

Flowline Closure Checklist

COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional Attachments:		Tank Battery Closure		Wellhead Closure		Pit Closure		Partially Buried Vault Closure	
Site Name & COGCC Facility Number: Antelope 12-19		Date: 02/09/23			Remediation Project #: 24162				
Associated Wells: 05-123-31862		Age of Site: Years			Number of Photos Attached: 21				
Starting point: (GPS coordinates and descriptions) 40.386580, -104.372610									
End point: (GPS coordinates and descriptions) 40.384505, -104.368050									
USCS Soil Type: Silty SAND					Estimated Depth to Groundwater: ~20-40'				
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) None observed									
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) None observed									
Flowlines									
Flowline type	Multiphase								
Depth	4'								
Age	Years								
Length	1950'								
Construction Material	Steel								
Were flowlines pulled?	Yes								
Visual Integrity of lines	Good								
Visual impacts if trenched	N/A								
PID Readings if trenched	3.4	2.1	2.4	1.9	2.7				
Sample taken? Location/Sample ID#	FL-SS-01	FL-SS-02	FL-SS-03	FL-SS-04	FL-SS-05				
Photo Number(s)									
Other observations regarding on location flowlines: FL-SS-06 through FL-SS-21 were all field screened, highest PID was 3.0									
Summary									
Was impacted soil identified? <input checked="" type="checkbox"/> No Yes - less than 10 cubic yards Yes - more than 10 cubic yards									
Total number of samples field screened: 21					Total number of samples collected: 21				
Highest PID Reading: 3.4					Total number of samples submitted to lab for analysis: 5				
If more than 10 cubic yards of impacted soil were observed:									
Vertical extent:					Estimated spill volume:				
Lateral extent:					Volume of soil removed:				
Is additional investigation required?									
Was groundwater encountered during the investigation? No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils									
Measured depth to groundwater:					Was remedial groundwater removal conducted? Yes No				
Date Groundwater was encountered:					Commencement date of removal:				
Sheen on groundwater? Yes No					Volume of groundwater removed prior to sampling:				
Free product observed? Yes No					Volume of groundwater removed post sampling:				
Total number of samples collected:					Total Volume of groundwater removed:				
Total number of samples submitted to lab for analysis:									

Wellhead Closure Checklist

COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional attachments (optional): _____		Pit Closure _____		Tank Battery Closure _____		Flowline Closure _____		Partially Buried Vault Closure _____
------------------------------------------	--	-------------------	--	----------------------------	--	------------------------	--	--------------------------------------

Site Name & COGCC Facility Number: Antelope 12-19	Date: 08/02/24	Remediation Project #: 24162
-------------------------------------------------------------	--------------------------	----------------------------------------

Associated Wells: 05-123-31862	Age of Site: Years	Number of Photos Attached: 2
------------------------------------------	-----------------------	-------------------------------------

Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple) 40.386580, -104.372610	Estimated Facility Size (acres):
---------------------------------------------------------------------------------------------------------------------	----------------------------------

General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)

Good

USCS Soil Type: Silty SAND	Estimated Depth to Groundwater: ~20-40'
-----------------------------------	------------------------------------------------

Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)

None observed

Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)

None observed

Wellhead(s)

Well API	05-123-31862				
Age	Years				
Condition of surface around wellhead	Good				
PID Readings					
Condition of subsurface (staining present)	Good				
PID Readings	5.5	4.3	3.9	3.5	4.5
Sample taken? Location/Sample ID#	WH-SS-01	WH-SS-02	WH-SS-03	WH-SS-04	WH-FS-01
Photo Number(s)	See photo log				

Other observations regarding wellheads:

Summary

Was impacted soil identified? **No** Yes - less than 10 cubic yards Yes - more than 10 cubic yards

Total number of samples field screened: 5	Total number of samples collected: 5
-----------------------------------------------------	------------------------------------------------

Highest PID Reading: 5.5	Total number of samples submitted to lab for analysis: 2
------------------------------------	--------------------------------------------------------------------

If more than 10 cubic yards of impacted soil were observed:	
Vertical extent:	Estimated spill volume:
Lateral extent:	Volume of soil removed:
Is additional investigation required?	
Was groundwater encountered during the investigation? No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils	
Measured depth to groundwater:	Was remedial groundwater removal conducted? Yes No
Date Groundwater was encountered:	Commencement date of removal:
Sheen on groundwater? Yes No	Volume of groundwater removed prior to sampling:
Free product observed? Yes No	Volume of groundwater removed post sampling:
Total number of samples collected:	Total Volume of groundwater removed:
Total number of samples submitted to lab for analysis:	



FIGURES

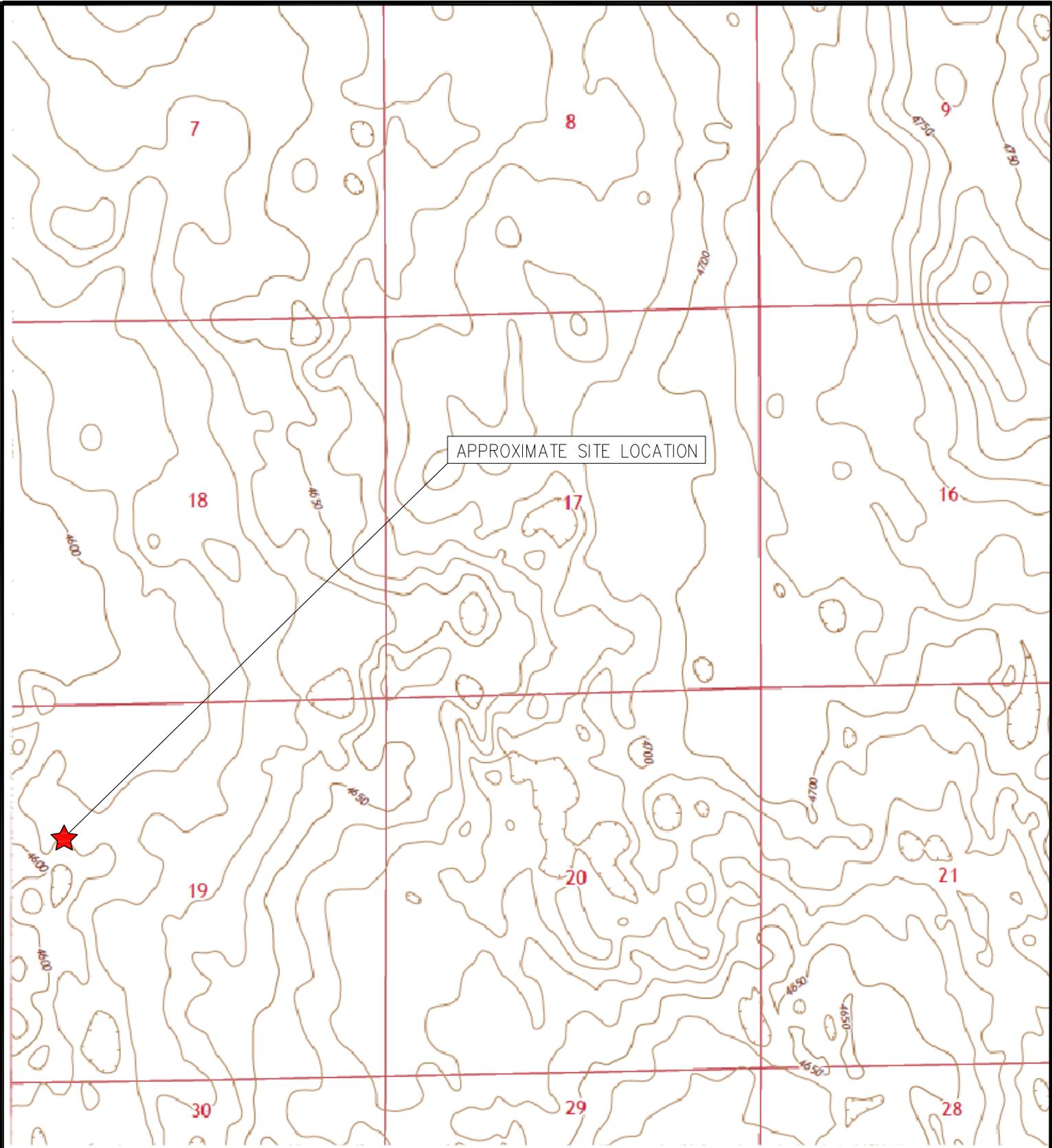
Figure 1: Topographic Site Location Map

Figure 2: Aerial Site Location Map

Figure 3: Flowline Soil Analytical Map

Figure 4: Flowline Polycyclic Aromatic Hydrocarbons Map

Figure 5: Wellhead Soil Analytical Map



APPROXIMATE SITE LOCATION



TOPOGRAPHIC SITE LOCATION MAP
 ANTELOPE #12-19
 CLOSURE ASSESSMENT
 40.386580 / -104.372610
 SW¼ NW¼ SEC.19 T5N R62W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-31862
 REMEDIATION # 24162



EAGLE
 ENVIRONMENTAL
 CONSULTING, LLC

8000 W 44th Ave, Wheat Ridge, CO 80033
 Ph: 303-433-0479 • F: 303-325-5449

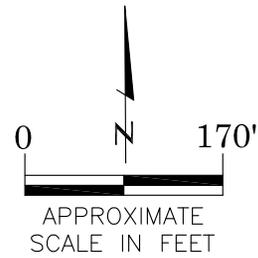
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAPS
 POINT OF ROCKS, CO QUADRANGLE 2022

FIGURE 1



LEGEND

- ANTELOPE #12-19 WELLHEAD (P&A PLANNED)
- APPROXIMATE FLOWLINE LOCATION (REMOVED)



AERIAL SITE LOCATION MAP

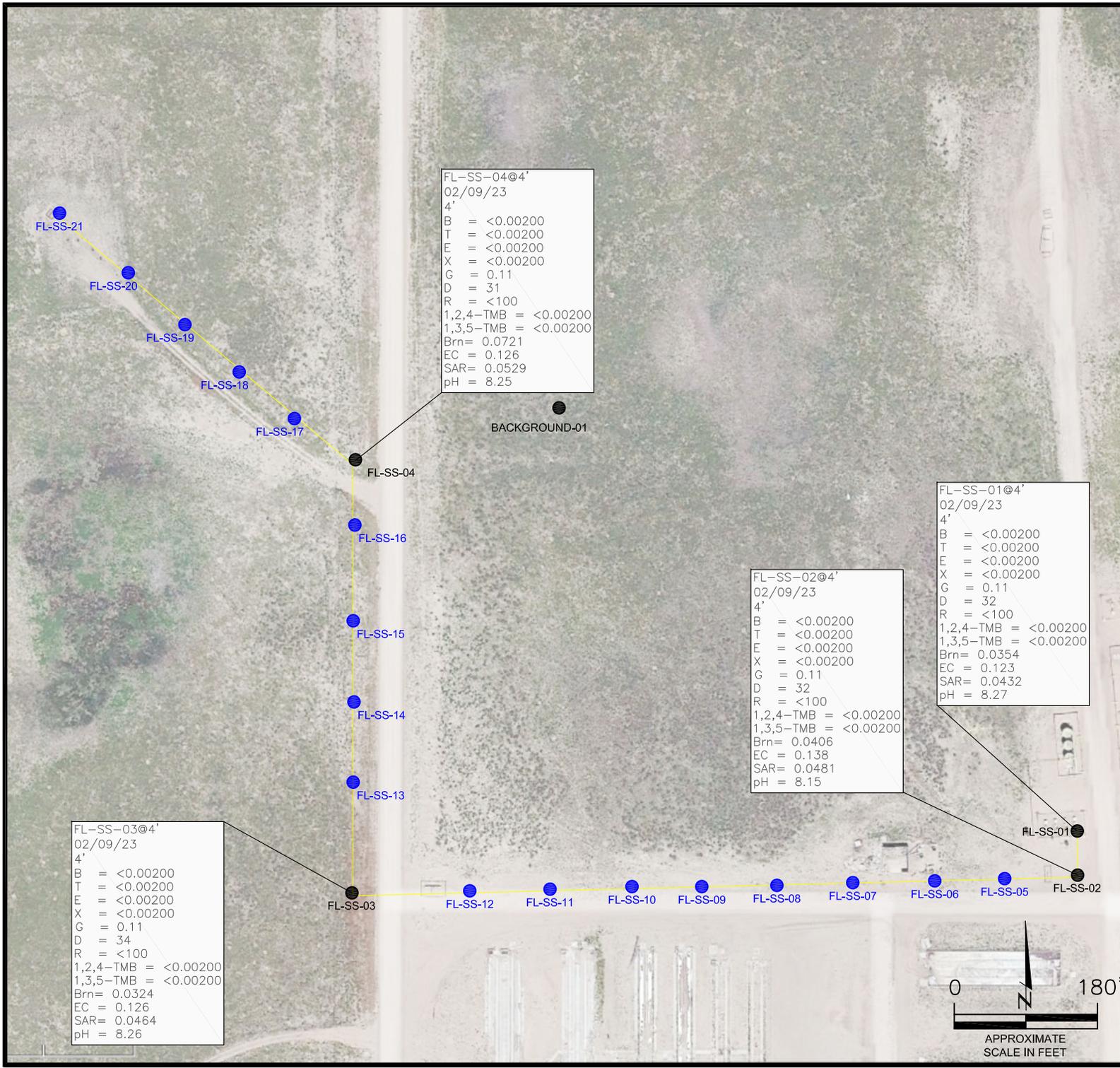
ANTELOPE #12-19
 CLOSURE ASSESSMENT
 40.386580 / -104.372610
 SW¼ NW¼ SEC.19 T5N R62W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-31862
 REMEDIATION # 24162

