

Wellhead Closure Checklist

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

Additional attachments (optional):	<u>Pit Closure</u>	<u>Tank Battery Closure</u>	<u>Flowline Closure</u>	<u>Partially Buried Vault Closure</u>
------------------------------------	--------------------	-----------------------------	-------------------------	---------------------------------------

Site Name & COGCC Facility Number: SPIKE STATE #D 12.3	Date: 11-9-22	Remediation Project #: 24016
Associated Wells: 05-123-17225	Age of Site: YEARS	Number of Photos Attached: 1
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple) 40.245310, -104.501860		Estimated Facility Size (acres):

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

USCS Soil Type: **SW** Estimated Depth to Groundwater: **> 20'**

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	05-123-17225				
Age	YEARS				
Condition of surface around wellhead	GOOD - PER CREW				
PID Readings	N/A - EXCAVATED UPON ARRIVAL				
Condition of subsurface	GOOD				
Leakage or event					
PID Readings	0.1	0.2	0.1	0.2	0.3
Sample taken? Location/Sample ID	WH-SS-01	WH-SS-02	WH-SS-03	WH-SS-04	WH-FS-01
Photo Number(s)	SEE PHOTOS				

Other observations regarding wellheads:
WELL CASING CUT/CAPPED FOLLOWING ASSESSMENT.

Summary

Was impacted soil identified?		<input checked="" type="radio"/> 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:	0.3	Total number of samples submitted to lab for analysis:	1	
If more than 10 cubic yards of impacted soil were observed:				
Vertical extent:	N/A		Estimated spill volume:	
Lateral extent:			Volume of soil removed:	
Is additional investigation required?				
Was groundwater encountered during the investigation?				
<input checked="" type="radio"/> 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: Soil Analytical Map

Figure 4: Polycyclic Aromatic Hydrocarbons Map






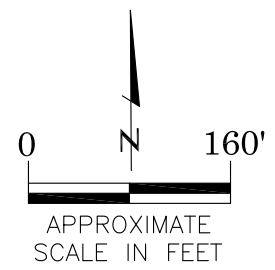
**ENVIRONMENTAL
CONSULTANTS**

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



LEGEND

-  FORMER SPIKE STATE #D 12-3 WELLHEAD (PLUGGED AND ABANDONED)
-  ASSOCIATED SEPARATOR
-  APPROXIMATE FLOWLINE LOCATION



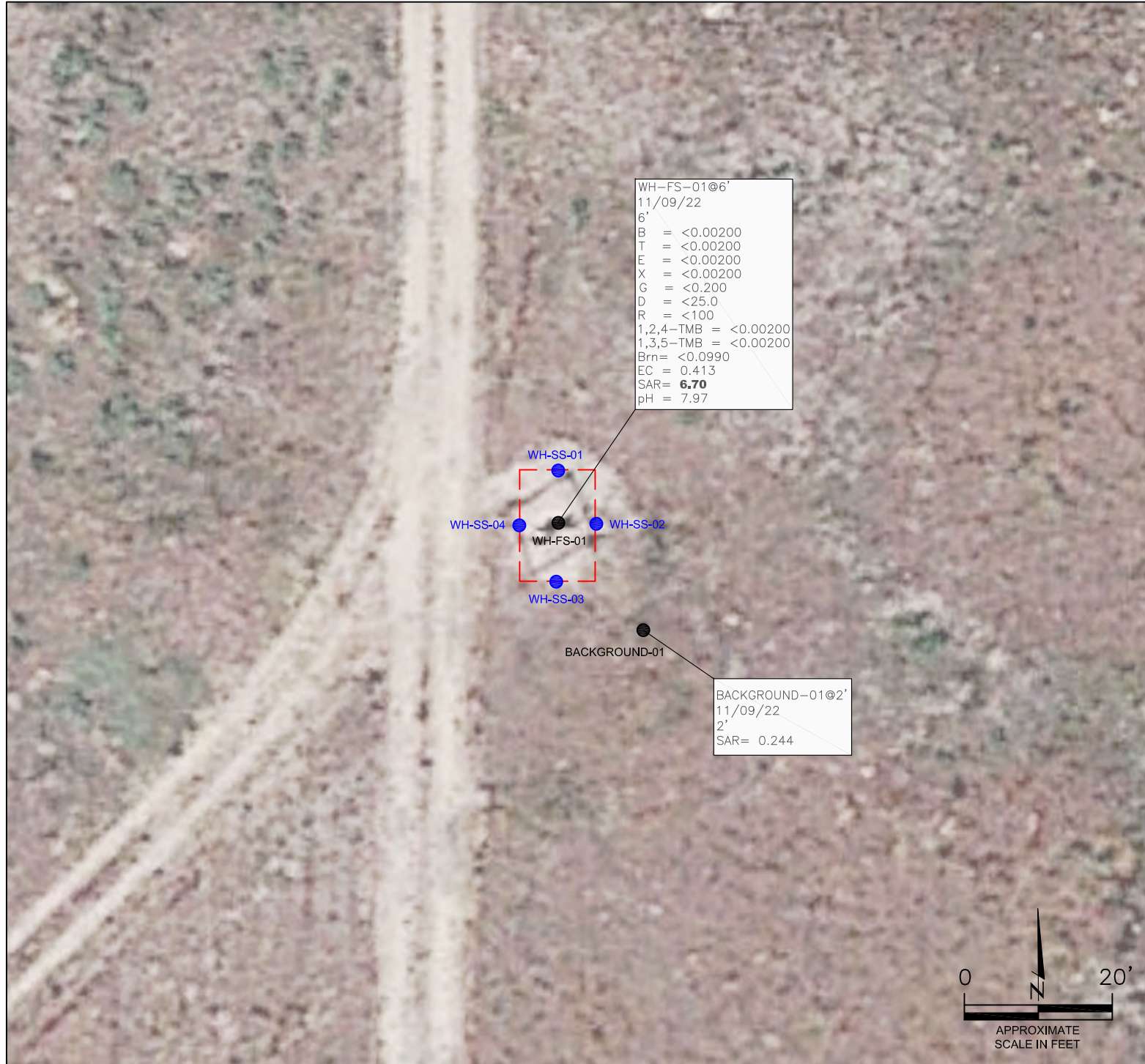
AERIAL SITE LOCATION MAP
SPIKE STATE #D 12-3
CLOSURE ASSESSMENT
40.245310 / -104.501860
NE $\frac{1}{4}$ NW $\frac{1}{4}$ SEC.12 T3N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-17225
REMEDATION # 24016

