

Wellhead Closure Checklist

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

Additional attachments (optional):		Pit Closure		Tank Battery Closure	2-27-23	Flowline Closure	2-27-23	Partially Buried Vault Closure	2-27-23
Site Name & COGCC Facility Number: Johnson #20-29		Date: 12-5-22					Remediation Project #: 25270		
Associated Wells: 05-123-21693		Age of Site: years					Number of Photos Attached: 1		
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple) 40.279506 / -104.569422							Estimated Facility Size (acres):		
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.) Good condition									
USCS Soil Type: CL					Estimated Depth to Groundwater: ~10-15'				
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	05-123-21693								
Age	years								
Condition of surface around wellhead	Good-Per Crew								
PID Readings	N/A-Excavated upon arrival								
Condition of subsurface (if not present)	Good-no staining/no odor								
PID Readings	1.9	1.3	3.2	2.1	4.0				
Sample taken? Location/Sample ID#	WH-SS-01	WH-SS-02	WH-SS-03	WH-SS-04	WH-FS-01				
Photo Number(s)	See photolog								
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: 4.0					Total number of samples submitted to lab for analysis: 1				
If more than 10 cubic yards of impacted soil were observed:									
Vertical extent:					Estimated spill volume:				
Lateral extent: N/A					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:									

Flowline Closure Checklist

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

Additional Attachments:	Tank Battery Closure 2-27-23	Wellhead Closure 12-5-23	Pit Closure —	Partially Buried Vault Closure 2-27-23
Site Name & COGCC Facility Number: Johnson #20-29		Date: 2-21-23 - 2-27-23		Remediation Project #: 25270
Associated Wells: 05-123-21693		Age of Site: years		Number of Photos Attached: 10
Starting point: (GPS coordinates and descriptions) At well: 40.279506 / -104.569422				
End point: (GPS coordinates and descriptions) At sep: 40.281904 / -104.565631				
USCS Soil Type: CL			Estimated Depth to Groundwater: ~10-15'	
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	D, G, W			
Depth	~3'			
Age	years			
Length	~1367'			
Construction Material	Steel			
Were flowlines pulled?	Yes			
Visual Integrity of lines	Good			
Visual impacts if trenched	None observed			
PID Readings if trenched	0.6	0.1 to 0.5		
Sample taken? Location/Sample ID#	FL-SS-01 9 additional bellholes/cut-points field screened. See PID table			
Photo Number(s)	See photolog			
Other observations regarding on location flowlines: Flowline fully removed. Terminus / Pt. B at separator assessed + lab analyzed.				
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: 10		Total number of samples collected: 10		
Highest PID Reading: 0.6		Total number of samples submitted to lab for analysis: 1		
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?		N/A		
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:		
Seen 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:				