FIG. NO.
2

DRAWN BY:
TC



EAGLE
 ENVIRONMENTAL
 CONSULTING, LLC
 8000 W 44th Ave, Wheat Ridge, CO 80033
 Ph: 303-433-0479 • F: 303-325-5449



LEGEND

- APPROXIMATE FLOWLINE LOCATION (REMOVED)
- SS-02 APPROXIMATE LOCATION OF SOIL SAMPLES FIELD SCREENED, ONLY, WITH PHOTOIONIZATION DETECTOR
- SS-02 APPROXIMATE LOCATION OF SOIL SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

PARAMETERS

SAMPLE LOCATION	
DATE	
DEPTH (FEET)	
B =	BENZENE (mg/kg)
T =	TOLUENE (mg/kg)
E =	ETHYLBENZENE (mg/kg)
X =	TOTAL XYLENES (mg/kg)
G =	TPH-GRO (mg/kg)
D =	TPH-DRO (mg/kg)
R =	TPH-RRO (mg/kg)
1,2,4-TMB =	1,2,4 TRIMETHYLBENZENE (mg/kg)
1,3,5-TMB =	1,3,5 TRIMETHYLBENZENE (mg/kg)
PAHs =	POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)
Brn =	BORON (mg/L)
EC =	SPECIFIC CONDUCTANCE (mmhos/cm)
SAR =	SODIUM ADSORPTION RATIO
pH =	pH (pH UNITS)

mg/kg = MILLIGRAMS PER KILOGRAM
 mg/L = MILLIGRAMS PER LITER
 mmhos/cm = MILLIMHOS PER CENTIMETER

TPH-GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS
 TPH-DRO = TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE ORGANICS
 TPH-RRO = TOTAL PETROLEUM HYDROCARBONS - RESIDUAL RANGE ORGANICS

NOTES:
 VALUES PRESENTED WITH A LESS THAN SYMBOL (<) DID NOT CONTAIN CONCENTRATIONS AT OR ABOVE LABORATORY DETECTION LIMITS

VALUES PRESENTED IN **BOLD** EXCEED ECMC TABLE 915-1 REGULATORY LIMITS FOR THAT COMPOUND.

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

FLOWLINE SOIL ANALYTICAL MAP
 ANTELOPE #12-19
 CLOSURE ASSESSMENT
 40.386580 / -104.372610
 SW¼ NW¼ SEC.19 T5N R62W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-31862
 REMEDIATION # 24162

DRAWN BY:

TC

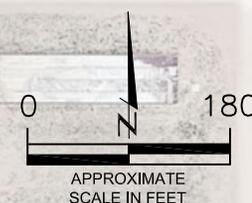
FIG. NO.

3



EAGLE
 ENVIRONMENTAL
 CONSULTING, LLC

8000 W 44th Ave, Wheat Ridge, CO 80033
 Ph: 303-433-0479 • F: 303-325-5449



FL-SS-04@4'
 02/09/23
 4'
 B = <0.00200
 T = <0.00200
 E = <0.00200
 X = <0.00200
 G = 0.11
 D = 31
 R = <100
 1,2,4-TMB = <0.00200
 1,3,5-TMB = <0.00200
 Brn= 0.0721
 EC = 0.126
 SAR= 0.0529
 pH = 8.25

BACKGROUND-01

FL-SS-01@4'
 02/09/23
 4'
 B = <0.00200
 T = <0.00200
 E = <0.00200
 X = <0.00200
 G = 0.11
 D = 32
 R = <100
 1,2,4-TMB = <0.00200
 1,3,5-TMB = <0.00200
 Brn= 0.0354
 EC = 0.123
 SAR= 0.0432
 pH = 8.27

FL-SS-02@4'
 02/09/23
 4'
 B = <0.00200
 T = <0.00200
 E = <0.00200
 X = <0.00200
 G = 0.11
 D = 32
 R = <100
 1,2,4-TMB = <0.00200
 1,3,5-TMB = <0.00200
 Brn= 0.0406
 EC = 0.138
 SAR= 0.0481
 pH = 8.15

FL-SS-03@4'
 02/09/23
 4'
 B = <0.00200
 T = <0.00200
 E = <0.00200
 X = <0.00200
 G = 0.11
 D = 34
 R = <100
 1,2,4-TMB = <0.00200
 1,3,5-TMB = <0.00200
 Brn= 0.0324
 EC = 0.126
 SAR= 0.0464
 pH = 8.26

LEGEND

-  APPROXIMATE FLOWLINE LOCATION (REMOVED)
-  **SS-02** APPROXIMATE LOCATION OF SOIL SAMPLES FIELD SCREENED, ONLY, WITH PHOTOIONIZATION DETECTOR
-  **SS-02** APPROXIMATE LOCATION OF SOIL SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

PARAMETERS

SAMPLE LOCATION
 DATE SAMPLE COLLECTED
 APPROXIMATE DEPTH
 POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) (mg/kg)

mg/kg = MILLIGRAMS PER KILOGRAM

ND = NON-DETECT

NOTES:
 VALUES PRESENTED WITH A LESS THAN SYMBOL (<) DID NOT CONTAIN CONCENTRATIONS AT OR ABOVE LABORATORY DETECTION LIMITS

VALUES PRESENTED IN **BOLD** CONTAIN CONCENTRATIONS EXCEEDING ECMC TABLE 915-1 REGULATORY LIMITS.

VALUES PRESENTED WITH AN ASTERISK (*) EXCEED ECMC TABLE 915-1 GROUNDWATER SOIL SCREENING LEVELS.

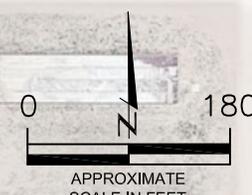
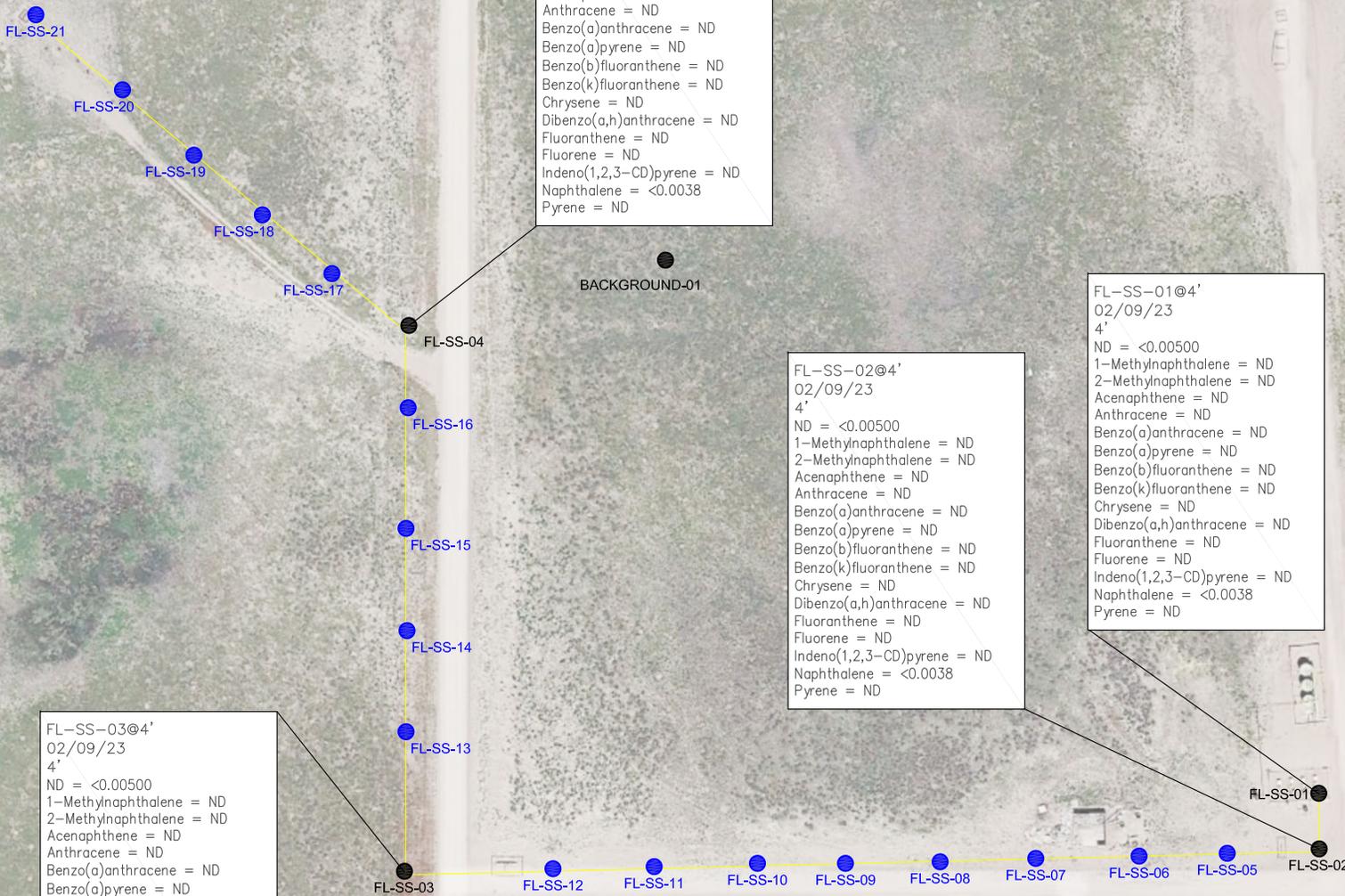
ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

FL-SS-04@4'
 02/09/23
 4'
 ND = <0.00500
 1-Methylnaphthalene = ND
 2-Methylnaphthalene = ND
 Acenaphthene = ND
 Anthracene = ND
 Benzo(a)anthracene = ND
 Benzo(a)pyrene = ND
 Benzo(b)fluoranthene = ND
 Benzo(k)fluoranthene = ND
 Chrysene = ND
 Dibenzo(a,h)anthracene = ND
 Fluoranthene = ND
 Fluorene = ND
 Indeno(1,2,3-CD)pyrene = ND
 Naphthalene = <0.0038
 Pyrene = ND

FL-SS-02@4'
 02/09/23
 4'
 ND = <0.00500
 1-Methylnaphthalene = ND
 2-Methylnaphthalene = ND
 Acenaphthene = ND
 Anthracene = ND
 Benzo(a)anthracene = ND
 Benzo(a)pyrene = ND
 Benzo(b)fluoranthene = ND
 Benzo(k)fluoranthene = ND
 Chrysene = ND
 Dibenzo(a,h)anthracene = ND
 Fluoranthene = ND
 Fluorene = ND
 Indeno(1,2,3-CD)pyrene = ND
 Naphthalene = <0.0038
 Pyrene = ND

FL-SS-01@4'
 02/09/23
 4'
 ND = <0.00500
 1-Methylnaphthalene = ND
 2-Methylnaphthalene = ND
 Acenaphthene = ND
 Anthracene = ND
 Benzo(a)anthracene = ND
 Benzo(a)pyrene = ND
 Benzo(b)fluoranthene = ND
 Benzo(k)fluoranthene = ND
 Chrysene = ND
 Dibenzo(a,h)anthracene = ND
 Fluoranthene = ND
 Fluorene = ND
 Indeno(1,2,3-CD)pyrene = ND
 Naphthalene = <0.0038
 Pyrene = ND

FL-SS-03@4'
 02/09/23
 4'
 ND = <0.00500
 1-Methylnaphthalene = ND
 2-Methylnaphthalene = ND
 Acenaphthene = ND
 Anthracene = ND
 Benzo(a)anthracene = ND
 Benzo(a)pyrene = ND
 Benzo(b)fluoranthene = ND
 Benzo(k)fluoranthene = ND
 Chrysene = ND
 Dibenzo(a,h)anthracene = ND
 Fluoranthene = ND
 Fluorene = ND
 Indeno(1,2,3-CD)pyrene = ND
 Naphthalene = <0.0038
 Pyrene = ND



FLOWLINE POLYCYCLIC AROMATIC HYDROCARBONS MAP
 ANTELOPE #12-19
 CLOSURE ASSESSMENT
 40.386580 / -104.372610
 SW¼ NW¼ SEC.19 T5N R62W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-31862
 REMEDIATION # 24162

DRAWN BY:

TC

FIG. NO.