DRAWN BY:
JF

FIG. NO.
2

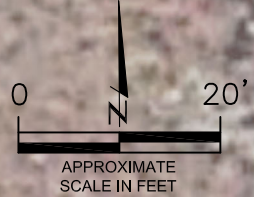


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WH-FS-01@6'
 11/09/22
 6'
 B = <0.00200
 T = <0.00200
 E = <0.00200
 X = <0.00200
 G = <0.200
 D = <25.0
 R = <100
 1,2,4-TMB = <0.00200
 1,3,5-TMB = <0.00200
 Brn = <0.0990
 EC = 0.413
 SAR= **6.70**
 pH = 7.97

BACKGROUND-01@2'
 11/09/22
 2'
 SAR= 0.244



LEGEND

- — WELLHEAD ASSESSMENT BOUNDARIES
- 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)
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 COGCC TABLE 915-1 REGULATORY LIMITS.

COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION

SOIL ANALYTICAL MAP
 SPIKE STATE #D 12-3
 CLOSURE ASSESSMENT
 40.245310 / -104.501860
 NE¼ NW¼ SEC.12 T3N R64W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-17225
 REMEDIATION # 24016

DRAWN BY:
 JF

FIG.
 NO. 3



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 Ph: 303-433-0479 • F: 303-325-5449



WH-FS-01@6'
 11/09/22
 6'

1-Methylnaphthalene = <0.00201
 2-Methylnaphthalene = <0.00201
 Acenaphthene = <0.00067
 Anthracene = <0.00067
 Benzo(a)anthracene = <0.00067
 Benzo(a)pyrene = <0.00067
 Benzo(b)fluoranthene = <0.00067
 Benzo(k)fluoranthene = <0.00067
 Chrysene = <0.00067
 Dibenzo(a,h)anthracene = <0.00067
 Fluoranthene = <0.000677
 Fluorene = <0.00067
 Indeno(1,2,3-CD)pyrene = <0.00067
 Naphthalene = <0.00201
 Pyrene = <0.00067

LEGEND

- - - WELLHEAD ASSESSMENT BOUNDARIES
- APPROXIMATE LOCATION OF SOIL SAMPLES FIELD SCREENED, ONLY, WITH PHOTOIONIZATION DETECTOR
- 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

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

VALUES PRESENTED IN **BOLD** EXCEED COGCC TABLE 915-1 REGULATORY LIMITS.

COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION

POLYCYCLIC AROMATIC HYDROCARBONS MAP

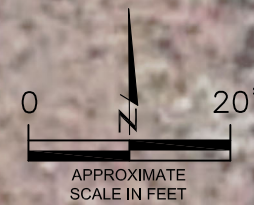
SPIKE STATE #D 12-3
 CLOSURE ASSESSMENT
 40.245310 / -104.501860
 NE¼ NW¼ SEC.12 T3N R64W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-17225
 REMEDIATION # 24016

DRAWN BY:
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FIG. NO. 4



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TABLES

Table 1: Photoionization Detector Reading Summary

Table 2: Soil Analytical Results Summary

TABLE 1
PHOTOIONIZATION DETECTOR READING SUMMARY
SPIKE STATE #D 12-3
CLOSURE ASSESSMENT
40.245310 / -104.501860
NE¼ NW¼ SEC.12 T3N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-17225
REMEDIAATION # 24016

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Lab Submission (Y/N)
WH-SS-01 @ 5' (40.245337 / -104.501871)	11/09/22	5	0.1	N
WH-SS-02 @ 5' (40.245322 / -104.501851)	11/09/22	5	0.2	N
WH-SS-03 @ 5' (40.245302 / -104.501869)	11/09/22	5	0.1	N
WH-SS-04 @ 5' (40.245321 / -104.501887)	11/09/22	5	0.2	N
WH-FS-01 @ 6' (40.245323 / -104.501870)	11/09/22	6	0.3	Y
Background-01 @ 2' (40.245281 / -104.501826)	11/09/22	2	0.0	Y
(Y/N) = Yes or No ppm-v = parts per million by volume PID = Photoionization Detector				

TABLE 2
SOIL ANALYTICAL RESULTS SUMMARY
SPIKE STATE #D 12-3
CLOSURE ASSESSMENT
40.245310 / -104.501860
NE¼ NW¼ SEC.12 T3N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-17225
REMEDIATION # 24016

Sample Location		WH-FS-01 @ 6'		Background-01 @ 2'	
(Latitude / Longitude)		(40.245323 / -104.501870)		(40.245281 / -104.501826)	
Sample Date		11/09/22		11/09/22	
Sample Depth		6'		2'	
PID Reading (ppm-v)		0.3		0.0	
Regulatory Limits					
Chemical of Concern	Units	COGCC Table 915-1 RSSLs	COGCC Table 915-1 GSSLs		
VOCs					
Benzene	mg/kg	1.2	0.0026	<0.00200	NA
Toluene	mg/kg	490	0.69	<0.00200	NA
Ethylbenzene	mg/kg	5.8	0.78	<0.00200	NA
Total Xylenes	mg/kg	58	9.9	<0.00200	NA
1,2,4-Trimethylbenzene	mg/kg	30	0.0081	<0.00200	NA
1,3,5-Trimethylbenzene	mg/kg	27	0.0087	<0.00200	NA
Total Petroleum Hydrocarbons					
TPH-GRO	mg/kg	500	--	<0.200	NA
TPH-DRO	mg/kg	500	--	<25.0	NA
TPH-RRO	mg/kg	500	--	<100	NA
Polycyclic Aromatics Hydrocarbons					
1-Methyl-naphthalene	mg/kg	18	0.006	<0.00201	NA
2-Methyl-naphthalene	mg/kg	24	0.019	<0.00201	NA
Acenaphthene	mg/kg	360	0.55	<0.00067	NA
Anthracene	mg/kg	1800	5.8	<0.00067	NA
Benzo(a)-anthracene	mg/kg	1.1	0.011	<0.00067	NA
Benzo(a)-pyrene	mg/kg	0.11	0.24	<0.00067	NA
Benzo(b)-fluoranthene	mg/kg	1.1	0.3	<0.00067	NA
Benzo(k)-fluoranthene	mg/kg	11	2.9	<0.00067	NA
Chrysene	mg/kg	110	9	<0.00067	NA
Dibenzo(a,h)-anthracene	mg/kg	0.11	0.096	<0.00067	NA
Fluoranthene	mg/kg	240	8.9	<0.00067	NA
Fluorene	mg/kg	240	0.54	<0.00067	NA
Indeno(1,2,3-cd)-pyrene	mg/kg	1.1	0.98	<0.00067	NA
Naphthalene	mg/kg	2	0.0038	<0.00201	NA
Pyrene	mg/kg	180	1.3	<0.00067	NA
Soil Suitability (Inorganics)					
Boron	mg/L	2	--	<0.0990	NA
pH	standard unit	6-8.3	--	7.97	NA
Sodium Adsorption Ratio (SAR)	--	<6	--	6.70	0.244
Specific Conductance (EC)	mmhos/cm	<4	--	0.413	NA
COGCC = Colorado Oil and Gas Conservation Commission mg/kg = milligrams per kilogram mmhos/cm = millimhos per centimeter PID = Photoionization Detector ppm-v = parts per million by volume mg/L = milligrams per liter SAR = Sodium Adsorption Ratio Notes: Values presented with a less than symbol (<) did not contain concentrations at or above the laboratory reporting limit and/or minimum detection limit. Values presented in BOLD exceed COGCC Table 915-1 Regulatory Limits.					



