08/22 10:50	12/08/22 20:12	
o-Xylene	0.000467	J	0.00200	0.000343	mg/Kg		12/08/22 10:50	12/08/22 20:12	
Xylenes, Total	<0.00101	U	0.00399	0.00101	mg/Kg		12/08/22 10:50	12/08/22 20:12	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
4-Bromofluorobenzene (Surr)	76		70 - 130				12/08/22 10:50	12/08/22 20:12	
1,4-Difluorobenzene (Surr)	104		70 - 130				12/08/22 10:50	12/08/22 20:12	
Method: TAL SOP Total BTEX	- Total BTE	X Calculat	ion						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Total BTEX	<0.00101	U	0.00399	0.00101	mg/Kg			12/09/22 12:20	
Method: SW846 8015 NM - Did	esel Range (	Organics (	DRO) (GC)						
	_	•	, , ,	MDI	Unit	ь	Dranarad	Anglyzad	Dile
Method: SW846 8015 NM - Did Analyte Total TPH	_	Qualifier	DRO) (GC) RL 50.0	<b>MDL</b> 15.0	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 12/09/22 11:21	Dil F
Analyte Total TPH	Result 31.8	Qualifier J	RL 50.0	15.0		<u>D</u>	Prepared		Dil F
Analyte Total TPH Method: SW846 8015B NM - D	Result 31.8 Diesel Range	Qualifier  J  Organics	RL 50.0	15.0	mg/Kg	<u>D</u>	Prepared		
Analyte Total TPH Method: SW846 8015B NM - E Analyte	Result 31.8  Diesel Range Result	Qualifier  J  Organics Qualifier	RL 50.0 (DRO) (GC)	15.0 <b>MDL</b>	mg/Kg Unit	<u>D</u>	Prepared	12/09/22 11:21  Analyzed	
Analyte Total TPH Method: SW846 8015B NM - D Analyte Gasoline Range Organics	Result 31.8 Diesel Range	Qualifier  J  Organics Qualifier	RL 50.0 (DRO) (GC)	15.0 <b>MDL</b>	mg/Kg	— <u>-</u>	<u> </u>	12/09/22 11:21	
Analyte Total TPH  Method: SW846 8015B NM - D  Analyte Gasoline Range Organics (GRO)-C6-C10  Diesel Range Organics (Over	Result 31.8  Diesel Range Result	Qualifier  J  Organics  Qualifier  J B	RL 50.0 (DRO) (GC)	15.0 MDL 15.0	mg/Kg Unit	— <u>-</u>	Prepared 12/08/22 12:54	12/09/22 11:21  Analyzed	
Analyte Total TPH  Method: SW846 8015B NM - DANALYTE  Gasoline Range Organics (GRO)-C6-C10  Diesel Range Organics (Over C10-C28)	Result 31.8  Diesel Range Result 31.8	Qualifier  J  Organics  Qualifier  J B  U	RL 50.0 (GC) RL 50.0	15.0 MDL 15.0 15.0	mg/Kg  Unit mg/Kg	— <u>-</u>	Prepared 12/08/22 12:54 12/08/22 12:54	12/09/22 11:21  Analyzed 12/08/22 23:57	
Analyte Total TPH  Method: SW846 8015B NM - DANALYTE  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result 31.8 Diesel Range Result 31.8 <15.0	Qualifier  J  Organics Qualifier  J B  U	RL 50.0  (DRO) (GC) RL 50.0  50.0	15.0 MDL 15.0 15.0	mg/Kg  Unit mg/Kg mg/Kg	— <u>-</u>	Prepared 12/08/22 12:54 12/08/22 12:54	12/09/22 11:21  Analyzed 12/08/22 23:57 12/08/22 23:57	Dil F
Analyte Total TPH  Method: SW846 8015B NM - DANALYTE  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	Result 31.8  Diesel Range Result 31.8  <15.0  <15.0	Qualifier  J  Organics Qualifier  J B  U	RL 50.0  (DRO) (GC) RL 50.0  50.0	15.0 MDL 15.0 15.0	mg/Kg  Unit mg/Kg mg/Kg	— <u>-</u>	Prepared 12/08/22 12:54 12/08/22 12:54 12/08/22 12:54	12/09/22 11:21  Analyzed 12/08/22 23:57 12/08/22 23:57 12/08/22 23:57	Dil F
Analyte Total TPH  Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	Result   31.8	Qualifier  J  Organics Qualifier  J B  U	RL 50.0  (DRO) (GC) RL 50.0  50.0  Limits	15.0 MDL 15.0 15.0	mg/Kg  Unit mg/Kg mg/Kg	— <u>-</u>	Prepared 12/08/22 12:54 12/08/22 12:54 12/08/22 12:54 Prepared 12/08/22 12:54	12/09/22 11:21  Analyzed 12/08/22 23:57 12/08/22 23:57 12/08/22 23:57 Analyzed	Dil F
Analyte	Result 31.8  Diesel Range Result 31.8  <15.0  <15.0  *Recovery  114 127	Qualifier  J  Organics Qualifier  J B  U  U  Qualifier	RL 50.0  (DRO) (GC) RL 50.0  50.0  50.0  Limits 70 - 130 70 - 130	15.0 MDL 15.0 15.0	mg/Kg  Unit mg/Kg mg/Kg	— <u>-</u>	Prepared 12/08/22 12:54 12/08/22 12:54 12/08/22 12:54 Prepared 12/08/22 12:54	Analyzed 12/08/22 23:57 12/08/22 23:57 12/08/22 23:57 12/08/22 23:57 Analyzed 12/08/22 23:57	Dil F
Analyte Total TPH  Method: SW846 8015B NM - E 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   31.8	Qualifier  J  Organics Qualifier  J B  U  U  Qualifier	RL 50.0  (DRO) (GC) RL 50.0  50.0  50.0  Limits 70 - 130 70 - 130	15.0 MDL 15.0 15.0	mg/Kg  Unit mg/Kg mg/Kg mg/Kg	— <u>-</u>	Prepared 12/08/22 12:54 12/08/22 12:54 12/08/22 12:54 Prepared 12/08/22 12:54	Analyzed 12/08/22 23:57 12/08/22 23:57 12/08/22 23:57 12/08/22 23:57 Analyzed 12/08/22 23:57	Dil F

## **Surrogate Summary**

Client: Talon/LPE Job ID: 890-3595-1 Project/Site: Marathon AGI State #1 SDG: 700438.303.01

Method: 8021B - Volatile Organic Compounds (GC)

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

			Percent Surrogate F	Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	70-130)	
890-3595-1	C-1	78	98	
890-3595-2	C-2	79	100	
890-3595-3	SWW-1	92	105	
890-3595-4	SWE-1	90	108	
890-3595-5	SWN-1	75	105	
890-3595-6	SWS-1	76	104	
LCS 880-41354/1-A	Lab Control Sample	87	111	
LCSD 880-41354/2-A	Lab Control Sample Dup	78	101	
MB 880-41354/5-A	Method Blank	69 S1-	102	
Surrogate Legend				

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

			Percent Surrog	gate Recovery (Acceptance Limits)
		1001	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3595-1	C-1	109	129	
890-3595-1 MS	C-1	115	114	
890-3595-1 MSD	C-1	117	115	
390-3595-2	C-2	108	124	
390-3595-3	SWW-1	112	127	
890-3595-4	SWE-1	106	119	
890-3595-5	SWN-1	110	123	
890-3595-6	SWS-1	114	127	
LCS 880-41374/2-A	Lab Control Sample	86	96	
LCSD 880-41374/3-A	Lab Control Sample Dup	81	91	
MB 880-41374/1-A	Method Blank	94	145 S1+	

1CO = 1-Chlorooctane OTPH = o-Terphenyl

Dil Fac

Client: Talon/LPE Job ID: 890-3595-1 Project/Site: Marathon AGI State #1 SDG: 700438.303.01