4



EAGLE
 ENVIRONMENTAL
 CONSULTING, LLC
 8000 W 44th Ave, Wheat Ridge, CO 80033
 Ph: 303-433-0479 • F: 303-325-5449

LEGEND

-  APPROXIMATE FLOWLINE LOCATION (REMOVED)
-  APPROXIMATE LOCATION OF SOIL SAMPLES FIELD SCREENED, ONLY, WITH PHOTOIONIZATION DETECTOR
-  APPROXIMATE LOCATION OF SOIL SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

PARAMETERS

SAMPLE LOCATION	
DATE	
DEPTH (FEET)	
B = BENZENE (mg/kg)	
T = TOLUENE (mg/kg)	
E = ETHYLBENZENE (mg/kg)	
X = TOTAL XYLENES (mg/kg)	
G = TPH-GRO (mg/kg)	
D = TPH-DRO (mg/kg)	
R = TPH-RRO (mg/kg)	
1,2,4-TMB = 1,2,4 TRIMETHYLBENZENE (mg/kg)	
1,3,5-TMB = 1,3,5 TRIMETHYLBENZENE (mg/kg)	
PAHs = POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)	
Brn= BORON (mg/L)	
EC = SPECIFIC CONDUCTANCE (mmhos/cm)	
SAR= SODIUM ADSORPTION RATIO	
pH = pH (pH UNITS)	

mg/kg = MILLIGRAMS PER KILOGRAM
 mg/L = MILLIGRAMS PER LITER
 mmhos/cm = MILLIMHOS PER CENTIMETER

TPH-GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS
 TPH-DRO = TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE ORGANICS
 TPH-RRO = TOTAL PETROLEUM HYDROCARBONS - RESIDUAL RANGE ORGANICS

NOTES:
 VALUES PRESENTED WITH A LESS THAN SYMBOL (<) DID NOT CONTAIN CONCENTRATIONS AT OR ABOVE LABORATORY DETECTION LIMITS

VALUES PRESENTED IN **BOLD** EXCEED ECMC TABLE 915-1 REGULATORY LIMITS FOR THAT COMPOUND.

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

WELLHEAD SOIL ANALYTICAL MAP
 ANTELOPE #12-19
 CLOSURE ASSESSMENT
 40.386580 / -104.372610
 SW¼ NW¼ SEC.19 T5N R62W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-31862
 REMEDIATION # 24162

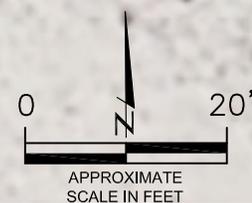
DRAWN BY:

ZM

FIG. NO. 5



EAGLE
 ENVIRONMENTAL
 CONSULTING, LLC
 8000 W 44th Ave, Wheat Ridge, CO 80033
 Ph: 303-433-0479 • F: 303-325-5449



BACKGROUND-03@6'
 08/02/24
 6'
 Brn= <2.00
 EC = 0.691
 SAR= 0.910
 pH = 7.81

BACKGROUND-03

BACKGROUND-02@6'
 08/02/24
 6'
 Brn= <2.00
 EC = 0.127
 SAR= 0.179
 pH = 7.74

BACKGROUND-01

BACKGROUND-02

BACKGROUND-01@6'
 08/02/24
 6'
 Brn= <2.00
 EC = 0.132
 SAR= 0.169
 pH = 7.47

WH-SS-01@5'
 08/02/24
 5'
 B = <0.00200
 T = <0.00500
 E = <0.00500
 X = <0.0100
 G = <0.500
 D = <50.0
 R = <50.0
 1,2,4-TMB = <0.00500
 1,3,5-TMB = <0.00500
 PAHs = BRL
 Brn= <2.00
 EC = 0.291
 SAR= 1.09
 pH = 7.97

WH-SS-01
 WH-SS-02
 WH-FS-01
 WH-SS-03

WH-FS-01@6'
 08/02/24
 6'
 B = <0.00200
 T = <0.00500
 E = <0.00500
 X = <0.0100
 G = <0.500
 D = <50.0
 R = <50.0
 1,2,4-TMB = <0.00500
 1,3,5-TMB = <0.00500
 PAHs = BRL
 Brn= <2.00
 EC = 0.370
 SAR= 3.09
 pH = **8.42**



TABLES

Table 1: Photoionization Detector Reading Summary

Table 2: Soil Analytical Results Summary

Table 3: Polycyclic Aromatic Hydrocarbons Analytical Results Summary

TABLE 1
PHOTOIONIZATION DETECTOR READING SUMMARY
ANTELOPE 12-19
CLOSURE ASSESSMENT
40.386580 / -104.372610
SW¼ NW¼ SEC.19 T5N R62W 6PM
WELD COUNTY, COLORADO
API # 05-123-31862
REMEDIATION # 24162

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Lab Submission (Y/N)
FL-SS-01 @ 4' (40.384504 / -104.368034)	2/9/23	4	3.4	Y
FL-SS-02 @ 4' (40.384340 / -104.368023)	2/9/23	4	2.1	Y
FL-SS-03 @ 4' (40.384267 / -104.371215)	2/9/23	4	2.4	Y
FL-SS-04 @ 4' (40.385723 / -104.371251)	2/9/23	4	1.9	Y
FL-SS-05 @ 4' (40.384335 / -104.368370)	2/9/23	4	2.7	N
FL-SS-06 @ 4' (40.384346 / -104.368671)	2/9/23	4	2.1	N
FL-SS-07 @ 4' (40.384359 / -104.369050)	2/9/23	4	1.5	N
FL-SS-08 @ 4' (40.384362 / -104.369355)	2/9/23	4	2.0	N
FL-SS-09 @ 4' (40.384358 / -104.369724)	2/9/23	4	1.7	N
FL-SS-10 @ 4' (40.384349 / -104.370001)	2/9/23	4	2.3	N
FL-SS-11 @ 4' (40.384350 / -104.370395)	2/9/23	4	2.2	N
FL-SS-12 @ 4' (40.384330 / -104.370752)	2/9/23	4	3.0	N
FL-SS-13 @ 4' (40.384637 / -104.371253)	2/9/23	4	2.5	N
FL-SS-14 @ 4' (40.384910 / -104.371272)	2/9/23	4	2.6	N
FL-SS-15 @ 4' (40.385222 / -104.371266)	2/9/23	4	2.1	N
FL-SS-16 @ 4' (40.385547 / -104.371256)	2/9/23	4	1.4	N
FL-SS-17 @ 4' (40.385875 / -104.371516)	2/9/23	4	1.9	N
FL-SS-18 @ 4' (40.386030 / -104.371781)	2/9/23	4	1.3	N
FL-SS-19 @ 4' (40.386231 / -104.372062)	2/9/23	4	1.8	N
FL-SS-20 @ 4' (40.386388 / -104.372272)	2/9/23	4	2.3	N
FL-SS-21 @ 4' (40.386595 / -104.372579)	2/9/23	4	1.7	N
WH-FS-01 @ 6' (40.3865914 / -104.3726237)	8/2/24	6	4.5	Y



TABLE 1
PHOTOIONIZATION DETECTOR READING SUMMARY
ANTELOPE 12-19
CLOSURE ASSESSMENT
40.386580 / -104.372610
SW¼ NW¼ SEC.19 T5N R62W 6PM
WELD COUNTY, COLORADO
API # 05-123-31862
REMEDIAION # 24162

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Lab Submission (Y/N)
WH-SS-01 @ 5' (40.3866062 / -104.3726230)	8/2/24	5	5.5	Y
WH-SS-02 @ 5' (40.3865975 / -104.3726100)	8/2/24	5	4.3	N
WH-SS-03 @ 5' (40.3865853 / -104.3726224)	8/2/24	5	3.9	N
WH-SS-04 @ 5' (40.3865998 / -104.3726422)	8/2/24	5	3.5	N
Background-01 @ 6' (40.3865984 / -104.3727602)	8/2/24	6	4.7	Y
Background-02 @ 6' (40.3866302 / -104.3727417)	8/2/24	6	3.9	Y
Background-03 @ 6' (40.3866866 / -104.3726254)	8/2/24	6	3.9	Y
(Y/N) = Yes or No ppm-v = parts per million by volume PID = Photoionization Detector		*Sample collected in same location/in-conjunction with flowline removal assessment associated with the North Platte 22-24 wellhead/flowline (Rem. # 17890)		

TABLE 2
SOIL ANALYTICAL RESULTS SUMMARY
ANTELOPE 12-19
CLOSURE ASSESSMENT
40.386580 / -104.372610
SW¼ NW¼ SEC.19 T5N R62W 6PM
WELD COUNTY, COLORADO
API # 05-123-31862
REMEDIATION # 24162

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-RRO (mg/kg)	1,2,4- Trimethylbenzene (mg/kg)	1,3,5- Trimethylbenzene (mg/kg)	Boron (mg/L)	Specific Conductance (mmhos/cm)	pH (pH units)	SAR
CECMC Table 915-1 Residential Screening Levels				1.2	490	5.8	58	500			30	27	2	<4	6-8.3	<6
CECMC Table 915-1 Protection of Groundwater Soil Screening Levels				0.0026	0.69	0.78	9.9	--			0.0081	0.0087	--	--	--	--
FL-SS-01 @ 4' (40.384504 / -104.368034)	2/9/23	4	3.4	<0.0020	<0.0050	<0.0050	<0.010	0.11	32	<50	<0.0050	<0.0050	0.0354	0.123	8.27	0.0432
FL-SS-02 @ 4' (40.384340 / -104.368023)	2/9/23	4	2.1	<0.0020	<0.0050	<0.0050	<0.010	0.11	32	<50	<0.0050	<0.0050	0.0406	0.138	8.15	0.0481
FL-SS-03 @ 4' (40.384267 / -104.371215)	2/9/23	4	2.4	<0.0020	<0.0050	<0.0050	<0.010	0.11	34	<50	<0.0050	<0.0050	0.0324	0.126	8.26	0.0464
FL-SS-04 @ 4' (40.385723 / -104.371251)	2/9/23	4	1.9	<0.0020	<0.0050	<0.0050	<0.010	0.11	31	<50	<0.0050	<0.0050	0.0721	0.126	8.25	0.0529
WH-FS-01 @ 6' (40.3865914 / -104.3726237)	8/2/24	6	4.5	<0.00200	<0.00500	<0.00500	<0.0100	<0.500	<50.0	<50.0	<0.00500	<0.00500	<2.00	0.370	8.42	3.09
WH-SS-01 @ 5' (40.3866062 / -104.3726230)	8/2/24	5	5.5	<0.00200	<0.00500	<0.00500	<0.0100	<0.500	<50.0	<50.0	<0.00500	<0.00500	<2.00	0.291	7.97	1.09
Background-01 @ 6' (40.3865984 / -104.3727602)	8/2/24	6	4.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.00	0.132	7.47	0.169
Background-02 @ 6' (40.3866302 / -104.3727417)	8/2/24	6	3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.00	0.127	7.74	0.179
Background-03 @ 6' (40.3866866 / -104.3726254)	8/2/24	6	3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.00	0.691	7.81	0.910
CECMC = Colorado Energy & Carbon Management Commission				mg/kg = milligrams per kilogram				mg/L = milligram per liter				mmhos/cm = millimhos per centimeter				
SAR = Sodium Adsorption Ratio				ppm-v = parts per million by volume				NA = Not Analyzed								
TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics				TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics				TPH-RRO = Total Petroleum Hydrocarbons - Residual Range Organics								
Note: Values presented with a less than symbol (<) did not contain concentrations at or above the laboratory reporting limit.																
Note: Values presented in BOLD contained concentrations exceeding applicable CECMC Table 915-1 Regulatory Limits																