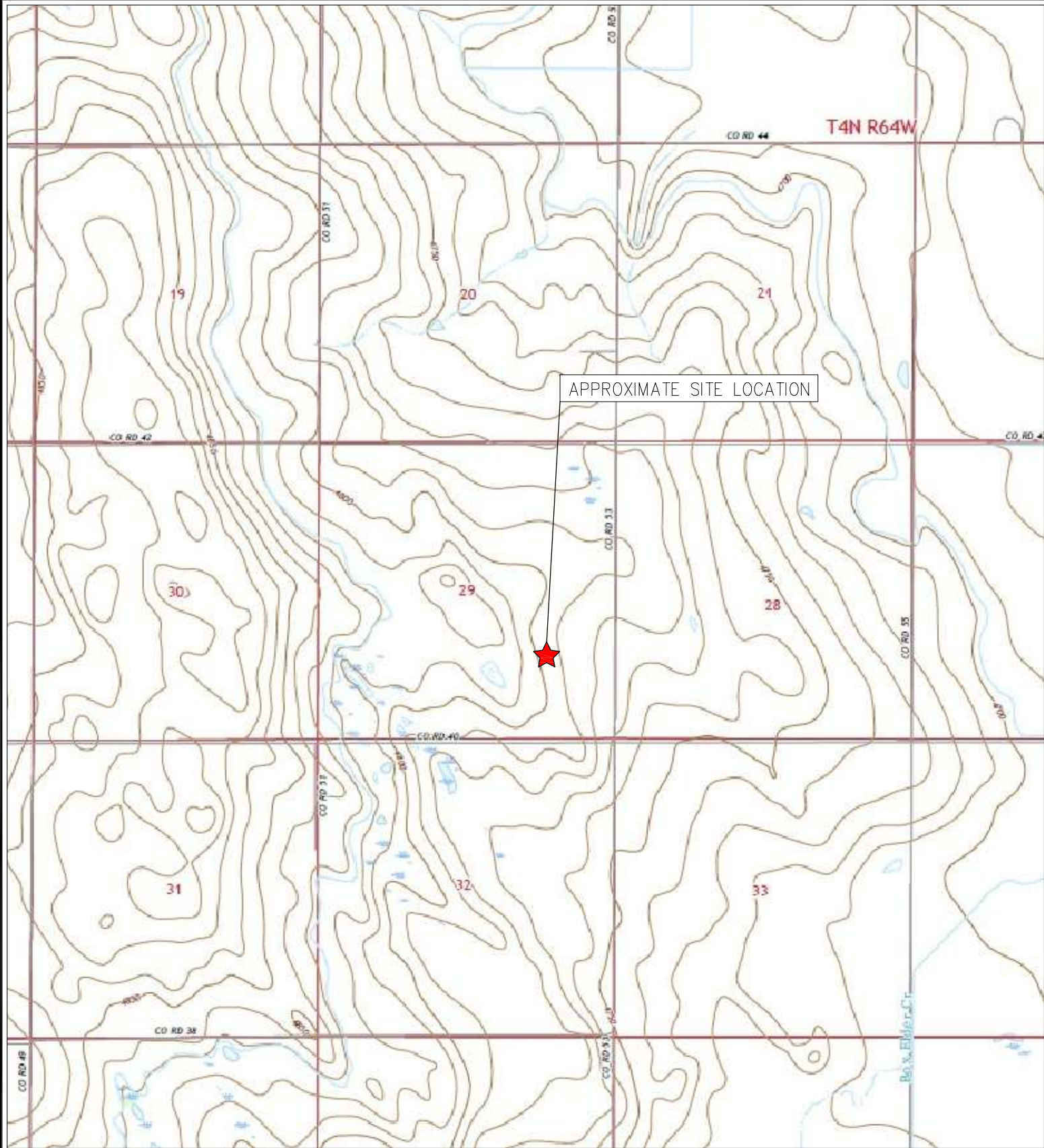


FIGURES

Figure 1: Topographic Site Location Map

Figure 2: Aerial Site Location Map

Figure 3: Soil Analytical Map



TOPOGRAPHIC SITE LOCATION MAP
 JOHNSON #20-29
 CLOSURE ASSESSMENT
 40.279506 / -104.569422
 C SE¼ SEC.29 T4N R64W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-21693
 REMEDIATION # 25270



EAGLE
ENVIRONMENTAL
CONSULTING, LLC






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

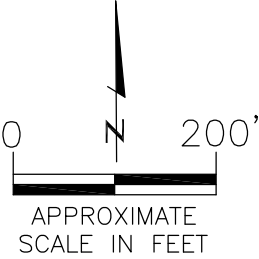
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP,
 VALLEY VIEW SCHOOL, CO QUADRANGLE 2022

FIGURE NO. 1



LEGEND

-  FORMER JOHNSON #20-29 WELLHEAD (PLUGGED AND ABANDONED)
-  ASSOCIATED SEPARATOR
-  APPROXIMATE FLOWLINE LOCATION (REMOVED)
-  APPROXIMATE FLOWLINE SAMPLE LOCATIONS – FIELD SCREENED
-  APPROXIMATE FLOWLINE SAMPLE LOCATIONS – LAB SUBMITTED