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

%Recovery Qualifier

102

69 S1-

Lab Sample ID: MB 880-41354/5-A

**Matrix: Solid** 

Surrogate

**Analysis Batch: 41352** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Prep Batch: 41354

	MB	MR							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		12/08/22 10:50	12/08/22 14:50	1
Toluene	< 0.000456	U	0.00200	0.000456	mg/Kg		12/08/22 10:50	12/08/22 14:50	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		12/08/22 10:50	12/08/22 14:50	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		12/08/22 10:50	12/08/22 14:50	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		12/08/22 10:50	12/08/22 14:50	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		12/08/22 10:50	12/08/22 14:50	1
	MB	MB							
	Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	Analyte         Result           Benzene         <0.000385           Toluene         <0.000456           Ethylbenzene         <0.000565           m-Xylene & p-Xylene         <0.00101           o-Xylene         <0.000344           Xylenes, Total         <0.00101	Senzene	Analyte         Result         Qualifier         RL           Benzene         <0.000385         U         0.00200           Toluene         <0.000456         U         0.00200           Ethylbenzene         <0.000565         U         0.00200           m-Xylene & p-Xylene         <0.00101         U         0.00400           o-Xylene         <0.000344         U         0.00200           Xylenes, Total         <0.00101         U         0.00400	Analyte         Result         Qualifier         RL         MDL           Benzene         <0.000385         U         0.00200         0.000385           Toluene         <0.000456         U         0.00200         0.000456           Ethylbenzene         <0.000565         U         0.00200         0.000565           m-Xylene & p-Xylene         <0.00101         U         0.00400         0.00101           o-Xylene         <0.000344         U         0.00200         0.000344           Xylenes, Total         <0.00101         U         0.00400         0.00101	Analyte         Result         Qualifier         RL         MDL         Unit           Benzene         <0.000385         U         0.00200         0.000385         mg/Kg           Toluene         <0.000456         U         0.00200         0.000456         mg/Kg           Ethylbenzene         <0.000565         U         0.00200         0.000565         mg/Kg           m-Xylene & p-Xylene         <0.00101         U         0.00400         0.00101         mg/Kg           o-Xylene         <0.000344         U         0.00200         0.000344         mg/Kg           Xylenes, Total         <0.00101         U         0.00400         0.00101         mg/Kg	Analyte         Result         Qualifier         RL         MDL         Unit         D           Benzene         <0.000385         U         0.00200         0.000385         mg/Kg           Toluene         <0.000456         U         0.00200         0.000456         mg/Kg           Ethylbenzene         <0.000565         U         0.00200         0.000565         mg/Kg           m-Xylene & p-Xylene         <0.00101         U         0.00400         0.00101         mg/Kg           o-Xylene         <0.000344         U         0.00200         0.000344         mg/Kg           Xylenes, Total         <0.00101         U         0.00400         0.00101         mg/Kg	Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared           Benzene         <0.000385         U         0.00200         0.000385         mg/Kg         12/08/22 10:50           Toluene         <0.000456         U         0.00200         0.000456         mg/Kg         12/08/22 10:50           Ethylbenzene         <0.000565         U         0.00200         0.000565         mg/Kg         12/08/22 10:50           m-Xylene & p-Xylene         <0.00101         U         0.00400         0.00101         mg/Kg         12/08/22 10:50           o-Xylene         <0.000344         U         0.00200         0.000344         mg/Kg         12/08/22 10:50           Xylenes, Total         <0.00101         U         0.00400         0.00101         mg/Kg         12/08/22 10:50	Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed           Benzene         <0.000385         U         0.00200         0.000385         mg/Kg         12/08/22 10:50         12/08/22 14:50           Toluene         <0.000456         U         0.00200         0.000456         mg/Kg         12/08/22 10:50         12/08/22 14:50           Ethylbenzene         <0.000565         U         0.00200         0.000565         mg/Kg         12/08/22 10:50         12/08/22 14:50           m-Xylene & p-Xylene         <0.00101         U         0.00400         0.00101         mg/Kg         12/08/22 10:50         12/08/22 14:50           xylenes, Total         <0.00101         U         0.00400         0.00101         mg/Kg         12/08/22 10:50         12/08/22 14:50

Limits

70 - 130

70 - 130

1,4-Difluorobenzene (Surr)

Lab Sample ID: LCS 880-41354/1-A **Matrix: Solid** 

**Analysis Batch: 41352** 

4-Bromofluorobenzene (Surr)

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA Prep Batch: 41354

12/08/22 10:50 12/08/22 14:50

12/08/22 10:50 12/08/22 14:50

Analyzed

Prepared

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Benzene 70 - 130 0.100 0.08787 mg/Kg 88 Toluene 0.100 0.07899 mg/Kg 79 70 - 130 Ethylbenzene 0.100 0.09052 mg/Kg 91 70 - 130 79 m-Xylene & p-Xylene 0.200 0.1589 mg/Kg 70 - 130 o-Xylene 0.100 0.07767 mg/Kg 78 70 - 130

LCS LCS %Recovery Qualifier Surrogate Limits 70 - 130 4-Bromofluorobenzene (Surr) 87 1,4-Difluorobenzene (Surr) 111 70 - 130

Lab Sample ID: LCSD 880-41354/2-A

**Matrix: Solid** 

**Analysis Batch: 41352** 

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

Prep Batch: 41354

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09484		mg/Kg		95	70 - 130	8	35
Toluene	0.100	0.1060		mg/Kg		106	70 - 130	29	35
Ethylbenzene	0.100	0.1011		mg/Kg		101	70 - 130	11	35
m-Xylene & p-Xylene	0.200	0.1739		mg/Kg		87	70 - 130	9	35
o-Xylene	0.100	0.08367		mg/Kg		84	70 - 130	7	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	78		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Client: Talon/LPE Job ID: 890-3595-1 Project/Site: Marathon AGI State #1 SDG: 700438.303.01

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

Lab Sample ID: MB 880-41374/1-A

Lab Sample ID: LCS 880-41374/2-A

**Matrix: Solid** 

**Analysis Batch: 41317** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Prep Batch: 41374

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	19.91	J	50.0	15.0	mg/Kg		12/08/22 12:54	12/08/22 20:36	1
Diesel Range Organics (Over C10-C28)	<15.0	U	50.0	15.0	mg/Kg		12/08/22 12:54	12/08/22 20:36	1
Oll Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		12/08/22 12:54	12/08/22 20:36	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	94	70 - 130	12/08/22 12:54	12/08/22 20:36	1
o-Terphenyl	145 S1+	70 - 130	12/08/22 12:54	12/08/22 20:36	1

**Client Sample ID: Lab Control Sample** 

Prep Batch: 41374

Client Sample ID: C-1

Prep Type: Total/NA

**Matrix: Solid Prep Type: Total/NA Analysis Batch: 41317** Prep Batch: 41374 LCS LCS Spike %Rec

Analyte Added Result Qualifier Unit D %Rec Limits 1000 777.3 78 70 - 130 Gasoline Range Organics mg/Kg (GRO)-C6-C10 mg/Kg Diesel Range Organics (Over 1000 902.1 90 70 - 130 C10-C28)

LCS LCS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	86	70 - 130
o-Ternhenyl	96	70 - 130

Lab Sample ID: LCSD 880-41374/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid** Prep Type: Total/NA

**Analysis Batch: 41317** 

-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	756.0		mg/Kg		76	70 - 130	3	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	876.3		mg/Kg		88	70 - 130	3	20
C10-C28)									

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	91		70 - 130

Lab Sample ID: 890-3595-1 MS **Matrix: Solid** 

Analysis Batch: 41317									Prep I	Batch: 41374
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	41.1	JB	999	1034		mg/Kg		99	70 - 130	
Diesel Range Organics (Over C10-C28)	<15.0	U	999	965.1		mg/Kg		97	70 - 130	

Client: Talon/LPE Job ID: 890-3595-1 Project/Site: Marathon AGI State #1 SDG: 700438.303.01

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

Client Sample ID: C-1 Lab Sample ID: 890-3595-1 MS **Matrix: Solid** Prep Type: Total/NA

**Analysis Batch: 41317** Prep Batch: 41374

MS MS %Recovery Qualifier Limits Surrogate 1-Chlorooctane 115 70 - 130 o-Terphenyl 114 70 - 130