TABLE 3
PAH ANALYTICAL RESULTS SUMMARY
ANTELOPE 12-19
CLOSURE ASSESSMENT
40.386680 / -104.372610
SW¼ NW¼ SEC.19 T5N R62W 6PM
WELD COUNTY, COLORADO
API # 05-123-31862
REMEDATION # 24162

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading	1-Methyl- naphthalene (mg/kg)	2-Methyl- naphthalene (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo(a)- anthracene (mg/kg)	Benzo(a)- pyrene (mg/kg)	Benzo(b)- fluoranthene (mg/kg)	Benzo(k)- fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h)- anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno(1,2,3- cd)-pyrene (mg/kg)	Naphthalene (mg/kg)	Pyrene (mg/kg)	
CECMC Table 915-1 Residential Screening Levels				18	24	360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	2	180	
CECMC Table 915-1 Protection of Groundwater Soil Screening Levels				0.006	0.019	0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	0.0038	1.3	
FL-SS-01 @ 4' (40.384504 / -104.368034)	2/9/23	4	3.4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.0038	<0.00500	
FL-SS-02 @ 4' (40.384340 / -104.368023)	2/9/23	4	2.1	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.0038	<0.00500	
FL-SS-03 @ 4' (40.384267 / -104.371215)	2/9/23	4	2.4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.0038	<0.00500	
FL-SS-04 @ 4' (40.385723 / -104.371251)	2/9/23	4	1.9	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.0038	<0.00500	
WH-FS-01 @ 6' (40.3865914 / -104.3726237)	8/2/24	6	4.5	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00181	<0.00408	<0.00500	
WH-SS-01 @ 5' (40.3866062 / -104.3726230)	8/2/24	5	5.5	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00181	<0.00408	<0.00500	
CECMC = Colorado Energy & Carbon Management Commission				mg/kg = milligrams per kilogram				PID = Photoionization Detector											
Note: Values presented with a less than symbol (<) did not contain concentrations at or above the laboratory reporting limit.																			



ATTACHMENT A

Photo Log

Antelope 12-19
API # 05-123-31862
Flowline System ID 478703
Remediation # 24162

Closure Assessment
February 2023 – August 2024



Flowline Assessment – 02/09/23



Looking north



Looking west



Looking east

Cut-points/bell-holes field-screened and/or sampled per assessment plan

No petroleum hydrocarbon staining or odor observed

Samples collected:

FL-SS-01@4' (terminus at separator) – 3.4 ppm-v (lab submitted)

FL-SS-02@4' (change of direction) – 2.1 ppm-v (lab submitted)

FL-SS-03@4' (change of direction) – 2.4 ppm-v (lab submitted)

Flowline Assessment – 02/09/23



Looking south



Looking east



Looking east

Cut-points/bell-holes field-screened and/or sampled per assessment plan

No petroleum hydrocarbon staining or odor observed

Samples collected:

FL-SS-04@4' (change of direction) – 1.9 ppm-v (lab submitted)

FL-SS-05@4' – 2.7 ppm-v

FL-SS-06@4' – 2.1 ppm-v

Flowline Assessment – 02/09/23



Looking east



Looking east



Looking east

Cut-points/bell-holes field-screened and/or sampled per assessment plan

No petroleum hydrocarbon staining or odor observed

Samples collected:

FL-SS-07@4' – 1.5 ppm-v

FL-SS-08@4' – 2.0 ppm-v

FL-SS-09@4' – 1.7 ppm-v

Flowline Assessment – 02/09/23



Looking east



Looking east



Looking west

Cut-points/bell-holes field-screened and/or sampled per assessment plan

No petroleum hydrocarbon staining or odor observed

Samples collected:

FL-SS-10@4' – 2.3 ppm-v

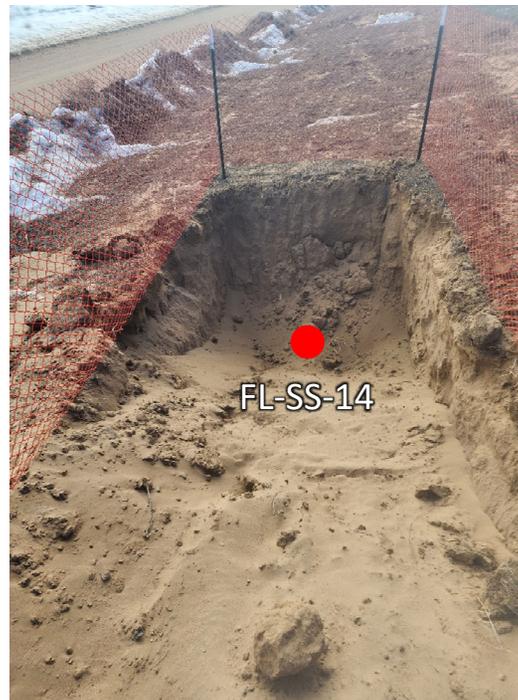
FL-SS-11@4' – 2.2 ppm-v

FL-SS-12@4' – 3.0 ppm-v

Flowline Assessment – 02/09/23



Looking east



Looking east



Looking east

Cut-points/bell-holes field-screened and/or sampled per assessment plan

No petroleum hydrocarbon staining or odor observed

Samples collected:

FL-SS-13@4' – 2.5 ppm-v

FL-SS-14@4' – 2.6 ppm-v

FL-SS-15@4' – 2.1 ppm-v

Flowline Assessment – 02/09/23



Looking south



Looking northwest



Looking southeast

Cut-points/bell-holes field-screened and/or sampled per assessment plan

No petroleum hydrocarbon staining or odor observed

Samples collected:

FL-SS-16@4' – 1.4 ppm-v

FL-SS-17@4' – 1.9 ppm-v

FL-SS-18@4' – 1.3 ppm-v

Flowline Assessment – 02/09/23



Looking southeast



Looking southeast



Looking northwest

Cut-points/bell-holes field-screened and/or sampled per assessment plan

No petroleum hydrocarbon staining or odor observed

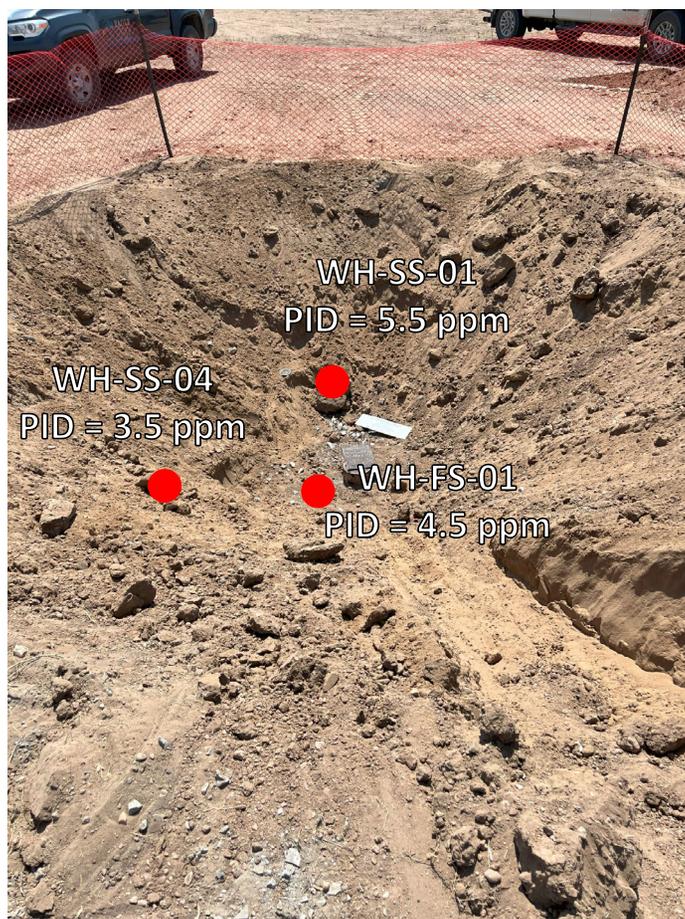
Samples collected:

FL-SS-19@4' – 1.8 ppm-v

FL-SS-20@4' – 2.3 ppm-v

FL-SS-21@4' (wellhead connection) – 1.7 ppm-v

Wellhead Excavation – 08/02/24



Looking north at wellhead cut/cap excavation

No petroleum hydrocarbon staining or odor observed in soil

WH-FS-01 & WH-SS-01 submitted for laboratory analysis

Wellhead Excavation – 08/02/24



Looking southeast at wellhead cut/cap excavation

No petroleum hydrocarbon staining or odor observed in soil



ATTACHMENT B

Laboratory Analytical Reports

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80401

303.277.9310

February 16, 2023

Martin Eckert III

Civitas Resources

650 Southgate Drive

Windsor, CO 80550

RE: Antelope 12-19

Work Order # 2302176

Enclosed are the results of analyses for samples received by Summit Scientific on 02/09/23 15:46. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Scott Sheely". The signature is written in a cursive style with a large, stylized 'S' at the beginning.

Scott Sheely For Paul Shrewsbury

President



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL-SS-01@4'	2302176-01	Soil	02/09/23 09:50	02/09/23 15:46
FL-SS-02@4'	2302176-02	Soil	02/09/23 09:55	02/09/23 15:46
FL-SS-03@4'	2302176-03	Soil	02/09/23 10:00	02/09/23 15:46
FL-SS-04@4'	2302176-04	Soil	02/09/23 10:05	02/09/23 15:46

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SUMMIT SCIENTIFIC

4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of 1
2302176	

Send Data To:		Send Invoice To:	
Client: Eagle Environmental Consulting	Project Manager: Martin Eckert III	Company: Civitas	
Address: 8000 W 44th Ave	E-Mail: mce3@eagle-enviro.com	Project Name/Location:	
City/State/Zip: Wheat Ridge, CO 80033		AFE#:	
Phone: 303-433-0479	Project Name: Antelope 12-19	PO/Billing Codes:	
Sampler Name: TL	Project Number: —	Contact: Jacob	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	G, BTEX, TMBs - 8260D	ARO/RRO - 8015D	PAHs - 8270D s/m	EC - 9050A	SAR - 20B	pH - 9645D	
1	FL-SS-01 @ 4'	2-9-23	0950	2			X			X			X	X	X	X	X	X	EC, SAR, pH = Substrated Paste Prep
2	FL-SS-02 @ 4'	↓	0955	↓			↓			↓			↓	↓	↓	↓	↓	↓	
3	FL-SS-03 @ 4'	↓	1000	↓			↓			↓			↓	↓	↓	↓	↓	↓	⊕ MDLs needed
4	FL-SS-04 @ 4'	↓	1005	↓			↓			↓			↓	↓	↓	↓	↓	↓	
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: Trevor Copple	Date/Time: 2-9-23/1545	Received by: Bob Shady	Date/Time: 2/9/23 1546	TAT Business Days	Field DO	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard	Field Turb. <input checked="" type="checkbox"/>	
Temperature Upon Receipt: 0.9	Corrected Temperature: —	IR gun #: 02	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2302176Client: Eagle Environmental Client Project ID: Antelope 12-19Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____ Matrix (Check all that apply) Air Soil/Solid Water Other Temp (°C) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>On Ice</u>
If custody seals are present, are they intact? ⁽¹⁾	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.SI
Custodian Printed Name2/19/23 1546
Date/Time



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

FL-SS-01@4'
2302176-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/09/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020	0.000098	mg/kg	1	BGB0301	02/10/23	02/12/23	EPA 8260B	
Toluene	ND	0.0050	0.00025	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	0.00021	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	0.00044	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	0.00024	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	0.00024	"	"	"	"	"	"	
Naphthalene	ND	0.0038	0.00036	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.11	0.50		"	"	"	"	"	"	

Date Sampled: **02/09/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		78.9 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		91.3 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.0 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/09/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	32	50	4.3	mg/kg	1	BGB0299	02/10/23	02/12/23	EPA 8015M	
C28-C36 (ORO)	ND	50	4.3	"	"	"	"	"	"	

Date Sampled: **02/09/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		111 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

FL-SS-01@4'
2302176-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/09/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Acenaphthene	ND	0.00500	0.000620	mg/kg	1	BGB0388	02/14/23	02/14/23	EPA 8270D SIM	
Anthracene	ND	0.00500	0.000308	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	0.000363	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	0.000234	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	0.000433	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	0.000423	"	"	"	"	"	"	
Chrysene	ND	0.00500	0.000237	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	0.00167	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	0.000373	"	"	"	"	"	"	
Fluorene	ND	0.00500	0.000477	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	0.00118	"	"	"	"	"	"	
Pyrene	ND	0.00500	0.000317	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	0.00185	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	0.00189	"	"	"	"	"	"	