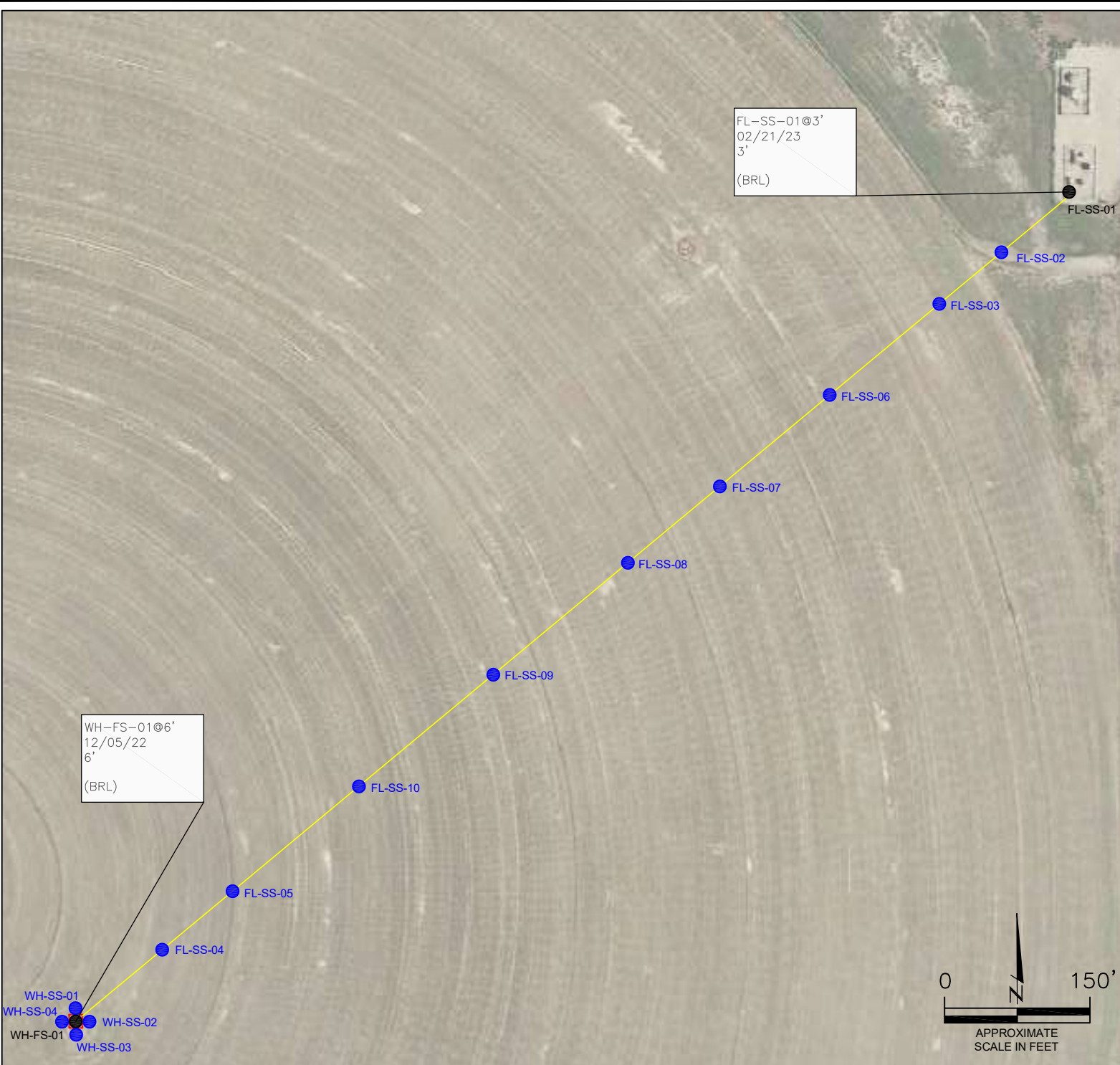
AERIAL SITE LOCATION MAP
JOHNSON #20-29
CLOSURE ASSESSMENT
40.279506 / -104.569422
C SE¼ SEC.29 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-21693
REMEDATION # 25270

DRAWN BY:
IM

FIGURE NO.
2



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



LEGEND

- WELLHEAD ASSESSMENT BOUNDARIES
- 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)
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

(BRL) = ALL VALUES BELOW REGULATORY LIMITS

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

COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION

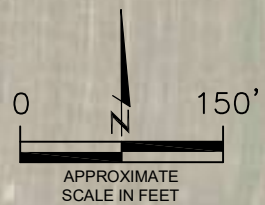
SOIL ANALYTICAL MAP
JOHNSON #20-29
CLOSURE ASSESSMENT
40.279506 / -104.569422
C SE¼ SEC.29 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-21693
REMEDATION # 25270

DRAWN BY:
BPW

FIG.
NO. 3



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





TABLES

Table 1: Photoionization Detector Reading Summary

Table 2: Soil Analytical Results Summary

TABLE 1
 PHOTOIONIZATION DETECTOR READING SUMMARY
 JOHNSON #20-29
 CLOSURE ASSESSMENT
 40.279506 / -104.569422
 C SE¼ SEC.29 T4N R64W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-21693
 REMEDIATION # 25270