ATTACHMENT A

Photo Log

Spike State #D 12-3
API # 05-123-17225
Remediation # 24016

Closure Assessment

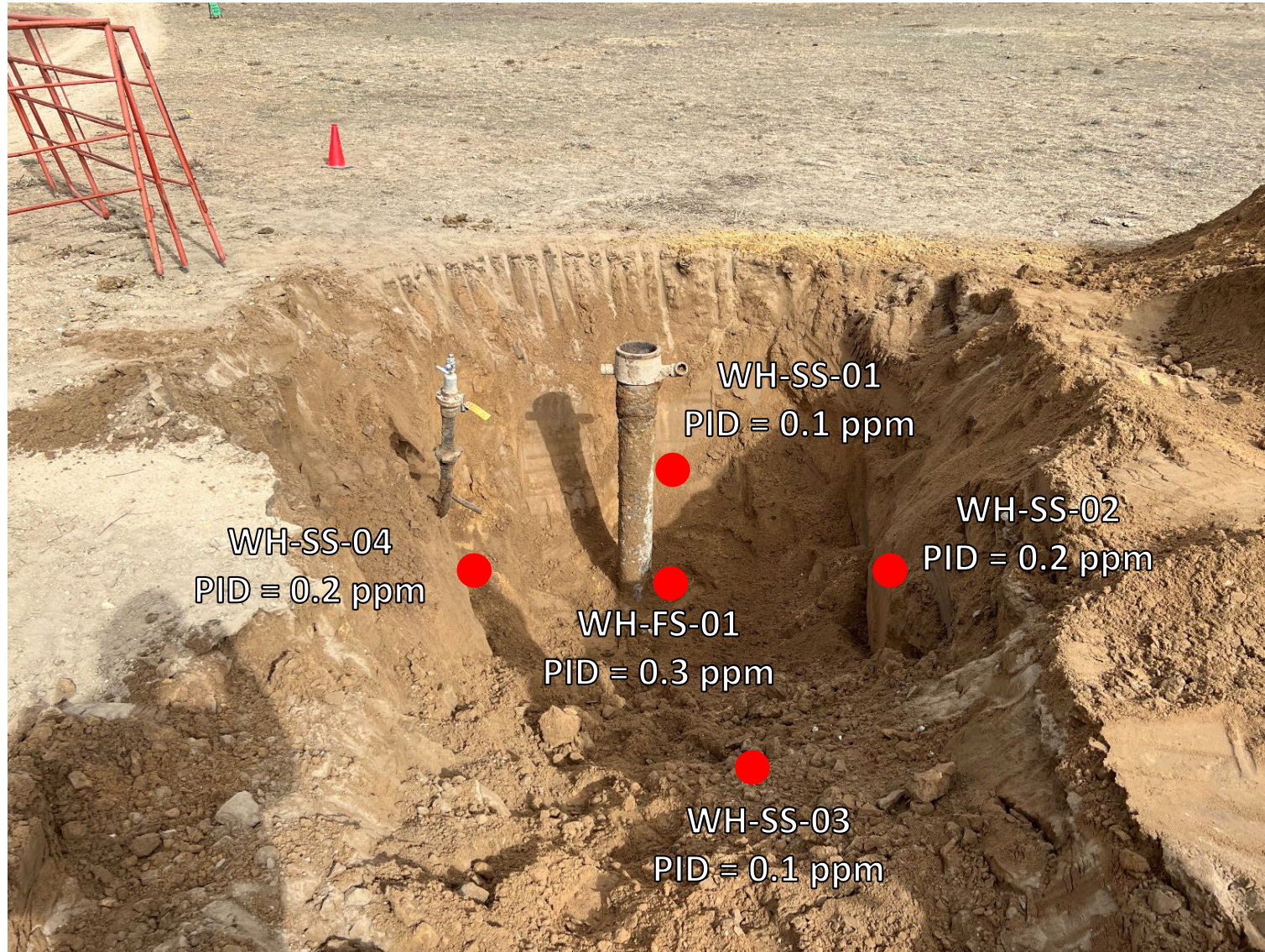
November 2022



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



Wellhead Excavation – 11/09/22



Looking north
No petroleum hydrocarbon staining or odor observed



ATTACHMENT B

Laboratory Analytical Reports

November 21, 2022

Eagle Environmental Consulting, Inc.

Martin C Eckert III

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - NOBLE - Spike State #D 12-3

Project Number - [none]

Attached are your analytical results for NOBLE - Spike State #D 12-3 received by Origins Laboratory, Inc. November 09, 2022. This project is associated with Origins project number Y211255-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



Eagle Environmental Consulting, Inc.
8000 W 44th Ave
Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: NOBLE - Spike State #D 12-3

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-FS-01@6'	Y211255-01	Soil	November 9, 2022 11:18	11/09/2022 13:45

Origins Laboratory, Inc.



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.

Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

Origins Laboratory

F-012207-01-R1
 Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: 1211255

Client: Eagle Environmental
 Client Project ID: Spike State #D 12-3

Checklist Completed by: TSM/efs

Shipped Via: HD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 11/9/12

Airbill #: n/a

Matrix(s) Received: (Check all that apply): Soil/Solid

Water Other:

Cooler Number/Temperature: 1, 4.4c / 1 °C / 1 °C (Describe) °C

Thermometer ID: 1004

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? if yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by: JTB (Project Manager)

Date/Time Reviewed: 11/9-22

Origins Laboratory, Inc.



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.

Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

WH-FS-01@6'

11/9/2022 11:18:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y211255-01 (Soil)

Boron (DTPA Sorbitol)

Boron	ND		0.0990	mg/L	1	B2K1012	11/10/2022	11/11/2022	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2K1001	11/10/2022	11/11/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	87.2 %		50-150			"	"	"	
------------------------	--------	--	--------	--	--	---	---	---	--

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2K1043	11/10/2022	11/15/2022	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	118 %		70-130			"	"	"	
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Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

WH-FS-01@6'

11/9/2022 11:18:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	---------------------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc.
Y211255-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	95.9 %		70-130			B2K10 43	11/10/2022	11/15/2022	
Surrogate: 4-Bromofluorobenzene	105 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	ND		0.499	meq/L	10	[CALC]	11/11/2022	11/15/2022	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	3.32		0.435	"	"	"	"	"	

PAH by 8270D SIM

1-Methylnaphthalene	ND	0.00109	0.00201	mg/Kg	1	L648322	11/11/2022	11/11/2022	
2-Methylnaphthalene	ND	0.00194	0.00201	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	

Origins Laboratory, Inc.



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.

Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

WH-FS-01@6'

11/9/2022 11:18:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	---------------------	-----------------	-------	----------	-------	----------	----------	-------

Waypoint Analytical, LLC.
Y211255-01 (Soil)

PAH by 8270D SIM

Fluorene	ND	0.000286	0.00067	mg/Kg	1	L648322	11/11/2022	11/11/2022	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	ND	0.00145	0.00201	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	51.1 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	59.8 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	44.7 %		29-110			"	"	"	

pH in Soil by 9045D

pH	7.97			pH Units	1	B2K1112	11/11/2022	11/15/2022	
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SAR by 20B Saturated Paste

SAR	6.70			SAR	1	B2K1104	11/11/2022	11/15/2022	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.413		0.00500	mmhos/cm	1	B2K1112	11/11/2022	11/15/2022	
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Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2K1001 - EPA 3580										
Blank (B2K1001-BLK1)										
					Prepared: 11/10/2022 Analyzed: 11/11/2022					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	23		"	24.9		91.4	50-150			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2K1001 - EPA 3580

LCS (B2K1001-BS1)

Prepared: 11/10/2022 Analyzed: 11/11/2022

Diesel (C10-C28)	983	50.0	mg/kg	1000		98.3	70-130			
Residual Range Organics (C28-C40)	914	200	"	1000		91.4	70-130			
Surrogate: o-Terphenyl	46		"	49.8		92.4	50-150			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2K1001 - EPA 3580

Matrix Spike (B2K1001-MS1)	Source: Y211255-01			Prepared: 11/10/2022 Analyzed: 11/11/2022						
Diesel (C10-C28)	995	50.0	mg/kg	1000	ND	99.5	70-130			
Residual Range Organics (C28-C40)	900	200	"	1000	ND	90.0	70-130			
Surrogate: o-Terphenyl	50		"	49.8		101	50-150			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2K1001 - EPA 3580

Matrix Spike Dup (B2K1001-MSD1)	Source: Y211255-01		Prepared: 11/10/2022 Analyzed: 11/11/2022							
Diesel (C10-C28)	796	50.0	mg/kg	1000	ND	79.6	70-130	22.2	35	
Residual Range Organics (C28-C40)	712	200	"	1000	ND	71.2	70-130	23.4	35	
<i>Surrogate: o-Terphenyl</i>	35		"	49.8		70.9	50-150			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2K1043 - EPA 5030 (soil)

Blank (B2K1043-BLK1)

Prepared: 11/10/2022 Analyzed: 11/14/2022

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.15		"	0.125	117		70-130			
Surrogate: Toluene-d8	0.12		"	0.125	96.5		70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	102		70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2K1043 - EPA 5030 (soil)

LCS (B2K1043-BS1)

Prepared: 11/10/2022 Analyzed: 11/14/2022

1,2,4-Trimethylbenzene	0.0946	0.00200	mg/kg	0.100		94.6	70-130			
1,3,5-Trimethylbenzene	0.0962	0.00200	"	0.100		96.2	70-130			
Benzene	0.106	0.00200	"	0.100		106	70-130			
Ethylbenzene	0.0941	0.00200	"	0.100		94.1	70-130			
Naphthalene	0.106	0.00380	"	0.100		106	70-130			
Toluene	0.102	0.00200	"	0.100		102	70-130			
o-Xylene	0.0969	0.00200	"	0.100		96.9	70-130			
m,p-Xylene	0.185	0.00400	"	0.200		92.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		112	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		105	70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2K1043 - EPA 5030 (soil)