Date Sampled: **02/09/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		42.6 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		62.8 %		40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/09/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Boron	0.0354	0.0100	0.00690	mg/L	1	BGB0348	02/13/23	02/14/23	EPA 6020B	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/09/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

FL-SS-01@4'
2302176-01 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	35.9	0.0515		mg/L dry	1	BGB0422	02/14/23	02/16/23	EPA 6020B	
Magnesium	16.2	0.0515		"	"	"	"	"	"	
Sodium	1.24	0.0515		"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/09/23 09:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0432	0.00100		units	1	BGB0499	02/16/23	02/16/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/09/23 09:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.2			%	1	BGB0425	02/14/23	02/15/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/09/23 09:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.123	0.0100	0.00100	mmhos/cm	1	BGB0462	02/15/23	02/15/23	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/09/23 09:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.27			pH Units	1	BGB0463	02/15/23	02/15/23	EPA 9045D	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

FL-SS-02@4'
2302176-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/09/23 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020	0.000098	mg/kg	1	BGB0301	02/10/23	02/12/23	EPA 8260B	
Toluene	ND	0.0050	0.00025	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	0.00021	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	0.00044	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	0.00024	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	0.00024	"	"	"	"	"	"	
Naphthalene	ND	0.0038	0.00036	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.11	0.50		"	"	"	"	"	"	

Date Sampled: **02/09/23 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		75.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		87.0 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.8 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/09/23 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	32	50	4.3	mg/kg	1	BGB0299	02/10/23	02/12/23	EPA 8015M	
C28-C36 (ORO)	ND	50	4.3	"	"	"	"	"	"	

Date Sampled: **02/09/23 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		109 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

FL-SS-02@4'
2302176-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/09/23 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Acenaphthene	ND	0.00500	0.000620	mg/kg	1	BGB0388	02/14/23	02/14/23	EPA 8270D SIM	
Anthracene	ND	0.00500	0.000308	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	0.000363	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	0.000234	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	0.000433	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	0.000423	"	"	"	"	"	"	
Chrysene	ND	0.00500	0.000237	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	0.00167	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	0.000373	"	"	"	"	"	"	
Fluorene	ND	0.00500	0.000477	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	0.00118	"	"	"	"	"	"	
Pyrene	ND	0.00500	0.000317	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	0.00185	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	0.00189	"	"	"	"	"	"	

Date Sampled: **02/09/23 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		49.1 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		80.7 %		40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/09/23 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Boron	0.0406	0.0100	0.00690	mg/L	1	BGB0348	02/13/23	02/14/23	EPA 6020B	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/09/23 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

FL-SS-02@4'
2302176-02 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	27.9	0.0510		mg/L dry	1	BGB0422	02/14/23	02/16/23	EPA 6020B	
Magnesium	11.2	0.0510		"	"	"	"	"	"	
Sodium	1.19	0.0510		"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/09/23 09:55**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0481	0.00100		units	1	BGB0499	02/16/23	02/16/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/09/23 09:55**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.1			%	1	BGB0425	02/14/23	02/15/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/09/23 09:55**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.138	0.0100	0.00100	mmhos/cm	1	BGB0462	02/15/23	02/15/23	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/09/23 09:55**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.15			pH Units	1	BGB0463	02/15/23	02/15/23	EPA 9045D	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

FL-SS-03@4'
2302176-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/09/23 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020	0.000098	mg/kg	1	BGB0301	02/10/23	02/12/23	EPA 8260B	
Toluene	ND	0.0050	0.00025	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	0.00021	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	0.00044	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	0.00024	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	0.00024	"	"	"	"	"	"	
Naphthalene	ND	0.0038	0.00036	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.11	0.50		"	"	"	"	"	"	

Date Sampled: **02/09/23 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		75.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		85.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.8 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/09/23 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	34	50	4.3	mg/kg	1	BGB0299	02/10/23	02/12/23	EPA 8015M	
C28-C36 (ORO)	ND	50	4.3	"	"	"	"	"	"	

Date Sampled: **02/09/23 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		110 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

FL-SS-03@4'
2302176-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/09/23 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Acenaphthene	ND	0.00500	0.000620	mg/kg	1	BGB0388	02/14/23	02/14/23	EPA 8270D SIM	
Anthracene	ND	0.00500	0.000308	"	"	"	"	"	"	"
Benzo (a) anthracene	ND	0.00500	0.000363	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.00500	0.000234	"	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.00500	0.000433	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	0.000423	"	"	"	"	"	"	"
Chrysene	ND	0.00500	0.000237	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	0.00167	"	"	"	"	"	"	"
Fluoranthene	ND	0.00500	0.000373	"	"	"	"	"	"	"
Fluorene	ND	0.00500	0.000477	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	0.00118	"	"	"	"	"	"	"
Pyrene	ND	0.00500	0.000317	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	0.00185	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	0.00189	"	"	"	"	"	"	"

Date Sampled: **02/09/23 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		47.5 %		40-150		"	"	"	"	"
Surrogate: Fluoranthene-d10		77.9 %		40-150		"	"	"	"	"

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/09/23 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Boron	0.0324	0.0100	0.00690	mg/L	1	BGB0348	02/13/23	02/14/23	EPA 6020B	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/09/23 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

FL-SS-03@4'
2302176-03 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	26.4	0.0511		mg/L dry	1	BGB0422	02/14/23	02/16/23	EPA 6020B	
Magnesium	10.3	0.0511		"	"	"	"	"	"	
Sodium	1.11	0.0511		"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/09/23 10:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0464	0.00100		units	1	BGB0499	02/16/23	02/16/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/09/23 10:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.8			%	1	BGB0425	02/14/23	02/15/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/09/23 10:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.126	0.0100	0.00100	mmhos/cm	1	BGB0462	02/15/23	02/15/23	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/09/23 10:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.26			pH Units	1	BGB0463	02/15/23	02/15/23	EPA 9045D	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

FL-SS-04@4'
2302176-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/09/23 10:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020	0.000098	mg/kg	1	BGB0301	02/10/23	02/12/23	EPA 8260B	
Toluene	ND	0.0050	0.00025	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	0.00021	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	0.00044	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	0.00024	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	0.00024	"	"	"	"	"	"	
Naphthalene	ND	0.0038	0.00036	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.11	0.50		"	"	"	"	"	"	

Date Sampled: **02/09/23 10:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		89.5 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/09/23 10:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	31	50	4.3	mg/kg	1	BGB0299	02/10/23	02/12/23	EPA 8015M	
C28-C36 (ORO)	ND	50	4.3	"	"	"	"	"	"	

Date Sampled: **02/09/23 10:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		111 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

FL-SS-04@4'
2302176-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/09/23 10:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Acenaphthene	ND	0.00500	0.000620	mg/kg	1	BGB0388	02/14/23	02/14/23	EPA 8270D SIM	
Anthracene	ND	0.00500	0.000308	"	"	"	"	"	"	"
Benzo (a) anthracene	ND	0.00500	0.000363	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.00500	0.000234	"	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.00500	0.000433	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	0.000423	"	"	"	"	"	"	"
Chrysene	ND	0.00500	0.000237	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	0.00167	"	"	"	"	"	"	"
Fluoranthene	ND	0.00500	0.000373	"	"	"	"	"	"	"
Fluorene	ND	0.00500	0.000477	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	0.00118	"	"	"	"	"	"	"
Pyrene	ND	0.00500	0.000317	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	0.00185	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	0.00189	"	"	"	"	"	"	"

Date Sampled: **02/09/23 10:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		43.4 %		40-150		"	"	"	"	"
Surrogate: Fluoranthene-d10		62.4 %		40-150		"	"	"	"	"

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/09/23 10:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Boron	0.0721	0.0100	0.00690	mg/L	1	BGB0348	02/13/23	02/14/23	EPA 6020B	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/09/23 10:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

FL-SS-04@4'
2302176-04 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	20.1	0.0513		mg/L dry	1	BGB0422	02/14/23	02/16/23	EPA 6020B	
Magnesium	7.37	0.0513		"	"	"	"	"	"	
Sodium	1.09	0.0513		"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/09/23 10:05**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0529	0.00100		units	1	BGB0499	02/16/23	02/16/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/09/23 10:05**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.5			%	1	BGB0425	02/14/23	02/15/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/09/23 10:05**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.126	0.0100	0.00100	mmhos/cm	1	BGB0462	02/15/23	02/15/23	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/09/23 10:05**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.25			pH Units	1	BGB0463	02/15/23	02/15/23	EPA 9045D	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGB0301 - EPA 5030 Soil MS

Blank (BGB0301-BLK1)

Prepared: 02/10/23 Analyzed: 02/11/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	0.120	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0400</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0489</i>		<i>"</i>	<i>0.0400</i>		<i>122</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0469</i>		<i>"</i>	<i>0.0400</i>		<i>117</i>	<i>50-150</i>			

LCS (BGB0301-BS1)

Prepared: 02/10/23 Analyzed: 02/11/23

Benzene	0.0870	0.0020	mg/kg	0.100		87.0	70-130			
Toluene	0.130	0.0050	"	0.100		130	70-130			
Ethylbenzene	0.111	0.0050	"	0.100		111	70-130			
m,p-Xylene	0.248	0.010	"	0.200		124	70-130			
o-Xylene	0.116	0.0050	"	0.100		116	70-130			
1,2,4-Trimethylbenzene	0.103	0.0050	"	0.100		103	70-130			
1,3,5-Trimethylbenzene	0.106	0.0050	"	0.100		106	70-130			
Naphthalene	0.0911	0.0038	"	0.100		91.1	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0504</i>		<i>"</i>	<i>0.0400</i>		<i>126</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0445</i>		<i>"</i>	<i>0.0400</i>		<i>111</i>	<i>50-150</i>			

Matrix Spike (BGB0301-MS1)

Source: 2302169-01

Prepared: 02/10/23 Analyzed: 02/11/23

Benzene	0.0801	0.0020	mg/kg	0.100	ND	80.1	70-130			
Toluene	0.0820	0.0050	"	0.100	ND	82.0	70-130			
Ethylbenzene	0.0988	0.0050	"	0.100	ND	98.8	70-130			
m,p-Xylene	0.204	0.010	"	0.200	ND	102	70-130			
o-Xylene	0.0950	0.0050	"	0.100	ND	95.0	70-130			
1,2,4-Trimethylbenzene	0.0940	0.0050	"	0.100	ND	94.0	70-130			
1,3,5-Trimethylbenzene	0.0979	0.0050	"	0.100	ND	97.9	70-130			
Naphthalene	0.0904	0.0038	"	0.100	ND	90.4	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0280</i>		<i>"</i>	<i>0.0400</i>		<i>70.1</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0370</i>		<i>"</i>	<i>0.0400</i>		<i>92.6</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0381</i>		<i>"</i>	<i>0.0400</i>		<i>95.2</i>	<i>50-150</i>			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGB0301 - EPA 5030 Soil MS

Matrix Spike Dup (BGB0301-MSD1)	Source: 2302169-01			Prepared: 02/10/23 Analyzed: 02/11/23						
Benzene	0.0821	0.0020	mg/kg	0.100	ND	82.1	70-130	2.48	30	
Toluene	0.0817	0.0050	"	0.100	ND	81.7	70-130	0.367	30	
Ethylbenzene	0.100	0.0050	"	0.100	ND	100	70-130	1.18	30	
m,p-Xylene	0.204	0.010	"	0.200	ND	102	70-130	0.0440	30	
o-Xylene	0.0963	0.0050	"	0.100	ND	96.3	70-130	1.41	30	
1,2,4-Trimethylbenzene	0.0927	0.0050	"	0.100	ND	92.7	70-130	1.35	30	
1,3,5-Trimethylbenzene	0.0960	0.0050	"	0.100	ND	96.0	70-130	1.89	30	
Naphthalene	0.0933	0.0038	"	0.100	ND	93.3	70-130	3.13	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0262</i>		<i>"</i>	<i>0.0400</i>		<i>65.6</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0340</i>		<i>"</i>	<i>0.0400</i>		<i>85.0</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0371</i>		<i>"</i>	<i>0.0400</i>		<i>92.8</i>	<i>50-150</i>			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BGB0299 - EPA 3550A

Blank (BGB0299-BLK1)

Prepared: 02/10/23 Analyzed: 02/12/23

C10-C28 (DRO)	26.0	50	mg/kg								
C28-C36 (ORO)	5.74	50	"								
Surrogate: <i>o</i> -Terphenyl	13.3		"	12.5		107	30-150				

LCS (BGB0299-BS1)