Lab Sample ID: 890-3595-1 MSD Client Sample ID: C-1

**Matrix: Solid** 

**Prep Type: Total/NA** 

Prep Batch: 41374 **Analysis Batch: 41317** 

MSD MSD %Rec **RPD** Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics 41.1 JB 997 1036 mg/Kg 100 70 - 130 0 20 (GRO)-C6-C10 Diesel Range Organics (Over <15.0 U 997 972.3 mg/Kg 98 70 - 130 20

C10-C28)

MSD MSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 117 70 - 130 70 - 130 o-Terphenyl 115

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-41363/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 41403** 

MB MB RL **MDL** Unit Analyte Result Qualifier Prepared Analyzed Dil Fac 5.00 Chloride <0.395 U 0.395 mg/Kg 12/08/22 18:53

Lab Sample ID: LCS 880-41363/2-A **Client Sample ID: Lab Control Sample** 

**Matrix: Solid** 

**Analysis Batch: 41403** 

Spike LCS LCS %Rec Analyte Added Result Qualifier D %Rec Limits Unit 250 252.0 Chloride mg/Kg 101 90 - 110

Lab Sample ID: LCSD 880-41363/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid** 

**Analysis Batch: 41403** 

Spike LCSD LCSD %Rec **RPD** Added Result Qualifier Limits RPD Analyte Unit D %Rec Limit Chloride 250 252.2 mg/Kg 101 90 - 110 0

Lab Sample ID: 890-3595-1 MS Client Sample ID: C-1 **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 41403** 

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 201 250 451.5 100 90 - 110 mg/Kg

**Eurofins Carlsbad** 

**Prep Type: Soluble** 

**Prep Type: Soluble** 

# **QC Sample Results**

Client: Talon/LPE Job ID: 890-3595-1 Project/Site: Marathon AGI State #1 SDG: 700438.303.01

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-3595-1 MSD Client Sample ID: C-1 **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 41403** 

•	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	201		250	452.2		mg/Kg		100	90 - 110	0	20

# **QC Association Summary**

Client: Talon/LPE Job ID: 890-3595-1
Project/Site: Marathon AGI State #1 SDG: 700438.303.01

## **GC VOA**

## **Analysis Batch: 41352**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3595-1	C-1	Total/NA	Solid	8021B	41354
890-3595-2	C-2	Total/NA	Solid	8021B	41354
890-3595-3	SWW-1	Total/NA	Solid	8021B	41354
890-3595-4	SWE-1	Total/NA	Solid	8021B	41354
890-3595-5	SWN-1	Total/NA	Solid	8021B	41354
890-3595-6	SWS-1	Total/NA	Solid	8021B	41354
MB 880-41354/5-A	Method Blank	Total/NA	Solid	8021B	41354
LCS 880-41354/1-A	Lab Control Sample	Total/NA	Solid	8021B	41354
LCSD 880-41354/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	41354

### Prep Batch: 41354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3595-1	C-1	Total/NA	Solid	5035	
890-3595-2	C-2	Total/NA	Solid	5035	
890-3595-3	SWW-1	Total/NA	Solid	5035	
890-3595-4	SWE-1	Total/NA	Solid	5035	
890-3595-5	SWN-1	Total/NA	Solid	5035	
890-3595-6	SWS-1	Total/NA	Solid	5035	
MB 880-41354/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-41354/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-41354/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

## Analysis Batch: 41404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3595-1	C-1	Total/NA	Solid	Total BTEX	
890-3595-2	C-2	Total/NA	Solid	Total BTEX	
890-3595-3	SWW-1	Total/NA	Solid	Total BTEX	
890-3595-4	SWE-1	Total/NA	Solid	Total BTEX	
890-3595-5	SWN-1	Total/NA	Solid	Total BTEX	
890-3595-6	SWS-1	Total/NA	Solid	Total BTEX	

## GC Semi VOA

## **Analysis Batch: 41317**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3595-1	C-1	Total/NA	Solid	8015B NM	41374
890-3595-2	C-2	Total/NA	Solid	8015B NM	41374
890-3595-3	SWW-1	Total/NA	Solid	8015B NM	41374
890-3595-4	SWE-1	Total/NA	Solid	8015B NM	41374
890-3595-5	SWN-1	Total/NA	Solid	8015B NM	41374
890-3595-6	SWS-1	Total/NA	Solid	8015B NM	41374
MB 880-41374/1-A	Method Blank	Total/NA	Solid	8015B NM	41374
LCS 880-41374/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41374
LCSD 880-41374/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41374
890-3595-1 MS	C-1	Total/NA	Solid	8015B NM	41374
890-3595-1 MSD	C-1	Total/NA	Solid	8015B NM	41374

## Prep Batch: 41374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3595-1	C-1	Total/NA	Solid	8015NM Prep	
890-3595-2	C-2	Total/NA	Solid	8015NM Prep	

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# **QC Association Summary**

Job ID: 890-3595-1 Client: Talon/LPE Project/Site: Marathon AGI State #1 SDG: 700438.303.01

# GC Semi VOA (Continued)

## Prep Batch: 41374 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3595-3	SWW-1	Total/NA	Solid	8015NM Prep	
890-3595-4	SWE-1	Total/NA	Solid	8015NM Prep	
890-3595-5	SWN-1	Total/NA	Solid	8015NM Prep	
890-3595-6	SWS-1	Total/NA	Solid	8015NM Prep	
MB 880-41374/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41374/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41374/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3595-1 MS	C-1	Total/NA	Solid	8015NM Prep	
890-3595-1 MSD	C-1	Total/NA	Solid	8015NM Prep	

## **Analysis Batch: 41448**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3595-1	C-1	Total/NA	Solid	8015 NM	
890-3595-2	C-2	Total/NA	Solid	8015 NM	
890-3595-3	SWW-1	Total/NA	Solid	8015 NM	
890-3595-4	SWE-1	Total/NA	Solid	8015 NM	
890-3595-5	SWN-1	Total/NA	Solid	8015 NM	
890-3595-6	SWS-1	Total/NA	Solid	8015 NM	

## HPLC/IC

### Leach Batch: 41363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3595-1	C-1	Soluble	Solid	DI Leach	
890-3595-2	C-2	Soluble	Solid	DI Leach	
890-3595-3	SWW-1	Soluble	Solid	DI Leach	
890-3595-4	SWE-1	Soluble	Solid	DI Leach	
890-3595-5	SWN-1	Soluble	Solid	DI Leach	
890-3595-6	SWS-1	Soluble	Solid	DI Leach	
MB 880-41363/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-41363/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-41363/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3595-1 MS	C-1	Soluble	Solid	DI Leach	
890-3595-1 MSD	C-1	Soluble	Solid	DI Leach	

## **Analysis Batch: 41403**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3595-1	C-1	Soluble	Solid	300.0	41363
890-3595-2	C-2	Soluble	Solid	300.0	41363
890-3595-3	SWW-1	Soluble	Solid	300.0	41363
890-3595-4	SWE-1	Soluble	Solid	300.0	41363
890-3595-5	SWN-1	Soluble	Solid	300.0	41363
890-3595-6	SWS-1	Soluble	Solid	300.0	41363
MB 880-41363/1-A	Method Blank	Soluble	Solid	300.0	41363
LCS 880-41363/2-A	Lab Control Sample	Soluble	Solid	300.0	41363
LCSD 880-41363/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	41363
890-3595-1 MS	C-1	Soluble	Solid	300.0	41363
890-3595-1 MSD	C-1	Soluble	Solid	300.0	41363

SDG: 700438.303.01

Client Sample ID: C-1

Client: Talon/LPE

Date Collected: 12/07/22 08:01 Date Received: 12/07/22 13:28

Project/Site: Marathon AGI State #1

Lab Sample ID: 890-3595-1

**Matrix: Solid** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	41354	12/08/22 10:50	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	41352	12/08/22 15:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			41404	12/08/22 17:01	SM	EET MID
Total/NA	Analysis	8015 NM		1			41448	12/09/22 11:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	41374	12/08/22 12:54	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	41317	12/08/22 21:36	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	41363	12/08/22 12:11	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	41403	12/08/22 19:21	CH	EET MID