Matrix Spike (B2K1043-MS1)	Source: Y211226-01			Prepared: 11/10/2022 Analyzed: 11/14/2022						
1,2,4-Trimethylbenzene	0.0656	0.00200	mg/kg	0.100	0.000680	64.9	70-130			QM-07
1,3,5-Trimethylbenzene	0.0641	0.00200	"	0.100	ND	64.1	70-130			QM-07
Benzene	0.0875	0.00200	"	0.100	ND	87.5	70-130			
Ethylbenzene	0.0711	0.00200	"	0.100	ND	71.1	70-130			
Naphthalene	0.0669	0.00380	"	0.100	0.00168	65.2	70-130			QM-07
Toluene	0.0795	0.00200	"	0.100	0.000800	78.7	70-130			
o-Xylene	0.0722	0.00200	"	0.100	ND	72.2	70-130			
m,p-Xylene	0.138	0.00400	"	0.200	0.00106	68.4	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.15		"	0.125		118	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		106	70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2K1043 - EPA 5030 (soil)

Matrix Spike Dup (B2K1043-MSD1)	Source: Y211226-01			Prepared: 11/10/2022 Analyzed: 11/14/2022						
1,2,4-Trimethylbenzene	0.0757	0.00200	mg/kg	0.100	0.000680	75.0	70-130	14.4	20	
1,3,5-Trimethylbenzene	0.0757	0.00200	"	0.100	ND	75.7	70-130	16.5	20	
Benzene	0.101	0.00200	"	0.100	ND	101	70-130	14.2	20	
Ethylbenzene	0.0831	0.00200	"	0.100	ND	83.1	70-130	15.5	20	
Naphthalene	0.0780	0.00380	"	0.100	0.00168	76.4	70-130	15.4	20	
Toluene	0.0923	0.00200	"	0.100	0.000800	91.5	70-130	14.8	20	
o-Xylene	0.0857	0.00200	"	0.100	ND	85.7	70-130	17.1	20	
m,p-Xylene	0.163	0.00400	"	0.200	0.00106	80.9	70-130	16.6	20	
Surrogate: 1,2-Dichloroethane-d4	0.15		"	0.125		119	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2K1012 - DTPA Sorbitol Preparation

Blank (B2K1012-BLK1)

Prepared: 11/10/2022 Analyzed: 11/11/2022

Boron ND 0.100 mg/L

Duplicate (B2K1012-DUP1)

Source: Y211251-01

Prepared: 11/10/2022 Analyzed: 11/11/2022

Boron 1.46 0.100 mg/L 1.52 3.77 50

Batch B2K1104 - Saturated Paste Metals

Blank (B2K1104-BLK1)

Prepared: 11/11/2022 Analyzed: 11/15/2022

Calcium PPM ND 10.0 mg/L

SAR 0.00 SAR

Magnesium PPM ND 10.0 mg/L

Sodium PPM ND 10.0 "

Duplicate (B2K1104-DUP1)

Source: Y211251-02

Prepared: 11/11/2022 Analyzed: 11/15/2022

SAR 0.00 SAR 26.6 200 200

Calcium PPM 403 100 mg/L 410 1.60 50

Magnesium PPM 490 100 " 531 8.13 50

Sodium PPM 3250 100 " 3460 6.16 50

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

Saturated Paste - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2K1112 - Saturated Paste pH/EC										
Blank (B2K1112-BLK1)					Prepared: 11/11/2022 Analyzed: 11/15/2022					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B2K1112-DUP1)					Source: Y211251-02 Prepared: 11/11/2022 Analyzed: 11/15/2022					
pH	8.10		pH Units		8.10			0.00	25	
Specific Conductance (EC)	15.5	0.00500	mmhos/cm		15.6			1.06	25	

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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

PAH by 8270D SIM - Quality Control
Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L648322 - 3550B