Prepared: 02/10/23 Analyzed: 02/12/23

C10-C28 (DRO)	519	50	mg/kg	500		104	70-130				
Surrogate: <i>o</i> -Terphenyl	13.3		"	12.5		107	30-150				

Matrix Spike (BGB0299-MS1)

Source: 2302169-01

Prepared: 02/10/23 Analyzed: 02/12/23

C10-C28 (DRO)	478	50	mg/kg	500	29.9	89.6	70-130				
Surrogate: <i>o</i> -Terphenyl	13.2		"	12.5		106	30-150				

Matrix Spike Dup (BGB0299-MSD1)

Source: 2302169-01

Prepared: 02/10/23 Analyzed: 02/12/23

C10-C28 (DRO)	466	50	mg/kg	500	29.9	87.2	70-130	2.59	20		
Surrogate: <i>o</i> -Terphenyl	12.4		"	12.5		99.6	30-150				

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGB0388 - EPA 5030 Soil MS

Blank (BGB0388-BLK1)

Prepared & Analyzed: 02/14/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0205</i>		"	<i>0.0333</i>		<i>61.4</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0334</i>		"	<i>0.0333</i>		<i>100</i>	<i>40-150</i>			

LCS (BGB0388-BS1)

Prepared & Analyzed: 02/14/23

Acenaphthene	0.0326	0.00500	mg/kg	0.0333		97.9	31-137			
Anthracene	0.0295	0.00500	"	0.0333		88.4	30-120			
Benzo (a) anthracene	0.0269	0.00500	"	0.0333		80.7	30-120			
Benzo (a) pyrene	0.0245	0.00500	"	0.0333		73.6	30-120			
Benzo (b) fluoranthene	0.0337	0.00500	"	0.0333		101	30-120			
Benzo (k) fluoranthene	0.0321	0.00500	"	0.0333		96.2	30-120			
Chrysene	0.0331	0.00500	"	0.0333		99.4	30-120			
Dibenz (a,h) anthracene	0.0232	0.00500	"	0.0333		69.6	30-120			
Fluoranthene	0.0316	0.00500	"	0.0333		94.9	30-120			
Fluorene	0.0338	0.00500	"	0.0333		101	30-120			
Indeno (1,2,3-cd) pyrene	0.0266	0.00500	"	0.0333		79.7	30-120			
Pyrene	0.0312	0.00500	"	0.0333		93.5	35-142			
1-Methylnaphthalene	0.0270	0.00500	"	0.0333		81.1	35-142			
2-Methylnaphthalene	0.0194	0.00500	"	0.0333		58.1	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0292</i>		"	<i>0.0333</i>		<i>87.7</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0311</i>		"	<i>0.0333</i>		<i>93.3</i>	<i>40-150</i>			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGB0388 - EPA 5030 Soil MS

Matrix Spike (BGB0388-MS1)	Source: 2302176-01			Prepared & Analyzed: 02/14/23						
Acenaphthene	0.0211	0.00500	mg/kg	0.0333	ND	63.4	31-137			
Anthracene	0.0190	0.00500	"	0.0333	ND	57.1	30-120			
Benzo (a) anthracene	0.0200	0.00500	"	0.0333	ND	60.1	30-120			
Benzo (a) pyrene	0.0216	0.00500	"	0.0333	ND	64.8	30-120			
Benzo (b) fluoranthene	0.0222	0.00500	"	0.0333	ND	66.6	30-120			
Benzo (k) fluoranthene	0.0209	0.00500	"	0.0333	ND	62.8	30-120			
Chrysene	0.0201	0.00500	"	0.0333	ND	60.3	30-120			
Dibenz (a,h) anthracene	0.0143	0.00500	"	0.0333	ND	42.9	30-120			
Fluoranthene	0.0209	0.00500	"	0.0333	ND	62.8	30-120			
Fluorene	0.0216	0.00500	"	0.0333	ND	64.8	30-120			
Indeno (1,2,3-cd) pyrene	0.0164	0.00500	"	0.0333	ND	49.3	30-120			
Pyrene	0.0204	0.00500	"	0.0333	ND	61.3	35-142			
1-Methylnaphthalene	0.0189	0.00500	"	0.0333	ND	56.7	15-130			
2-Methylnaphthalene	0.0167	0.00500	"	0.0333	ND	50.1	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0221		"	0.0333		66.2	40-150			
Surrogate: Fluoranthene-d10	0.0220		"	0.0333		66.1	40-150			

Matrix Spike Dup (BGB0388-MSD1)	Source: 2302176-01			Prepared & Analyzed: 02/14/23						
Acenaphthene	0.0222	0.00500	mg/kg	0.0333	ND	66.6	31-137	4.94	30	
Anthracene	0.0204	0.00500	"	0.0333	ND	61.1	30-120	6.70	30	
Benzo (a) anthracene	0.0213	0.00500	"	0.0333	ND	64.0	30-120	6.34	30	
Benzo (a) pyrene	0.0229	0.00500	"	0.0333	ND	68.6	30-120	5.70	30	
Benzo (b) fluoranthene	0.0239	0.00500	"	0.0333	ND	71.8	30-120	7.58	30	
Benzo (k) fluoranthene	0.0205	0.00500	"	0.0333	ND	61.4	30-120	2.23	30	
Chrysene	0.0208	0.00500	"	0.0333	ND	62.5	30-120	3.61	30	
Dibenz (a,h) anthracene	0.0167	0.00500	"	0.0333	ND	50.0	30-120	15.2	30	
Fluoranthene	0.0223	0.00500	"	0.0333	ND	66.9	30-120	6.26	30	
Fluorene	0.0233	0.00500	"	0.0333	ND	69.9	30-120	7.55	30	
Indeno (1,2,3-cd) pyrene	0.0198	0.00500	"	0.0333	ND	59.4	30-120	18.7	30	
Pyrene	0.0201	0.00500	"	0.0333	ND	60.3	35-142	1.66	30	
1-Methylnaphthalene	0.0191	0.00500	"	0.0333	ND	57.4	15-130	1.31	50	
2-Methylnaphthalene	0.0174	0.00500	"	0.0333	ND	52.2	15-130	3.99	50	
Surrogate: 2-Methylnaphthalene-d10	0.0220		"	0.0333		65.9	40-150			
Surrogate: Fluoranthene-d10	0.0230		"	0.0333		69.0	40-150			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BGB0348 - EPA 3050B

Blank (BGB0348-BLK1)

Prepared: 02/13/23 Analyzed: 02/14/23

Boron ND 0.0100 mg/L

LCS (BGB0348-BS1)

Prepared: 02/13/23 Analyzed: 02/14/23

Boron 5.95 0.0100 mg/L 5.00 119 80-120

Duplicate (BGB0348-DUP1)

Source: 2302170-01

Prepared: 02/13/23 Analyzed: 02/14/23

Boron 0.0437 0.0100 mg/L 0.0527 18.8 20

Matrix Spike (BGB0348-MS1)

Source: 2302170-01

Prepared: 02/13/23 Analyzed: 02/14/23

Boron 5.47 0.0100 mg/L 5.00 0.0527 108 75-125

Matrix Spike Dup (BGB0348-MSD1)

Source: 2302170-01

Prepared: 02/13/23 Analyzed: 02/14/23

Boron 5.62 0.0100 mg/L 5.00 0.0527 111 75-125 2.71 25

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.





Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGB0422 - General Preparation

Blank (BGB0422-BLK1)

Prepared: 02/14/23 Analyzed: 02/16/23

Calcium	0.0433	0.0500	mg/L wet							
Magnesium	0.0193	0.0500	"							
Sodium	0.0482	0.0500	"							

LCS (BGB0422-BS1)

Prepared: 02/14/23 Analyzed: 02/16/23

Calcium	5.20	0.0500	mg/L wet	5.00		104	70-130			
Magnesium	5.01	0.0500	"	5.00		100	70-130			
Sodium	4.76	0.0500	"	5.00		95.2	70-130			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
 650 Southgate Drive
 Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
 Project Manager: Martin Eckert III

Reported:
 02/16/23 12:59

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC			RPD	Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGB0425 - General Preparation

Duplicate (BGB0425-DUP1)		Source: 2302174-01		Prepared: 02/14/23		Analyzed: 02/15/23		
% Solids	96.7		%		96.8		0.0910	20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.





Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BGB0462 - General Preparation

Blank (BGB0462-BLK1)

Prepared & Analyzed: 02/15/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGB0462-BS1)

Prepared & Analyzed: 02/15/23

Specific Conductance (EC) 0.148 0.0100 mmhos/cm 0.150 98.5 95-105

Duplicate (BGB0462-DUP1)

Source: 2302169-01

Prepared & Analyzed: 02/15/23

Specific Conductance (EC) 0.138 0.0100 mmhos/cm 0.142 2.50 20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.





Civitas Resources
 650 Southgate Drive
 Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
 Project Manager: Martin Eckert III

Reported:
 02/16/23 12:59

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGB0463 - General Preparation

LCS (BGB0463-BS1)

Prepared & Analyzed: 02/15/23

pH	9.17	pH Units	9.18	99.9	95-105
----	------	----------	------	------	--------

Duplicate (BGB0463-DUP1)

Source: 2302169-01

Prepared & Analyzed: 02/15/23

pH	8.22	pH Units	8.15	0.855	20
----	------	----------	------	-------	----

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Civitas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Antelope 12-19

Project Number: [none]
Project Manager: Martin Eckert III

Reported:
02/16/23 12:59

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Civitas - CO

Sample Delivery Group: L1764112
Samples Received: 08/06/2024
Project Number:
Description: Antelope 12-19

Report To: EAGLE / CIVI
6855 W. 118th Ave
Broomfield, CO 80020

Entire Report Reviewed By:



Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
WH-FS-01 @ 6' L1764112-01	5
WH-SS-01 @ 5' L1764112-02	7
BACKGROUND-01 @ 6' L1764112-03	9
BACKGROUND-02 @ 6' L1764112-04	10
BACKGROUND-03 @ 6' L1764112-05	11
Qc: Quality Control Summary	12
Wet Chemistry by Method 9045D	12
Wet Chemistry by Method 9050AMod	14
Metals (ICP) by Method 6010B-NE493 Ch 2	16
Volatile Organic Compounds (GC) by Method 8015D/GRO	18
Volatile Organic Compounds (GC/MS) by Method 8260B	19
Semi-Volatile Organic Compounds (GC) by Method 8015M	20
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	21
Gl: Glossary of Terms	23
Al: Accreditations & Locations	24
Sc: Sample Chain of Custody	25

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

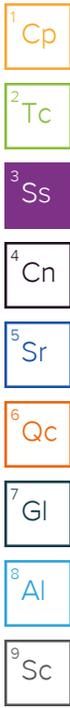
⁹Sc

SAMPLE SUMMARY

WH-FS-01 @ 6' L1764112-01 Solid

Collected by Rachel Seyler
 Collected date/time 08/02/24 12:40
 Received date/time 08/06/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2338992	1	08/10/24 11:36	08/10/24 11:36	JTM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2340063	1	08/09/24 21:49	08/10/24 15:15	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2340068	1	08/09/24 21:51	08/09/24 22:30	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2338988	1	08/09/24 11:29	08/09/24 17:10	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2340102	1	08/08/24 09:04	08/10/24 07:36	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2339302	1	08/08/24 09:04	08/08/24 23:10	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2340873	1	08/14/24 14:29	08/15/24 18:25	AUU	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2340864	1	08/12/24 14:32	08/13/24 04:22	DSH	Mt. Juliet, TN



WH-SS-01 @ 5' L1764112-02 Solid

Collected by Rachel Seyler
 Collected date/time 08/02/24 12:42
 Received date/time 08/06/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2338992	1	08/10/24 11:37	08/10/24 11:37	JTM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2340063	1	08/09/24 21:49	08/10/24 15:15	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2340068	1	08/09/24 21:51	08/09/24 22:30	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2338988	1	08/09/24 11:29	08/09/24 17:12	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2340102	1	08/08/24 09:04	08/10/24 07:56	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2339302	1	08/08/24 09:04	08/08/24 23:29	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2340873	1	08/14/24 14:29	08/15/24 18:12	AUU	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2340864	1	08/12/24 14:32	08/13/24 04:40	DSH	Mt. Juliet, TN

BACKGROUND-01 @ 6' L1764112-03 Solid

Collected by Rachel Seyler
 Collected date/time 08/02/24 12:50
 Received date/time 08/06/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2339087	1	08/12/24 11:18	08/12/24 11:18	DJS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2341041	1	08/12/24 10:31	08/12/24 15:07	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2341049	1	08/12/24 10:38	08/12/24 16:12	SJA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2339099	1	08/09/24 13:33	08/11/24 09:17	DJS	Mt. Juliet, TN

BACKGROUND-02 @ 6' L1764112-04 Solid

Collected by Rachel Seyler
 Collected date/time 08/02/24 12:55
 Received date/time 08/06/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2338992	1	08/10/24 11:39	08/10/24 11:39	JTM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2340063	1	08/09/24 21:49	08/10/24 15:15	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2340068	1	08/09/24 21:51	08/09/24 22:30	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2338988	1	08/09/24 11:29	08/09/24 17:15	JTM	Mt. Juliet, TN

BACKGROUND-03 @ 6' L1764112-05 Solid

Collected by Rachel Seyler
 Collected date/time 08/02/24 13:00
 Received date/time 08/06/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2339087	1	08/12/24 11:20	08/12/24 11:20	DJS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2341041	1	08/12/24 10:31	08/12/24 15:07	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2341049	1	08/12/24 10:38	08/12/24 16:12	SJA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2339099	1	08/09/24 13:33	08/11/24 09:18	DJS	Mt. Juliet, TN

CASE NARRATIVE

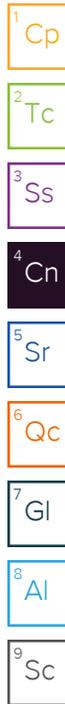
All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris Ward
Project Manager

Project Narrative

The requested project specific reporting limits may be less than laboratory standard quantitation limits (PQL) but will be greater than or equal to the laboratory method detection limits (MDL). It is noted that results reported below lab standard quantitation limits (PQLs) may result in false positive/false negative values that may require additional laboratory quality assurance review, if requested. Routine laboratory procedures do not initiate a data review process for detections below the laboratory's PQL unless requested by the client.