Client Sample ID: C-2 Lab Sample ID: 890-3595-2 **Matrix: Solid** 

Date Collected: 12/07/22 08:07 Date Received: 12/07/22 13:28

Batch Batch Dil Initial Final Batch Prepared **Prep Type** Method Number Type Run **Factor Amount** Amount or Analyzed **Analyst** Lab Total/NA Prep 5035 41354 12/08/22 10:50 MNR EET MID 5.01 g 5 mL Total/NA 8021B 5 mL 41352 12/08/22 16:00 MNR **EET MID** Analysis 5 mL 1 Total/NA Total BTEX Analysis 1 41404 12/08/22 17:01 SM **EET MID** Total/NA 8015 NM 41448 **EET MID** Analysis 1 12/09/22 11:21 SM Total/NA Prep 8015NM Prep 10.02 g 10 mL 41374 12/08/22 12:54 DM **EET MID** Total/NA 8015B NM 41317 12/08/22 22:37 SM **EET MID** Analysis 1 uL 1 uL Soluble 4.96 g 50 mL 41363 12/08/22 12:11 KS Leach DI Leach **EET MID** Soluble 300.0 50 mL 41403 12/08/22 19:49 CH Analysis 1 50 mL **EET MID** 

Client Sample ID: SWW-1 Lab Sample ID: 890-3595-3 Date Collected: 12/07/22 08:16 Matrix: Solid

Date Received: 12/07/22 13:28

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	41354	12/08/22 10:50	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	41352	12/08/22 16:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			41404	12/08/22 17:01	SM	EET MID
Total/NA	Analysis	8015 NM		1			41448	12/09/22 11:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	41374	12/08/22 12:54	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	41317	12/08/22 22:57	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	41363	12/08/22 12:11	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	41403	12/08/22 19:56	CH	EET MID

**Client Sample ID: SWE-1** Lab Sample ID: 890-3595-4 Date Collected: 12/07/22 08:11 **Matrix: Solid** 

Date Received: 12/07/22 13:28

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	41354	12/08/22 10:50	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	41352	12/08/22 16:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			41404	12/08/22 17:01	SM	EET MID

**Eurofins Carlsbad** 

Page 18 of 25

Client: Talon/LPE Job ID: 890-3595-1 Project/Site: Marathon AGI State #1 SDG: 700438.303.01

**Client Sample ID: SWE-1** Lab Sample ID: 890-3595-4

Matrix: Solid

Date Collected: 12/07/22 08:11 Date Received: 12/07/22 13:28

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			41448	12/09/22 11:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	41374	12/08/22 12:54	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	41317	12/08/22 23:17	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	41363	12/08/22 12:11	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	41403	12/08/22 20:04	CH	EET MID

**Client Sample ID: SWN-1** Lab Sample ID: 890-3595-5 Date Collected: 12/07/22 08:21 **Matrix: Solid** 

Date Received: 12/07/22 13:28

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	41354	12/08/22 10:50	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	41352	12/08/22 17:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			41404	12/09/22 12:20	SM	EET MID
Total/NA	Analysis	8015 NM		1			41448	12/09/22 11:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	41374	12/08/22 12:54	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	41317	12/08/22 23:37	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	41363	12/08/22 12:11	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	41403	12/08/22 20:12	CH	EET MID

Lab Sample ID: 890-3595-6 **Client Sample ID: SWS-1** Date Collected: 12/07/22 08:29 **Matrix: Solid** 

Date Received: 12/07/22 13:28

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	41354	12/08/22 10:50	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	41352	12/08/22 20:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			41404	12/09/22 12:20	SM	EET MID
Total/NA	Analysis	8015 NM		1			41448	12/09/22 11:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	41374	12/08/22 12:54	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	41317	12/08/22 23:57	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	41363	12/08/22 12:11	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	41403	12/09/22 08:50	CH	EET MID

**Laboratory References:** 

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

# **Accreditation/Certification Summary**

Client: Talon/LPE Job ID: 890-3595-1
Project/Site: Marathon AGI State #1 SDG: 700438.303.01

## **Laboratory: Eurofins Midland**

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-22-24	06-30-23
The following analyte:	s are included in this rend	ort but the laboratory is r	not certified by the governing authority.	This list may include analytes for y
the agency does not o	•	ore, but the laboratory is i	lot certified by the governing authority.	This list may include analytes for v
,	•	Matrix	Analyte	This list may include analytes for v
the agency does not o	offer certification.	•	, , ,	This list may include analytes for v

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## **Method Summary**

Client: Talon/LPE

Project/Site: Marathon AGI State #1

Job ID: 890-3595-1

SDG: 700438.303.01

Laboratory	
EET MID	
EET MID	
EET MID	F

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	MCAWW	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

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

### **Laboratory References:**

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

# **Sample Summary**

Client: Talon/LPE

Project/Site: Marathon AGI State #1

Job ID: 890-3595-1

SDG: 700438.303.01

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3595-1	C-1	Solid	12/07/22 08:01	12/07/22 13:28	22
890-3595-2	C-2	Solid	12/07/22 08:07	12/07/22 13:28	2
890-3595-3	SWW-1	Solid	12/07/22 08:16	12/07/22 13:28	1
890-3595-4	SWE-1	Solid	12/07/22 08:11	12/07/22 13:28	1
890-3595-5	SWN-1	Solid	12/07/22 08:21	12/07/22 13:28	1
890-3595-6	SWS-1	Solid	12/07/22 08:29	12/07/22 13:28	1

Circle Method(s) and Metal(s) to be analyzed

Total

200.7 / 6010

200.8 / 6020:

8RCRA

13PPM

Soil Soil Soil

votice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U

Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb

Mg Mn Mo Ni K Se

Ag SiO<sub>2</sub> Na Sr Tl Sn U V Zn Hg: 1631 / 245.1 / 7470

17471

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**Chain of Custody** 

eurofins	Ofins Environment Testing Xenco	Houston, 1 Midland, TX EL Paso, T Hobbs, NM	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	Work Order No:
		Hobbs, NM	(575) 392-7550, Carlsbad, NM (575) 988-3199	www.xenco.com
Manager:	Chad Hensley	Bill to: (if different)	Jermay Haass	Work Order Comments
ny Name:	Talon LPE	Company Name:	EOG	Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund [
S:	408 W. Texas Ave.	Address:		State of Project:
ate ZIP:	Artesia, NM 88210	City, State ZIP:		Reporting: Level II   Level III   PST/UST   TRRP   Level IV
	575.746.8768 Em	Email: Chensley@talonipe.com	e.com	Deliverables: EDD ☐ ADaPT ☐ Other

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of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$6 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated Relinquished by: (Signature) Received by (Signature) 2-07-22 Date/Time Relinquished by: (Signature) 10.1.00 1323 Received by: (Signature) Revised Date: 08/25/2020 Rev. 2020.2 Date/Time

NaOH+Ascorbic Acid: SAPC

Sample Comments

Zn Acetate+NaOH: Zn

Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>: NaSO<sub>3</sub> NaHSO<sub>4</sub>: NABIS H<sub>3</sub>PO<sub>4</sub>: HP

SAMPLE RECEIPT

Samples Received Intact:

S O

Thermometer ID:

ECONII VI

Yes) No

Wet Ice:

(Yes

o O

**Parameters** 

NX

Correction Factor:

Cooler Custody Seals: ample Custody Seals:

Yes Yes No (Yes) Temp Blank:

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Temperature Reading:

Corrected Temperature:

Sample Identification

Matrix

Sampled

Time

Depth

Comp Grab/

Cont # of

CL

BTEX

TPH

890-3595 Chain of Custody

SWW-1 SWE-1

Soil

12/7/2022

8:16

\_  $\sqrt{2}$ 22

Comp

8:11

Soil Soil

12/7/2022 12/7/2022 Sampled Date

8:07 8:01

Comp

×

Comp

C-2 5

SWS-1 SWN-1

Soil Soil Soil Soil

12/7/2022

8:29

Comp

12/7/2022 12/7/2022

8:21

Comp Comp Sampler's Name:

Project Location Project Number:

Rural Eddy, NM Chad Hensley

Due Date:

Routine

ORUSH ASAP

Code

Turn Around

ANALYSIS REQUEST

Preservative Codes

HCL: HC H<sub>2</sub>S0<sub>4</sub>: H<sub>2</sub>

> HNO3: HN MeOH: Me DI Water: H<sub>2</sub>O

NaOH: Na

Cool: Cool None: NO

TAT starts the day received by the lab, if received by 4:30pm

NA

Phone: City, St Addres Compa

575.746.8768

Email: Chensley@talonipe.com

roject Name:

Marathon AGI State #1

700438.303.01

## **Login Sample Receipt Checklist**

Client: Talon/LPE Job Number: 890-3595-1 SDG Number: 700438.303.01

Login Number: 3595 **List Source: Eurofins Carlsbad** 

List Number: 1 Creator: Clifton, Cloe

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

## **Login Sample Receipt Checklist**

 Client: Talon/LPE
 Job Number: 890-3595-1

 SDG Number: 700438.303.01

List Source: Eurofins Midland
List Number: 2
List Creation: 12/08/22 11:44 AM

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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<6mm (1/4").