MSD (L 89364-MSD-L648322)		Source: 89364			Prepared: 11/11/2022 Analyzed: 11/11/2022					
2-Methylnaphthalene	0.0772	0.00201	mg/Kg	0.162	<0.00194	47.6	30-130	17.4	30	
Fluorene	0.0851	0.00067	"	0.162	<0.000286	52.5	30-130	19	30	
Pyrene	0.0922	0.00067	"	0.162	<0.000643	56.9	30-130	17.6	30	
Indeno(1,2,3-cd)pyrene	0.088	0.00067	"	0.162	<0.000627	54.3	30-130	27.4	30	
Fluoranthene	0.0933	0.00067	"	0.162	<0.000394	57.5	30-130	17.3	30	
Dibenz(a,h)anthracene	0.0969	0.00067	"	0.162	<0.000614	59.8	30-130	23.7	30	
Chrysene	0.0917	0.00067	"	0.162	<0.000624	56.6	30-130	13.5	30	
Naphthalene	0.0736	0.00201	"	0.162	<0.00145	45.4	30-130	16.3	30	
1-Methylnaphthalene	0.0775	0.00201	"	0.162	<0.00109	47.8	30-130	17.2	30	
Benzo(k)fluoranthene	0.0822	0.00067	"	0.162	<0.000437	50.7	30-130	22.4	30	
Acenaphthene	0.0792	0.00067	"	0.162	<0.000304	48.8	30-130	18	30	
Anthracene	0.0871	0.00067	"	0.162	<0.000334	53.7	30-130	12.1	30	
Benzo(a)anthracene	0.089	0.00067	"	0.162	<0.000493	54.9	30-130	17.4	30	
Benzo(a)pyrene	0.111	0.00067	"	0.162	<0.000468	68.5	30-130	11	30	
Benzo(b)fluoranthene	0.0803	0.00067	"	0.162	<0.000585	49.5	30-130	27.5	30	
Surrogate: 2-Fluorobiphenyl	46.7		"	0.325	152	46.7	33-115			
Surrogate: Nitrobenzene-d5	39		"	0.325	130	39	29-110			
Surrogate: 4-Terphenyl-d14	55.3		"	0.325	182	55.3	33-122			

MS (L 89364-MS-L648322)		Source: 89364			Prepared: 11/11/2022 Analyzed: 11/11/2022					
Benzo(k)fluoranthene	0.103	0.00067	mg/Kg	0.164	<0.000437	62.8	30-130			
Acenaphthene	0.0949	0.00067	"	0.164	<0.000304	57.8	30-130			
Naphthalene	0.0867	0.00201	"	0.164	<0.00145	52.8	30-130			
Indeno(1,2,3-cd)pyrene	0.116	0.00067	"	0.164	<0.000627	70.7	30-130			
Fluorene	0.103	0.00067	"	0.164	<0.000286	62.8	30-130			
Fluoranthene	0.111	0.00067	"	0.164	<0.000394	67.6	30-130			
Dibenz(a,h)anthracene	0.123	0.00067	"	0.164	<0.000614	75	30-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

PAH by 8270D SIM - Quality Control
Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L648322 - 3550B

MS (L 89364-MS-L648322)	Source: 89364			Prepared: 11/11/2022 Analyzed: 11/11/2022						
Chrysene	0.105	0.00067	mg/Kg	0.164	<0.000624	64	30-130			
1-Methylnaphthalene	0.0921	0.00201	"	0.164	<0.00109	56.1	30-130			
Benzo(a)pyrene	0.124	0.00067	"	0.164	<0.000468	75.6	30-130			
Anthracene	0.0984	0.00067	"	0.164	<0.000334	60	30-130			
Pyrene	0.11	0.00067	"	0.164	<0.000643	67	30-130			
2-Methylnaphthalene	0.092	0.00201	"	0.164	<0.00194	56	30-130			
Benzo(b)fluoranthene	0.106	0.00067	"	0.164	<0.000585	64.6	30-130			
Benzo(a)anthracene	0.106	0.00067	"	0.164	<0.000493	64.6	30-130			
Surrogate: Nitrobenzene-d5	46.6		"	0.328	130	46.6	29-110			
Surrogate: 4-Terphenyl-d14	63.7		"	0.328	182	63.7	33-122			
Surrogate: 2-Fluorobiphenyl	54.2		"	0.328	152	54.2	33-115			

LCS (LCS-L648322)	Prepared: 11/11/2022 Analyzed: 11/11/2022									
Chrysene	0.118	0.00067	mg/Kg	0.167		70.6	30-130			
Dibenz(a,h)anthracene	0.14	0.00067	"	0.167		83.8	30-130			
Fluoranthene	0.122	0.00067	"	0.167		73	30-130			
Fluorene	0.114	0.00067	"	0.167		68.2	30-130			
Indeno(1,2,3-cd)pyrene	0.134	0.00067	"	0.167		80.2	30-130			
Naphthalene	0.0972	0.00201	"	0.167		58.2	30-130			
Benzo(k)fluoranthene	0.127	0.00067	"	0.167		76	30-130			
Pyrene	0.123	0.00067	"	0.167		73.6	30-130			
Benzo(a)pyrene	0.137	0.00067	"	0.167		82	30-130			
Benzo(a)anthracene	0.115	0.00067	"	0.167		68.8	30-130			
Anthracene	0.114	0.00067	"	0.167		68.2	30-130			
Acenaphthene	0.105	0.00067	"	0.167		62.8	30-130			
2-Methylnaphthalene	0.102	0.00201	"	0.167		61	30-130			
1-Methylnaphthalene	0.104	0.00201	"	0.167		62.2	30-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