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.09		1	08/10/2024 11:36	WG2338992

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.42	T8	1	08/10/2024 15:15	WG2340063

Sample Narrative:

L1764112-01 WG2340063: 8.42 at 21.3C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RL	Dilution	Analysis date / time	Batch	
Specific Conductance	370		umhos/cm	10.0	1	08/09/2024 22:30	WG2340068

Sample Narrative:

L1764112-01 WG2340068: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result	Qualifier	RL	Dilution	Analysis date / time	Batch	
Hot Water Sol. Boron	ND		mg/l	2.00	1	08/09/2024 17:10	WG2338988

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result	Qualifier	RL	Dilution	Analysis date / time	Batch	
TPH (GC/FID) Low Fraction	ND		mg/kg	0.500	1	08/10/2024 07:36	WG2340102
(S) a,a,a-Trifluorotoluene(FID)	81.4			77.0-120	08/10/2024 07:36	WG2340102	

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RL	Dilution	Analysis date / time	Batch	
Benzene	ND		mg/kg	0.00200	1	08/08/2024 23:10	WG2339302
Toluene	ND			0.00500	1	08/08/2024 23:10	WG2339302
Ethylbenzene	ND			0.00500	1	08/08/2024 23:10	WG2339302
Xylenes, Total	ND			0.0100	1	08/08/2024 23:10	WG2339302
1,2,4-Trimethylbenzene	ND			0.00500	1	08/08/2024 23:10	WG2339302
1,3,5-Trimethylbenzene	ND			0.00500	1	08/08/2024 23:10	WG2339302
(S) Toluene-d8	97.2			75.0-131	08/08/2024 23:10	WG2339302	
(S) 4-Bromofluorobenzene	104			67.0-138	08/08/2024 23:10	WG2339302	
(S) 1,2-Dichloroethane-d4	102			70.0-130	08/08/2024 23:10	WG2339302	

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result	Qualifier	RL	Dilution	Analysis date / time	Batch	
C10-C28 Diesel Range	ND		mg/kg	50.0	1	08/15/2024 18:25	WG2340873
C28-C36 Motor Oil Range	ND			50.0	1	08/15/2024 18:25	WG2340873
(S) o-Terphenyl	38.1			18.0-148	08/15/2024 18:25	WG2340873	



Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00500	1	08/13/2024 04:22	WG2340864
Anthracene	ND		0.00500	1	08/13/2024 04:22	WG2340864
Benzo(a)anthracene	ND		0.00500	1	08/13/2024 04:22	WG2340864
Benzo(b)fluoranthene	ND		0.00500	1	08/13/2024 04:22	WG2340864
Benzo(k)fluoranthene	ND		0.00500	1	08/13/2024 04:22	WG2340864
Benzo(a)pyrene	ND		0.00500	1	08/13/2024 04:22	WG2340864
Chrysene	ND		0.00500	1	08/13/2024 04:22	WG2340864
Dibenz(a,h)anthracene	ND		0.00500	1	08/13/2024 04:22	WG2340864
Fluoranthene	ND		0.00500	1	08/13/2024 04:22	WG2340864
Fluorene	ND		0.00500	1	08/13/2024 04:22	WG2340864
Indeno(1,2,3-cd)pyrene	ND		0.00181	1	08/13/2024 04:22	WG2340864
1-Methylnaphthalene	ND		0.00500	1	08/13/2024 04:22	WG2340864
2-Methylnaphthalene	ND		0.00500	1	08/13/2024 04:22	WG2340864
Naphthalene	ND		0.00408	1	08/13/2024 04:22	WG2340864
Pyrene	ND		0.00500	1	08/13/2024 04:22	WG2340864
(S) p-Terphenyl-d14	85.6			23.0-120	08/13/2024 04:22	WG2340864
(S) Nitrobenzene-d5	80.6			14.0-149	08/13/2024 04:22	WG2340864
(S) 2-Fluorobiphenyl	74.9			34.0-125	08/13/2024 04:22	WG2340864

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.09		1	08/10/2024 11:37	WG2338992

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.97	T8	1	08/10/2024 15:15	WG2340063

Sample Narrative:

L1764112-02 WG2340063: 7.97 at 21.3C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RL	Dilution	Analysis date / time	Batch	
Specific Conductance	291		umhos/cm	10.0	1	08/09/2024 22:30	WG2340068

Sample Narrative:

L1764112-02 WG2340068: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result	Qualifier	RL	Dilution	Analysis date / time	Batch	
Hot Water Sol. Boron	ND		mg/l	2.00	1	08/09/2024 17:12	WG2338988

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result	Qualifier	RL	Dilution	Analysis date / time	Batch	
TPH (GC/FID) Low Fraction	ND		mg/kg	0.500	1	08/10/2024 07:56	WG2340102
(S) a,a,a-Trifluorotoluene(FID)	82.3			77.0-120	08/10/2024 07:56	WG2340102	

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RL	Dilution	Analysis date / time	Batch	
Benzene	ND		mg/kg	0.00200	1	08/08/2024 23:29	WG2339302
Toluene	ND			0.00500	1	08/08/2024 23:29	WG2339302
Ethylbenzene	ND			0.00500	1	08/08/2024 23:29	WG2339302
Xylenes, Total	ND			0.0100	1	08/08/2024 23:29	WG2339302
1,2,4-Trimethylbenzene	ND			0.00500	1	08/08/2024 23:29	WG2339302
1,3,5-Trimethylbenzene	ND			0.00500	1	08/08/2024 23:29	WG2339302
(S) Toluene-d8	96.1			75.0-131	08/08/2024 23:29	WG2339302	
(S) 4-Bromofluorobenzene	103			67.0-138	08/08/2024 23:29	WG2339302	
(S) 1,2-Dichloroethane-d4	97.2			70.0-130	08/08/2024 23:29	WG2339302	

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result	Qualifier	RL	Dilution	Analysis date / time	Batch	
C10-C28 Diesel Range	ND		mg/kg	50.0	1	08/15/2024 18:12	WG2340873
C28-C36 Motor Oil Range	ND			50.0	1	08/15/2024 18:12	WG2340873
(S) o-Terphenyl	80.1			18.0-148	08/15/2024 18:12	WG2340873	



Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00500	1	08/13/2024 04:40	WG2340864
Anthracene	ND		0.00500	1	08/13/2024 04:40	WG2340864
Benzo(a)anthracene	ND		0.00500	1	08/13/2024 04:40	WG2340864
Benzo(b)fluoranthene	ND		0.00500	1	08/13/2024 04:40	WG2340864
Benzo(k)fluoranthene	ND		0.00500	1	08/13/2024 04:40	WG2340864
Benzo(a)pyrene	ND		0.00500	1	08/13/2024 04:40	WG2340864
Chrysene	ND		0.00500	1	08/13/2024 04:40	WG2340864
Dibenz(a,h)anthracene	ND		0.00500	1	08/13/2024 04:40	WG2340864
Fluoranthene	ND		0.00500	1	08/13/2024 04:40	WG2340864
Fluorene	ND		0.00500	1	08/13/2024 04:40	WG2340864
Indeno(1,2,3-cd)pyrene	ND		0.00181	1	08/13/2024 04:40	WG2340864
1-Methylnaphthalene	ND		0.00500	1	08/13/2024 04:40	WG2340864
2-Methylnaphthalene	ND		0.00500	1	08/13/2024 04:40	WG2340864
Naphthalene	ND		0.00408	1	08/13/2024 04:40	WG2340864
Pyrene	ND		0.00500	1	08/13/2024 04:40	WG2340864
(S) p-Terphenyl-d14	80.2			23.0-120	08/13/2024 04:40	WG2340864
(S) Nitrobenzene-d5	84.7			14.0-149	08/13/2024 04:40	WG2340864
(S) 2-Fluorobiphenyl	77.2			34.0-125	08/13/2024 04:40	WG2340864

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.169		1	08/12/2024 11:18	WG2339087

1 Cp

2 Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.47	T8	1	08/12/2024 15:07	WG2341041

3 Ss

4 Cn

Sample Narrative:

L1764112-03 WG2341041: 7.47 at 21.2C

5 Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Specific Conductance	132		10.0	1	08/12/2024 16:12	WG2341049

6 Qc

7 Gl

Sample Narrative:

L1764112-03 WG2341049: at 25C

8 Al

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND	J3	2.00	1	08/11/2024 09:17	WG2339099

9 Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.179		1	08/10/2024 11:39	WG2338992

1 Cp

2 Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.74	T8	1	08/10/2024 15:15	WG2340063

3 Ss

4 Cn

Sample Narrative:

L1764112-04 WG2340063: 7.74 at 21.2C

5 Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Specific Conductance	127		10.0	1	08/09/2024 22:30	WG2340068

6 Qc

7 Gl

Sample Narrative:

L1764112-04 WG2340068: at 25C

8 Al

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND		2.00	1	08/09/2024 17:15	WG2338988

9 Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.910		1	08/12/2024 11:20	WG2339087

1 Cp

2 Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.81	T8	1	08/12/2024 15:07	WG2341041

3 Ss

4 Cn

Sample Narrative:

L1764112-05 WG2341041: 7.81 at 21.3C

5 Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Specific Conductance	691		10.0	1	08/12/2024 16:12	WG2341049

6 Qc

7 Gl

Sample Narrative:

L1764112-05 WG2341049: at 25C

8 Al

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND	J3	2.00	1	08/11/2024 09:18	WG2339099

9 Sc

L1764059-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1764059-06 08/10/24 15:15 • (DUP) R4105223-2 08/10/24 15:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
su	su			%		%
pH	8.77	8.78	1	0.114		1

Sample Narrative:

OS: 8.77 at 21.6C
 DUP: 8.78 at 21.5C

L1764735-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1764735-01 08/10/24 15:15 • (DUP) R4105223-3 08/10/24 15:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
su	su			%		%
pH	7.56	7.52	1	0.531		1

Sample Narrative:

OS: 7.56 at 21.2C
 DUP: 7.52 at 21.3C

Laboratory Control Sample (LCS)

(LCS) R4105223-1 08/10/24 15:15

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
su	su		%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10.01 at 21.2C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1764049-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1764049-03 08/12/24 15:07 • (DUP) R4105634-2 08/12/24 15:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	9.36	9.35	1	0.107		1

Sample Narrative:

OS: 9.36 at 21.3C
DUP: 9.35 at 21.4C

L1764213-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1764213-03 08/12/24 15:07 • (DUP) R4105634-3 08/12/24 15:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.10	8.12	1	0.247		1

Sample Narrative:

OS: 8.1 at 21.1C
DUP: 8.12 at 21.2C

Laboratory Control Sample (LCS)

(LCS) R4105634-1 08/12/24 15:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.99	99.9	99.0-101	

Sample Narrative:

LCS: 9.99 at 21.5C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4105084-1 08/09/24 22:30

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Specific Conductance	ND		10.0	10.0

Sample Narrative:

BLANK: at 25C

L1764066-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1764066-02 08/09/24 22:30 • (DUP) R4105084-3 08/09/24 22:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Specific Conductance	475	474	1	0.211		20

Sample Narrative:

OS: at 25C
DUP: at 25C

L1764733-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1764733-03 08/09/24 22:30 • (DUP) R4105084-4 08/09/24 22:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Specific Conductance	2880	2890	1	0.0347		20

Sample Narrative:

OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4105084-2 08/09/24 22:30

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Specific Conductance	733	754	103	85.0-115	

Sample Narrative:

LCS: at 25C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4105686-1 08/12/24 16:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Specific Conductance	ND		10.0	10.0

Sample Narrative:

BLANK: at 25C

L1764059-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1764059-02 08/12/24 16:12 • (DUP) R4105686-3 08/12/24 16:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Specific Conductance	190	187	1	1.33		20

Sample Narrative:

OS: at 25C
DUP: at 25C

L1764606-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1764606-01 08/12/24 16:12 • (DUP) R4105686-4 08/12/24 16:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Specific Conductance	1300	1290	1	0.387		20

Sample Narrative:

OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4105686-2 08/12/24 16:12

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Specific Conductance	733	754	103	85.0-115	

Sample Narrative:

LCS: at 25C

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4105177-1 08/09/24 17:01

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	ND		0.0167	0.200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4105177-2 08/09/24 17:04 • (LCSD) R4105177-3 08/09/24 17:07

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	0.989	0.976	98.9	97.6	80.0-120			1.33	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4105306-1 08/11/24 09:12

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	ND		0.0167	0.200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4105306-2 08/11/24 09:13 • (LCSD) R4105306-3 08/11/24 09:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	0.817	1.09	81.7	109	80.0-120		<u>J3</u>	28.5	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4106011-2 08/10/24 03:44

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	ND		0.0217	0.100
^(S) a,a,a-Trifluorotoluene(FID)	83.5			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4106011-1 08/10/24 03:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	5.02	100	72.0-127	
^(S) a,a,a-Trifluorotoluene(FID)			92.1	77.0-120	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Method Blank (MB)

(MB) R4104665-2 08/08/24 17:53

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	ND		0.000467	0.00100
Toluene	ND		0.00130	0.00500
Ethylbenzene	ND		0.000737	0.00250
Xylenes, Total	ND		0.000880	0.00650
1,2,4-Trimethylbenzene	ND		0.00158	0.00500
1,3,5-Trimethylbenzene	ND		0.00200	0.00500
(S) Toluene-d8	96.9			75.0-131
(S) 4-Bromofluorobenzene	103			67.0-138
(S) 1,2-Dichloroethane-d4	99.3			70.0-130

Laboratory Control Sample (LCS)

(LCS) R4104665-1 08/08/24 16:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.129	103	70.0-123	
Toluene	0.125	0.125	100	75.0-121	
Ethylbenzene	0.125	0.123	98.4	74.0-126	
Xylenes, Total	0.375	0.362	96.5	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.107	85.6	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.109	87.2	73.0-127	
(S) Toluene-d8			96.3	75.0-131	
(S) 4-Bromofluorobenzene			102	67.0-138	
(S) 1,2-Dichloroethane-d4			103	70.0-130	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4107191-1 08/15/24 01:43

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	ND		1.61	4.00
C28-C36 Motor Oil Range	ND		0.274	4.00
<i>(S) o-Terphenyl</i>	42.6			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4107191-2 08/15/24 01:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	29.5	59.0	50.0-150	
<i>(S) o-Terphenyl</i>			58.3	18.0-148	

L1764204-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1764204-01 08/15/24 20:49 • (MS) R4107191-3 08/15/24 21:03 • (MSD) R4107191-4 08/15/24 21:16

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	156	183	179	54.0	46.0	20	50.0-150		<u>J6</u>	2.21	20
<i>(S) o-Terphenyl</i>					77.3	73.1		18.0-148	<u>J7</u>	<u>J7</u>		

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4105950-2 08/13/24 02:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	ND		0.00209	0.00600
Anthracene	ND		0.00230	0.00600
Benzo(a)anthracene	ND		0.00173	0.00600
Benzo(b)fluoranthene	ND		0.00153	0.00600
Benzo(k)fluoranthene	ND		0.00215	0.00600
Benzo(a)pyrene	ND		0.00179	0.00600
Chrysene	ND		0.00232	0.00600
Dibenz(a,h)anthracene	ND		0.00172	0.00600
Fluoranthene	ND		0.00227	0.00600
Fluorene	ND		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	ND		0.00181	0.00600
1-Methylnaphthalene	ND		0.00449	0.0200
2-Methylnaphthalene	ND		0.00427	0.0200
Naphthalene	ND		0.00408	0.0200
Pyrene	ND		0.00200	0.00600
(S) p-Terphenyl-d14	83.3			23.0-120
(S) Nitrobenzene-d5	72.7			14.0-149
(S) 2-Fluorobiphenyl	77.5			34.0-125

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4105950-1 08/13/24 01:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0627	78.4	50.0-120	
Anthracene	0.0800	0.0668	83.5	50.0-126	
Benzo(a)anthracene	0.0800	0.0659	82.4	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0618	77.3	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0609	76.1	49.0-125	
Benzo(a)pyrene	0.0800	0.0586	73.3	42.0-120	
Chrysene	0.0800	0.0658	82.3	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0637	79.6	47.0-125	
Fluoranthene	0.0800	0.0663	82.9	49.0-129	
Fluorene	0.0800	0.0673	84.1	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0627	78.4	46.0-125	
1-Methylnaphthalene	0.0800	0.0678	84.8	51.0-121	
2-Methylnaphthalene	0.0800	0.0655	81.9	50.0-120	
Naphthalene	0.0800	0.0652	81.5	50.0-120	
Pyrene	0.0800	0.0665	83.1	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R4105950-1 08/13/24 01:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			80.3	23.0-120	
(S) Nitrobenzene-d5			92.2	14.0-149	
(S) 2-Fluorobiphenyl			80.8	34.0-125	

L1764059-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1764059-09 08/13/24 03:31 • (MS) R4105950-3 08/13/24 03:48 • (MSD) R4105950-4 08/13/24 04:05

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0800	ND	0.0699	0.0681	87.4	85.1	1	14.0-127			2.61	27
Anthracene	0.0800	ND	0.0726	0.0714	90.8	89.3	1	10.0-145			1.67	30
Benzo(a)anthracene	0.0800	ND	0.0686	0.0662	85.8	82.8	1	10.0-139			3.56	30
Benzo(b)fluoranthene	0.0800	ND	0.0646	0.0621	80.7	77.6	1	10.0-140			3.95	36
Benzo(k)fluoranthene	0.0800	ND	0.0665	0.0631	83.1	78.9	1	10.0-137			5.25	31
Benzo(a)pyrene	0.0800	ND	0.0668	0.0631	83.5	78.9	1	10.0-141			5.70	31
Chrysene	0.0800	ND	0.0719	0.0688	89.9	86.0	1	10.0-145			4.41	30
Dibenz(a,h)anthracene	0.0800	ND	0.0668	0.0632	83.5	79.0	1	10.0-132			5.54	31
Fluoranthene	0.0800	ND	0.0731	0.0712	91.4	89.0	1	10.0-153			2.63	33
Fluorene	0.0800	ND	0.0743	0.0711	92.9	88.9	1	11.0-130			4.40	29
Indeno(1,2,3-cd)pyrene	0.0800	ND	0.0625	0.0603	78.1	75.4	1	10.0-137			3.58	32
1-Methylnaphthalene	0.0800	ND	0.0761	0.0743	95.1	92.9	1	10.0-142			2.39	28
2-Methylnaphthalene	0.0800	ND	0.0730	0.0713	91.3	89.1	1	10.0-137			2.36	28
Naphthalene	0.0800	ND	0.0728	0.0720	91.0	90.0	1	10.0-135			1.10	27
Pyrene	0.0800	ND	0.0725	0.0708	90.6	88.5	1	10.0-148			2.37	35
(S) p-Terphenyl-d14					90.9	89.3		23.0-120				
(S) Nitrobenzene-d5					102	103		14.0-149				
(S) 2-Fluorobiphenyl					88.7	86.7		34.0-125				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

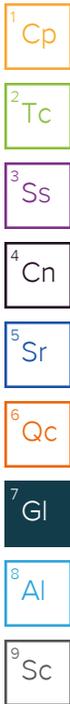
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
T8	Sample(s) received past/too close to holding time expiration.



ACCREDITATIONS & LOCATIONS

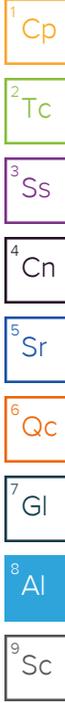
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Pace Pace® Location Requested (City/State): **CHAIN-OF-CUSTODY Analytical Request Document**
 Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY - Affix Workorder/Login Label Here



J080

Scan QR Code for instructions

Company Name: *Eagle Environmental Consulting*
 Street Address: *8000 W 44th Ave, Wheat Ridge, CO 80033*
 Contact/Report To: *EAGLE / CIVITAS*
 Phone #: *303-433-0479*
 E-Mail: *EAGLE TEAM*
 Cc E-Mail: *CIVIT TEAM*
 Customer Project #: *Antelope 12-19*
 Project Name: *Antelope 12-19*
 Site Collection Info/Facility ID (as applicable):
 Invoice to: *CIVITAS - Jacob*
 Invoice E-mail: *jevans@civiresources.com*
 Purchase Order # (if applicable):
 Quote #:

Time Zone Collected: AK PT MT CT ET
 County / State origin of sample(s): *weld CO*
 Data Deliverables: Regulatory Program (DW, RCRA, etc.) as applicable: *ECME Table 915* Reportable Yes No
 Level II Level III Level IV
 EQUIS
 Other
 Rush (Pre-approval required): Same Day 1 Day 2 Day 3 Day Other
 Date Results Requested: *5-7 days*
 DW PWSID # or WW Permit # as applicable:
 Field Filtered (if applicable): Yes No
 Analysis:
 * Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Sol/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **
 Identify Container Preservative Type***
 Analysis Requested

Proj. Mgr:
 AcctNum / Client ID:
CIVITAS-ECO-EAGLE
 Table #:
 Profile / Template:
W02M12
 Prelog / Bottle Ord. ID:

Preservation non-conformance identified for sample.

Customer Sample ID	Matrix *	Comp / Grab	Composite Start		Collected or Composite End		# Cont.	Residual Chlorine	
			Date	Time	Date	Time		Result	Units
<i>WH-FS-01E6'</i>	<i>SS</i>	<i>G</i>	<i>6/2/24</i>	<i>1240</i>			<i>3</i>		
<i>WH-SS-01E5'</i>				<i>1242</i>			<i>3</i>		
<i>Background-01E6'</i>				<i>1250</i>			<i>2</i>		
<i>Background-02E6'</i>				<i>1255</i>			<i>2</i>		
<i>Background-03E6'</i>				<i>1300</i>			<i>2</i>		

TPH - C6-C86	BTEX, TMBs - 8200D	PAHs - 8270D SIM	Boron - DPTH / 826101	PH - 9045D	EC - 9050-A	SAF - 20B
X	X	X	X	X		
X	X	X	X	X		
			X	X		
			X	X		
			X	X		

Sample Receipt Checklist

COC Seal Present/Intact: Y N If Applicable
 VOC Zero Headspace: Y N
 Bottles arrive intact: Y N Pres. Correct/Check: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 RA Screen <0.5 mR/hr: Y N

Additional Instructions from Pace®:
 Collected By: *Rachel Seiler*
 Printed Name: *Rachel Seiler*
 Signature: *[Signature]*

Customer Remarks / Special Conditions / Possible Hazards:
 # Coolers: Thermometer ID: Correction Factor (°C): Obs. Temp. (°C): Corrected Temp. (°C): On Ice

Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: <i>8/15/24 0947</i>	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: <i>8/15/24 0948</i>	Tracking Number:
Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: <i>8/15/24 0900</i>	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time:	Delivered by: <input type="checkbox"/> In-Person <input type="checkbox"/> Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	<input type="checkbox"/> FedEx <input type="checkbox"/> UPS <input type="checkbox"/> Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: <i>8-6-24 0900</i>	Page: <i>1</i> of <i>1</i>

1724112

<u>Tracking Numbers</u>	<u>MSA9 Temperature</u>
7315 3194 1749	2.6 + 0.3 = 2.9
7315 3194 1738	3.3 + 0.3 = 3.6
7315 3194 1750	2.3 + 0.3 = 2.6

Name _____

Date _____