**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Chad Hensley Talon/LPE 408 W. Texas St. Artesia, New Mexico 88210 Generated 12/21/2022 2:23:26 PM

# **JOB DESCRIPTION**

Marathon AGI State 2H SDG NUMBER 700438.303.01

# **JOB NUMBER**

890-3651-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220



# **Eurofins Carlsbad**

## **Job Notes**

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

## **Authorization**

Generated 12/21/2022 2:23:26 PM

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

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Client: Talon/LPE
Laboratory Job ID: 890-3651-1
Project/Site: Marathon AGI State 2H
SDG: 700438.303.01

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ī	5	

## **Definitions/Glossary**

Client: Talon/LPE Job ID: 890-3651-1 Project/Site: Marathon AGI State 2H

SDG: 700438.303.01

#### **Qualifiers**

### **GC VOA**

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

### **GC Semi VOA**

\*1 LCS/LCSD RPD exceeds control limits.

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

S1+ Surrogate recovery exceeds control limits, high biased. Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

### **Glossary**

Abbreviation These commonly used abbreviations may or may not be present in this report. Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery CFL Contains Free Liquid CFU Colony Forming Unit **CNF** Contains No Free Liquid

DFR 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

Decision Level Concentration (Radiochemistry) DLC

**EDL** Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

EPA recommended "Maximum Contaminant Level" MCL MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

Method Detection Limit MDL 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

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

**TNTC** Too Numerous To Count

### **Case Narrative**

Client: Talon/LPE Job ID: 890-3651-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Job ID: 890-3651-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-3651-1

#### Receipt

The sample was received on 12/14/2022 8:54 AM. 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 9.0°C

### **Receipt Exceptions**

The following samples > were received and analyzed from an unpreserved bulk soil jar: SWN (890-3651-1).

#### **GC VOA**

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 samples were outside control limits: (CCV 880-41982/5) and (LCSD 880-41926/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: The method blank for preparation batch 880-41926 and analytical batch 880-41982 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD\_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-41926 and analytical batch 880-41982 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28).

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

### HPLC/IC

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

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## **Client Sample Results**

Client: Talon/LPE Job ID: 890-3651-1

Project/Site: Marathon AGI State 2H SDG: 700438.303.01

**Client Sample ID: SWN** Lab Sample ID: 890-3651-1 Date Collected: 12/14/22 08:02 Matrix: Solid Date Received: 12/14/22 08:54

Sample Depth: 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.000387	U	0.00201	0.000387	mg/Kg		12/20/22 15:23	12/21/22 13:12	
Toluene	<0.000458	U	0.00201	0.000458	mg/Kg		12/20/22 15:23	12/21/22 13:12	
Ethylbenzene	< 0.000567	U	0.00201	0.000567	mg/Kg		12/20/22 15:23	12/21/22 13:12	
m-Xylene & p-Xylene	<0.00101	U	0.00402	0.00101	mg/Kg		12/20/22 15:23	12/21/22 13:12	
o-Xylene	< 0.000345	U	0.00201	0.000345	mg/Kg		12/20/22 15:23	12/21/22 13:12	
Xylenes, Total	<0.00101	U	0.00402	0.00101	mg/Kg		12/20/22 15:23	12/21/22 13:12	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	105		70 - 130				12/20/22 15:23	12/21/22 13:12	
1,4-Difluorobenzene (Surr)	101		70 - 130				12/20/22 15:23	12/21/22 13:12	
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00101	U	0.00402	0.00101	mg/Kg			12/21/22 14:46	•
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<15.0	U	49.9	15.0	mg/Kg			12/16/22 14:51	•
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)						
Amalusta			(00)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<b>Result</b> <15.0		•		Unit mg/Kg	<u>D</u>	Prepared 12/15/22 14:18	Analyzed 12/16/22 12:11	Dil Fac
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over		U	RL	15.0		<u>D</u>	<del></del>		
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<15.0	U *1	RL 49.9	15.0 15.0	mg/Kg	<u>D</u>	12/15/22 14:18	12/16/22 12:11	
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<15.0 <15.0	U *1	49.9	15.0 15.0	mg/Kg mg/Kg	<u> </u>	12/15/22 14:18 12/15/22 14:18	12/16/22 12:11	
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<15.0 <15.0 <15.0	U *1	49.9 49.9	15.0 15.0	mg/Kg mg/Kg	<u>D</u>	12/15/22 14:18 12/15/22 14:18 12/15/22 14:18	12/16/22 12:11 12/16/22 12:11 12/16/22 12:11	
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	<15.0 <15.0 <15.0 %Recovery	U *1	49.9 49.9 49.9 <i>Limits</i>	15.0 15.0	mg/Kg mg/Kg	<u>D</u>	12/15/22 14:18 12/15/22 14:18 12/15/22 14:18 Prepared	12/16/22 12:11 12/16/22 12:11 12/16/22 12:11 12/16/22 12:11  Analyzed	
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	<15.0 <15.0 <15.0 <15.0  %Recovery 102 101	U *1 U *1 U <b>Qualifier</b>	RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	15.0 15.0	mg/Kg mg/Kg	<u>D</u>	12/15/22 14:18  12/15/22 14:18  12/15/22 14:18  Prepared  12/15/22 14:18	12/16/22 12:11  12/16/22 12:11  12/16/22 12:11  Analyzed  12/16/22 12:11	
Oll Range Organics (Over C28-C36)  Surrogate	<15.0 <15.0 <15.0 <15.0  **Recovery 102 101 s, lon Chromato	U *1 U *1 U <b>Qualifier</b>	RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	15.0 15.0	mg/Kg mg/Kg mg/Kg	<u>D</u>	12/15/22 14:18  12/15/22 14:18  12/15/22 14:18  Prepared  12/15/22 14:18	12/16/22 12:11  12/16/22 12:11  12/16/22 12:11  Analyzed  12/16/22 12:11	

## **Surrogate Summary**

Client: Talon/LPE Job ID: 890-3651-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

-				Percent Surrogate Rec
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3651-1	SWN	105	101	
LCS 880-42329/1-A	Lab Control Sample	98	100	
LCSD 880-42329/2-A	Lab Control Sample Dup	96	99	
MB 880-42329/5-A	Method Blank	87	101	
Surrogate Legend				
BFB = 4-Bromofluorobe	nzene (Surr)			
DFBZ = 1,4-Difluoroben:	zene (Surr)			

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1001	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3651-1	SWN	102	101	
LCS 880-41926/2-A	Lab Control Sample	98	111	
LCSD 880-41926/3-A	Lab Control Sample Dup	128	134 S1+	
MB 880-41926/1-A	Method Blank	112	115	
Surrogate Legend				

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Talon/LPE Job ID: 890-3651-1 Project/Site: Marathon AGI State 2H SDG: 700438.303.01

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42329/5-A

**Matrix: Solid** 

Analysis Batch: 42368

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42329

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		12/20/22 15:23	12/21/22 11:22	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		12/20/22 15:23	12/21/22 11:22	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		12/20/22 15:23	12/21/22 11:22	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		12/20/22 15:23	12/21/22 11:22	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		12/20/22 15:23	12/21/22 11:22	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		12/20/22 15:23	12/21/22 11:22	1