PAH by 8270D SIM - Quality Control
Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L648322 - 3550B

LCS (LCS-L648322)

Prepared: 11/11/2022 Analyzed: 11/11/2022

Benzo(b)fluoranthene	0.113	0.00067	mg/Kg	0.167		67.6	30-130			
Surrogate: Nitrobenzene-d5	53.1		"	0.333		53.1	29-110			
Surrogate: 4-Terphenyl-d14	73.8		"	0.333		73.8	33-122			
Surrogate: 2-Fluorobiphenyl	63.3		"	0.333		63.3	33-115			

LRB (LRB-L648322)

Prepared: 11/11/2022 Analyzed: 11/11/2022

Chrysene	ND	0.00067	mg/Kg				-			
Dibenz(a,h)anthracene	ND	0.00067	"				-			
Fluoranthene	ND	0.00067	"				-			
Fluorene	ND	0.00067	"				-			
Benzo(k)fluoranthene	ND	0.00067	"				-			
Naphthalene	ND	0.00201	"				-			
Indeno(1,2,3-cd)pyrene	ND	0.00067	"				-			
Benzo(b)fluoranthene	ND	0.00067	"				-			
Benzo(a)pyrene	ND	0.00067	"				-			
Benzo(a)anthracene	ND	0.00067	"				-			
Acenaphthene	ND	0.00067	"				-			
2-Methylnaphthalene	ND	0.00201	"				-			
1-Methylnaphthalene	ND	0.00201	"				-			
Pyrene	ND	0.00067	"				-			
Anthracene	ND	0.00067	"				-			
Surrogate: Nitrobenzene-d5	48.9		"	0.333		48.9	29-110			
Surrogate: 4-Terphenyl-d14	68.7		"	0.333		68.7	33-122			
Surrogate: 2-Fluorobiphenyl	56.1		"	0.333		56.1	33-115			

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Eagle Environmental Consulting, Inc.
8000 W 44th Ave
Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: NOBLE - Spike State #D 12-3

Notes and Definitions

U Sample is Non-Detect.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on a wet weight basis.

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December 02, 2022

Eagle Environmental Consulting, Inc.

Martin C Eckert III

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - NOBLE - Spike State #D 12-3

Project Number - [none]

Attached are your analytical results for NOBLE - Spike State #D 12-3 received by Origins Laboratory, Inc. November 23, 2022. This project is associated with Origins project number Y211554-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Eagle Environmental Consulting, Inc.
8000 W 44th Ave
Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: NOBLE - Spike State #D 12-3

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Background-01@2'	Y211554-01	Soil	November 9, 2022 11:20	11/23/2022 08:50

Origins Laboratory, Inc.



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.

Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Laboratory

Origins Work Order: 4211554

Client: Eagle Environmental
 Client Project ID: Spike State #D 12-3

Checklist Completed by: TSH/EHS
 Date/time completed: 11/23/22

Shipped Via: HD
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: N/A

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____


Cooler Number/Temperature: 1 13.9 °C / _____ °C / _____ °C (Describe)

Thermometer ID: 1004

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	/			
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		/		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		/		
Were all samples received intact ⁽¹⁾ ?	/			
Was adequate sample volume provided ⁽¹⁾ ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		/		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	/			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	/			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	/			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			/	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)		/		
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by: TSH (Project Manager) Date/Time Reviewed: 11-28-22

Origins Laboratory, Inc.


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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

Background-01@2'
11/9/2022 11:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y211554-01 (Soil)

Metals by Saturated Paste by EPA 6010

Calcium	3.25	0.499	meq/L	10	[CALC]	KAP	11/29/2022	11/30/2022
Magnesium	0.953	0.823	"	"	"	KAP	"	"
Sodium	ND	0.435	"	"	"	KAP	"	"

SAR by 20B Saturated Paste

SAR	0.244		SAR	1	B2K2909	KAP	"	"
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Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: NOBLE - Spike State #D 12-3

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2K2909 - Saturated Paste Metals

Blank (B2K2909-BLK1)

Prepared: 11/29/2022 Analyzed: 11/30/2022

SAR	0.00		SAR							
Calcium PPM	ND	10.0	mg/L							
Magnesium PPM	ND	10.0	"							
Sodium PPM	ND	10.0	"							

Duplicate (B2K2909-DUP1)

Source: Y211547-01

Prepared: 11/29/2022 Analyzed: 11/30/2022

SAR	0.00		SAR		1.25			200	200	
Calcium PPM	133	10.0	mg/L		158			17.4	50	
Magnesium PPM	24.6	10.0	"		28.4			14.4	50	
Sodium PPM	67.2	10.0	"		64.9			3.47	50	

Origins Laboratory, Inc.



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Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: NOBLE - Spike State #D 12-3

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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