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130	12/20/22 15:23	12/21/22 11:22	1
1,4-Difluorobenzene (Surr)	101		70 - 130	12/20/22 15:23	12/21/22 11:22	1

Lab Sample ID: LCS 880-42329/1-A

**Matrix: Solid** 

Analysis Batch: 42368

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 42329

	<b>Spike</b>	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09235		mg/Kg		92	70 - 130	
Toluene	0.100	0.08850		mg/Kg		89	70 - 130	
Ethylbenzene	0.100	0.08780		mg/Kg		88	70 - 130	
m-Xylene & p-Xylene	0.200	0.1828		mg/Kg		91	70 - 130	
o-Xylene	0.100	0.08816		mg/Kg		88	70 - 130	

Spike

Added

0.100

0.100

0.100

0.200

0.100

LCSD LCSD

0.09353

0.08701

0.08572

0.1790

0.08705

Result Qualifier

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 880-42329/2-A

**Matrix: Solid** 

Analyte

Benzene

Toluene

o-Xylene

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 42368

**Client Sample ID: Lab Control Sample Dup** 

70 - 130

70 - 130

70 - 130

86

90

Prep Type: Total/NA Prep Batch: 42329

2

35

35

35

RPD %Rec %Rec Limits Limit 94 70 - 130 35 87 70 - 130 2 35

	LCSD LCSD	
Surrogate	%Recovery Quality	fier Limits
4-Bromofluorobenzene (Surr)	96	70 _ 130
1 A-Diffuorobenzene (Surr)	99	70 130

Client: Talon/LPE Job ID: 890-3651-1 Project/Site: Marathon AGI State 2H SDG: 700438.303.01

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

Lab Sample ID: MB 880-41926/1-A

Lab Sample ID: LCS 880-41926/2-A

**Matrix: Solid** 

Analysis Batch: 41982

**Matrix: Solid** 

Analysis Batch: 41982

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 41926

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	19.96	J	50.0	15.0	mg/Kg		12/15/22 14:18	12/16/22 08:33	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<15.0	U	50.0	15.0	mg/Kg		12/15/22 14:18	12/16/22 08:33	1
C10-C28)									
OII Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		12/15/22 14:18	12/16/22 08:33	1
	MB	MB							

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	12/15/22 14:18	12/16/22 08:33	1
o-Terphenyl	115		70 - 130	12/15/22 14:18	12/16/22 08:33	1

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 41926

LCS LCS Spike Added Analyte Result Qualifier Unit D %Rec Limits 918.4 Gasoline Range Organics 1000 mg/Kg 92 70 - 130 (GRO)-C6-C10 1000 903.8 Diesel Range Organics (Over mg/Kg 90 70 - 130 C10-C28)

LCS LCS

l	Surrogate	%Recovery	Qualifier	Limits
	1-Chlorooctane	98		70 - 130
l	o-Terphenyl	111		70 - 130

Lab Sample ID: LCSD 880-41926/3-A

**Matrix: Solid** 

Analysis Batch: 41982

Prep Type: Total/NA

Prep Batch: 41926

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1055		mg/Kg		105	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	1000	1147	*1	mg/Kg		115	70 - 130	24	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	128		70 - 130
o-Terphenyl	134	S1+	70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-41907/1-A

**Matrix: Solid** 

Analysis Batch: 41937

Client Sample ID:	Method Blank
Dron	Type: Soluble

Prep Type: Soluble

	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.395	U	5.00	0.395	mg/Kg			12/15/22 19:28	1

## QC Sample Results

Client: Talon/LPE Job ID: 890-3651-1 Project/Site: Marathon AGI State 2H

SDG: 700438.303.01

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-41907/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 41937** 

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Chloride 250 239.2 mg/Kg 96 90 - 110

Lab Sample ID: LCSD 880-41907/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 41937** 

Spike LCSD LCSD %Rec RPD Added Limit Analyte Result Qualifier Unit D %Rec Limits RPD Chloride 250 234.5 mg/Kg 94 90 - 110

Lab Sample ID: 890-3651-1 MS **Client Sample ID: SWN Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 41937

%Rec Sample Sample Spike MS MS Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 80.6 250 326.6 98 90 - 110 mg/Kg

Lab Sample ID: 890-3651-1 MSD Client Sample ID: SWN **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 41937** 

Sample Sample MSD MSD RPD Spike %Rec Analyte Result Qualifier Added Qualifier Unit %Rec RPD Limit Result Limits Chloride 80.6 250 323.1 90 - 110 20 mg/Kg

## **QC Association Summary**

Client: Talon/LPE Job ID: 890-3651-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

### **GC VOA**

## Prep Batch: 42329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
890-3651-1	SWN	Total/NA	Solid	5035
MB 880-42329/5-A	Method Blank	Total/NA	Solid	5035
LCS 880-42329/1-A	Lab Control Sample	Total/NA	Solid	5035
LCSD 880-42329/2-A	Lab Control Sample Dup	Total/NA	Solid	5035

### Analysis Batch: 42368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3651-1	SWN	Total/NA	Solid	8021B	42329
MB 880-42329/5-A	Method Blank	Total/NA	Solid	8021B	42329
LCS 880-42329/1-A	Lab Control Sample	Total/NA	Solid	8021B	42329
LCSD 880-42329/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	42329

### **Analysis Batch: 42428**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3651-1	SWN	Total/NA	Solid	Total BTEX	

### GC Semi VOA

## Prep Batch: 41926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3651-1	SWN	Total/NA	Solid	8015NM Prep	
MB 880-41926/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41926/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41926/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

### **Analysis Batch: 41982**

<b>Lab Sample ID</b> 890-3651-1	Client Sample ID SWN	Prep Type Total/NA	Solid	Method 8015B NM	Prep Batch 41926
MB 880-41926/1-A	Method Blank	Total/NA	Solid	8015B NM	41926
LCS 880-41926/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41926
LCSD 880-41926/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41926

### Analysis Batch: 42054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3651-1	SWN	Total/NA	Solid	8015 NM	

### HPLC/IC

## Leach Batch: 41907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3651-1	SWN	Soluble	Solid	DI Leach	
MB 880-41907/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-41907/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-41907/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3651-1 MS	SWN	Soluble	Solid	DI Leach	
890-3651-1 MSD	SWN	Soluble	Solid	DI Leach	

### Analysis Batch: 41937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3651-1	SWN	Soluble	Solid	300.0	41907
MB 880-41907/1-A	Method Blank	Soluble	Solid	300.0	41907
LCS 880-41907/2-A	Lab Control Sample	Soluble	Solid	300.0	41907

**Eurofins Carlsbad** 

12/21/2022

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# **QC Association Summary**

Client: Talon/LPE Job ID: 890-3651-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

## **HPLC/IC** (Continued)

## **Analysis Batch: 41937 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-41907/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	41907
890-3651-1 MS	SWN	Soluble	Solid	300.0	41907
890-3651-1 MSD	SWN	Soluble	Solid	300.0	41907

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## **Lab Chronicle**

Client: Talon/LPE Job ID: 890-3651-1 Project/Site: Marathon AGI State 2H SDG: 700438.303.01

**Client Sample ID: SWN** Lab Sample ID: 890-3651-1

Date Collected: 12/14/22 08:02 Matrix: Solid Date Received: 12/14/22 08:54

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	42329	12/20/22 15:23	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42368	12/21/22 13:12	SM	EET MID
Total/NA	Analysis	Total BTEX		1			42428	12/21/22 14:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			42054	12/16/22 14:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	41926	12/15/22 14:18	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	41982	12/16/22 12:11	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	41907	12/15/22 11:04	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	41937	12/15/22 19:43	CH	EET MID

### **Laboratory References:**

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

# **Accreditation/Certification Summary**

Client: Talon/LPE Job ID: 890-3651-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

# **Laboratory: Eurofins Midland**

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NI NI	ELAP	T104704400-22-25	06-30-23
The following analytes	are included in this report, bu	it the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes fo
0 ,	. ,	it the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes fo
The following analytes the agency does not o	. ,	it the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes fo
0 ,	. ,	it the laboratory is not certifi Matrix	ied by the governing authority. This list ma	ay include analytes fo

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# **Method Summary**

Client: Talon/LPE Job ID: 890-3651-1
Project/Site: Marathon AGI State 2H SDG: 700438.303.01

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

Eurofins Carlsbad

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# **Sample Summary**

Client: Talon/LPE

Project/Site: Marathon AGI State 2H

Job ID: 890-3651-1

SDG: 700438.303.01

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3651-1	SWN	Solid	12/14/22 08:02	12/14/22 08:54	4

: eurofins	1S   Environment Testing	or the contract of the contrac	Houston,	Chain of Custody Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300	tody TX (214) 902-0300	Work Order No.	2 No.
	Xenco	C	EL Paso, T Hobbs, NN	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	, TX (806) 794-1296 NM (575) 988-3199		2906 1 of 1
Project Manager: Cha	Chad Hensley	В	Bill to: (if different)	Jeremy		Work (	omments
	Talon LPE	0	Company Name:	EOG		ST[	☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐
	408 W. Texas Ave.	Þ	Address:			State of Project:	
e ZIP:	Artesia, NM 88210	0	City, State ZIP:			Reporting: Level III	PST/UST TRRP Level IV
	575.746.8768	Email: C	Chensley@talonlpe.com	e.com		Deliverables: EDD	ADaPT Other:
Project Name:	Marathon AGI State 2H	Turn Around	round		ANALYSIS RE	QUEST	Preservative Codes
Project Number:	700438.303.01	Routine	√Rush 2 Pre	<b>E</b> *			None: NO DI Water: H <sub>2</sub> O
Project Location:	Rual Eddy, NM	Due Date:	12/16/202	<del>-</del>			Cool: Cool MeOH: Me
Sampler's Name:	Chad Hensley	TAT starts the	TAT starts the day received by		_	- - -	
PO#:	N/A	the lab, if recei	1				H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> NaOH: Na
SAMPLE RECEIPT	Temp Blank: (Yes) No	Wet Ice:	No				H <sub>3</sub> PO <sub>4</sub> : HP
Samples Received Intact:	kes No Thermometer ID:	Y	arai				NaHSO <sub>4</sub> : NABIS
Cooler Custody Seals:	Yes No N/A Correction Factor:	Factor:			890-3651 Ch	890-3651 Chain of Custody	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>
Sample Custody Seals:	Yes NO NA Temperati	-	2 -			-	NaOH+Ascorbic Acid: SAPC
Sample Identification	Matrix	Time Sampled	Depth Grab/ # of Comp	CL BTEX TPH			Sample Comments
NWS	Soil 12/14/2022		4 Comp 1	×			
			1 1 1				
Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed		8RCRA 13PPM	/ Texas 11 AI -P 6010: 8RCRA	AI Sb As Ba Be B Cd CRA Sb As Ba Be Cd	TCLP / SPLP 6010: 8RCRA Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb	Mg Mn Mo Ni K Ni Se Ag TI U	Se Ag SiO <sub>2</sub> Na Sr TI Sn U V Zn Hg: 1631/245.1/7470/7471
lotice: Signature of this docum	volte: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors.	onstitutes a valid purcl	hase order from client any responsibility for a	company to Eurofins Xenco, i	ts affiliates and subcontractors. ed by the client if such losses a	. It assigns standard terms and conditions are due to circumstances beyond the contro	ons
f Eurofins Xenco. A minimum	charge of \$85.00 will be applied to ca	ch project and a charg	je of \$5 for each samp	e submitted to Eurolins Aeric	o, put flot alialyzed. Hiese telli	- Indicate	
Relinquished by: (Signature)	gnature) Rece	Received by: (Signature)	ге)	Date/Time	Relinquished by: (Signature)	ature) Received by: (Signature)	Signature) Date/Time
Cal ?	( Love	2	7	2.14.23 885			
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				C			

**Eurofins Carlsbad** 

# **Chain of Custody Record**

1089 N Canal St	0	Chain of Custody Record	f Cust	ody Re	corc					Š.	, in				٠.	🤻 eurofins	
Phone. 575-988-3199 Fax 575-988-3199				'						ħ	R						Environment lesting
Client Information (Sub Contract Lab)	Sampler			Lab PM Krame	<sub>Lab PM</sub> Kramer, Jessica	δÓ				Cami	Carrier Tracking No(s)	ing No	s)			COC No: 890-1064 1	
	Phone			E-Mail Jessic	E-Mail Jessica.Kramer@et.eurofinsus com	r@et.e	suifor	us com		State	State of Origin: New Mexico	8 =		l		Page: Page 1 of 1	
Company Eurofins Environment Testing South Centr				<b>フ</b> ♪	Accreditations Required (See note): NELAP - Texas	ns Requir	ed (See	note):		ł						Job #: 890-3651-1	
Address. 1211 W Florida Ave ,	Due Date Requested 12/16/2022	<u>σ</u>						Analy	ysis Re	Requested	ted					Code	- I
City Midland	TAT Requested (days)	ys)								-			-	一	e e	HCL NaOH	N None O - AsNaO2
State, Zir: TX, 79701					W.											D Nitric Acid E - NaHSO4	P Na2O4S Q Na2SO3
Phone: 432-704-5440(TeI)	PO#:			1	÷			e							Suit	:	S H2SO4 T TSP Dodecahydrate
	WO#:			or No	lo)			hlorid							The state of the s	H ASCORDIC ACID I - Ice J DI Water	U Acetone V MCAA
Project Name <sup>.</sup> marathon agı state 2h	Project #: 89000060				s or i		EX	ACH							ainer		Y - Trizma 7 - other (specific)
Site:	SSOW#:				SD (Y										of con	Other	
			Sample Type	Matrix (W=water	rm MS/N OD_NM/8	OD_Calc	6036FP_  BTEX_GO	RGFM_28							Number		
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	<u> </u>	_ ځ	Perfo										Total I	Special Ins	Special Instructions/Note.
		X	Preservation Code:	n Code:	$\hat{\mathbf{x}}$						1			(1000 mg/s)	X		
SWN (890-3651-1)	12/14/22	08 02 Mountain		Solid	×	×	×	×									
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Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/lests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the stone of Custody attention to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the stone of Custody attention to Eurofins Environment Testing South Central. LLC attention immediately.	Testing South Centra we for analysis/tests/ tral, LLC attention im	al, LLC places th matrix being and mediately If all	ne ownership of alyzed, the sam	method analyt	e & accred	litation co k to the E	mpliano urofins I	e upon o	ur subco ent Test	ntract la	boratori h Centr	es. Th	is sami	ble ship	other	is forwarded under chainstructions will be pro	ain-of-custody If the vided Any changes to
Possible Hazard Identification					Samp	le Disp	osal (	A fee r	nay be	asses	sed ii	sam	ples		tain	Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)	month)
Deliverable Requested   II III IV Other (specify)	Primary Deliverable Rank.	ble Rank. 2			Specia	Special Instructions/QC Requirements	ctions/	QC Re	quirem	ents.	nts.	Lab			Arch	Archive For	Months
Empty Kit Relinquished by		Date		-1	Time.	١				>	Metho	Method of Shipment:	pment		1		
Relinquished by CCC	Date/Time <sup>.</sup>		2	Company	R	ejved by			9	4		_ <u>_</u>	Date/Time	Œ.	1		Company
Relinquished by	Date/Time		Q	Company	Re	Laived by		(		1		9	Date/Time:	99	١		Company
Relinquished by:	Date/Time:		ρ	Company	Re	Received by	1					- D	Date/Time:	9	١		Company
Custody Seals Intact. Custody Seal No					ç	Cooler Temperature(s) °C	perature		and Other Remarks	Remarks	-	-					

Ver: 06/08/2021

1089 N Canal St. Carlsbad, NM 88220 Phone: 575-988-3199 Fax 575-988-3199 **Eurofins Carlsbad** 

# **Chain of Custody Record**

Environment Testing

Client Information (Sub Contract Lab)	Sampler			Lab PM Krame	<sub>Lab PM</sub> Kramer Jessica				Can	Carrier Tracking No(s)	ing No(	Š		COC No: 890-1064 1	
	Phone:			E-Mail:	E-Mail:	net eur	finerie	3	Stat	State of Origin:	3 =			Page:	
Company Eurofins Environment Testing South Centr				Z A	Accreditations Required (See no NELAP - Texas	Required	(See not	te):	l				1	Job #:	
Address 1211 W Florida Ave	Due Date Requested 12/16/2022						An	nalvsis l	Requested	etad			l	on Code	
City: Midland	TAT Requested (days)	8)				$\dashv$					$\dashv$		<u> </u>		M Hexane N None O-AsNaO2
State Zip. TX, 79701	1												The State of the S	4 bi a	P Na2O4S Q - Na2SO3
Phone 432-704-5440(Tel)	PO#				7			•	<del></del>		<del></del>				R Na2S2O3 S - H2SO4
Email	WO#			ir No	)			loride						Acid	U Acetone V MCAA
Project Name:	Project #:			eso	r No			H Ch						J DI Water K EDTA	W pH 4-5
marathon agı state 2h	89000060			e (Y	es o	ΓEX		EAC					25000	L EDA	Y Trizma Z other (specify)
Site.	SSOW#:			Samo	SD (Y	Calc B1		D/DI_L					20424C	Other	
			Sample N	Matrix (w=water s=solid,	Drm MS/M MOD_NM/8	MOD_Calc B/5035FP_0	_BTEX_GC	DRGFM_28	·····				Number		
Sample Identification - Client ID (Lab ID)	Sample Date	Time		r)	Per			300						804 June	Special Instructions/Note
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Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.	nt Testing South Central bove for analysis/tests/m entral, LLC attention imm	, LLC places th natrix being ana nediately If all	e ownership of m llyzed, the sample requested accred	ethod, analyte as must be sh itations are cu	& accredita pped back to irrent to date	tion comp the Euro	liance up fins Envi e signed	on our sub ronment To Chain of C	contract l esting Sou ustody at	aboratori ith Centr	es. This al LLCI said co	sample aborator	shipme y or oth to Eur	int is forwarded under chai er instructions will be provi	iin-of-custody If the  ided Any changes to  South Central LLC
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A Yes A No					-										

# **Login Sample Receipt Checklist**

Client: Talon/LPE Job Number: 890-3651-1

SDG Number: 700438.303.01

Login Number: 3651 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

2

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9

13

14

# **Login Sample Receipt Checklist**

Client: Talon/LPE Job Number: 890-3651-1

SDG Number: 700438.303.01

Login Number: 3651 **List Source: Eurofins Midland** List Number: 2 List Creation: 12/15/22 11:29 AM

Creator: Teel, Brianna

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



# Appendix V

C-141

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenuc, Artesia, NM 88210 District III 1000 Rio Brazos Roud, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

# State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

WILL	1166	5534	/ Ken	ase Notific	PERA	r	TI OCHIVO CI	<b>CHO1</b>	7 Ynitia	l Report	Final Repo
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Yates Petro		oration		25575		Robert Ashe	er			•	
Address	Tomir Corp	O 1 44 1 O 11				Telephone N	Vo.				
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Facility Nat				API Number		Facility Typ	c				
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Surface Ow	mer			Mineral C	)wner				Lease ?	No.	
State				State					V-2480	)	
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Incident ID	NKMW1102555534
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.

N/A (ft bgs)
☐ Yes 🛛 No
☐ Yes ☒ No
☐ Yes 🏿 No
☐ Yes ☒ No
☐ Yes 🏻 No
☐ Yes 🛛 No
☐ Yes 🛛 No
☐ Yes 🏿 No
☐ Yes 🛛 No
ical extents of soil
s.

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: 12/27/2022 9:18:32 AM Form C-141 State of New Mexico Page 4 Oil Conservation Division

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Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Printed Name: Jeremy Haass	Title: Sr. Safety & Enviromental Specialist	
Signature: Ty Huss	Date: 12/27/2022	
email: jeremy_Haass@eogresources.com	Telephone:	
OCD Only		
Received by: Jocelyn Harimon	Date: 12/27/2022	

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Incident ID	NKMW1102555534
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 19.15.29.1	1 NMAC	
Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	of the liner integrity if applicable (Note: appropriate OCD District office	
□ Laboratory analyses of final sampling (Note: appropriate ODC)	C 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 should their operations have failed to adequately investigate and renuman health or the environment. In addition, OCD acceptance of a	tions. The responsible party acknowledges they must substantially nditions that existed prior to the release or their final land use in	
Printed Name: Jeremy Haass	Title: Sr. Safety & Enviromental Specialist	
Signature: Ty Huss		
email: jeremy_Haass@eogresources.com	Telephone:	
OCD Only  Received by: Jocelyn Harimon	Date: 12/27/2022	
	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: Ashley Maxwell	Date: 2/03/2023	
Printed Name: Ashley Maxwell	Title:Environmental Specialist	



# **Appendix VI**

Correspondence

# **Chad Hensley**

From: Jeremy Haass <Jeremy\_Haass@eogresources.com>

Sent: Tuesday, November 15, 2022 8:43 AM

To: Chad Hensley

Subject: FW: [EXTERNAL] Marathon AGI State 2H (NKM1102555534) Sample Notification

This message originated from an **External Source**. Please use proper judgment and caution when opening attachments, clicking links, or responding to this email.

FYI

# Jeremy Haass

Safety & Environmental Specialist EOG Resources – Artesia Division 104 S. 4<sup>th</sup> Street Artesia, NM 88210

Office: (575) 748-4311 Fax: (575) 748-4131 Cell: (575) 513-9235

jeremy\_haass@eogresources.com



From: Tina Huerta <Tina\_Huerta@eogresources.com>

Sent: Tuesday, November 15, 2022 8:42 AM

To: Artesia S&E Spill Remediation < Artesia\_S&E\_Spill\_Remediation@eogresources.com>

**Cc:** Artesia Regulatory < Artesia\_Regulatory@eogresources.com>

Subject: FW: [EXTERNAL] Marathon AGI State 2H (NKM1102555534) Sample Notification

FYI

From: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov>

Sent: Tuesday, November 15, 2022 8:30 AM

To: Tina Huerta <Tina Huerta@eogresources.com>

Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Billings, Bradford, EMNRD

<Bradford.Billings@emnrd.nm.gov>

Subject: RE: [EXTERNAL] Marathon AGI State 2H (NKM1102555534) Sample Notification

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Jocelyn Harimon ● Environmental Specialist Environmental Bureau EMNRD - Oil Conservation Division 1220 South St. Francis Drive | Santa Fe, NM 87505 (505)469-2821 | <u>Jocelyn.Harimon@emnrd.nm.gov</u>

http:// www.emnrd.nm.gov



From: Tina Huerta <Tina\_Huerta@eogresources.com>

Sent: Tuesday, November 15, 2022 8:24 AM

To: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov >; Griffin, Becky R. < bgriffin@slo.state.nm.us >; wbarnes

<wbarnes@slo.state.nm.us>

Cc: Artesia S&E Spill Remediation <a href="mailto:Artesia S&E Spill Remediation@eogresources.com">Artesia Regulatory</a>

<a href="mailto:</a> <a href="mailto:Regulatory@eogresources.com">Regulatory@eogresources.com</a>

Subject: [EXTERNAL] Marathon AGI State 2H (NKM1102555534) Sample Notification

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good Morning,

EOG Resources, Inc. respectfully submits notification of sampling to be conducted at the below location.

Marathon AGI State 2H D-33-17S-24E Eddy County, NM NKMW1102555534

Sampling will begin at 10:00 a.m. on Thursday, November 17, 2022.

Thank you,

Tina Hverta Regulatory Specialist Direct: 575.748.4168

Cell: 575.703.3121

Email: tina huerta@eogresources.com

eog resources

**Artesia Division** 

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

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

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

CONDITIONS

Action 170075

## **CONDITIONS**

Operator:	OGRID:
EOG RESOURCES INC	7377
P.O. Box 2267	Action Number:
Midland, TX 79702	170075
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By		Condition Date
amaxwell	None	2/3/2023