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Lab Submission (Y/N)
WH-SS-01 @ 5' (40.279529 / -104.569420)	12/05/22	5	1.9	N
WH-SS-02 @ 5' (40.279507 / -104.569393)	12/05/22	5	1.3	N
WH-SS-03 @ 5' (40.279488 / -104.569421)	12/05/22	5	2.1	N
WH-SS-04 @ 5' (40.279511 / -104.569448)	12/05/22	5	3.2	N
WH-FS-01 @ 6' (40.279505 / -104.569422)	12/05/22	6	4.0	Y
FL-SS-01 @ 3' (40.281908 / -104.565666)	02/21/23	3	0.6	Y
FL-SS-02 @ 3' (40.281733 / -104.565902)	02/21/23	3	0.3	N
FL-SS-03 @ 3' (40.281578 / -104.566163)	02/21/23	3	0.1	N
FL-SS-04 @ 3' (40.279728 / -104.569075)	02/21/23	3	0.4	N
FL-SS-05 @ 3' (40.279875 / -104.568844)	02/21/23	3	0.3	N
FL-SS-06 @ 3' (40.281310 / -104.566596)	02/24/23	3	0.6	N
FL-SS-07 @ 3' (40.281042 / -104.567014)	02/24/23	3	0.2	N
FL-SS-08 @ 3' (40.280828 / -104.567352)	02/27/23	3	0.2	N
FL-SS-09 @ 3' (40.280492 / -104.567878)	02/27/23	3	0.0	N
FL-SS-10 @ 3' (40.280157 / -104.568404)	02/27/23	3	0.5	N
(Y/N) = Yes or No ppm-v = parts per million by volume PID = Photoionization Detector				

TABLE 2
SOIL ANALYTICAL RESULTS SUMMARY
JOHNSON #20-29
CLOSURE ASSESSMENT
40.279506 / -104.569422
C SE¼ SEC.29 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-21693
REMEDATION # 25270

Sample Location (Latitude / Longitude)			WH-FS-01 @ 6'	FL-SS-01 @ 3'	
Sample Date			12/5/2022	2/21/2023	
Sample Depth			6'	3'	
PID Reading (ppm-v)			4.0	0.6	
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	<0.00200
Toluene	mg/kg	490	0.69	<0.00200	<0.00200
Ethylbenzene	mg/kg	5.8	0.78	<0.00200	<0.00200
Total Xylenes	mg/kg	58	9.9	<0.00200	<0.00200
1,2,4-Trimethylbenzene	mg/kg	30	0.0081	<0.00200	<0.00200
1,3,5-Trimethylbenzene	mg/kg	27	0.0087	<0.00200	<0.00200
Total Petroleum Hydrocarbons					
TPH-GRO	mg/kg	500	--	<0.200	<0.200
TPH-DRO	mg/kg	500	--	<25.0	<25.0
TPH-RRO	mg/kg	500	--	<100	<100
Polycyclic Aromatics Hydrocarbons					
1-Methyl-naphthalene	mg/kg	18	0.006	<0.00201	<0.00201
2-Methyl-naphthalene	mg/kg	24	0.019	<0.00201	<0.00201
Acenaphthene	mg/kg	360	0.55	<0.00067	<0.00067
Anthracene	mg/kg	1800	5.8	<0.00067	<0.00067
Benzo(a)-anthracene	mg/kg	1.1	0.011	<0.00067	<0.00067
Benzo(a)-pyrene	mg/kg	0.11	0.24	<0.00067	<0.00067
Benzo(b)-fluoranthene	mg/kg	1.1	0.3	<0.00067	<0.00067
Benzo(k)-fluoranthene	mg/kg	11	2.9	<0.00067	<0.00067
Chrysene	mg/kg	110	9	<0.00067	<0.00067
Dibenzo(a,h)-anthracene	mg/kg	0.11	0.096	<0.00067	<0.00067
Fluoranthene	mg/kg	240	8.9	<0.00067	<0.00067
Fluorene	mg/kg	240	0.54	<0.00067	<0.00067
Indeno(1,2,3-cd)-pyrene	mg/kg	1.1	0.98	<0.00067	<0.00067
Naphthalene	mg/kg	2	0.0038	<0.00201	<0.00201
Pyrene	mg/kg	180	1.3	<0.00067	<0.00067
Soil Suitability (Inorganics)					
Boron	mg/L	2	--	0.344	0.185
pH	standard unit	6-8.3	--	7.95	8.05
Sodium Adsorption Ratio (SAR)	--	<6	--	3.67	0.229
Specific Conductance (EC)	mmhos/cm	<4	--	0.757	0.334
COGCC = Colorado Oil and Gas Conservation Commission		VOCs - Volatile Organic Compounds			
mg/kg = milligrams per kilogram		RSSLs = Residential Soil Screening Levels			
mmhos/cm = millimhos per centimeter		GSSLs = Protection of Groundwater Soil Screening Levels			
PID = Photoionization Detector		TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics			
ppm-v = parts per million by volume		TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics			
mg/L = milligrams per liter		TPH-RRO = Total Petroleum Hydrocarbons - Residual Range Organics			
SAR = Sodium Adsorption Ratio					
Notes:					
Values presented with a less than symbol (<) did					
Values presented in BOLD exceed COGCC Table 915-1 Regulatory Limits.					



ATTACHMENT A

Photo Log

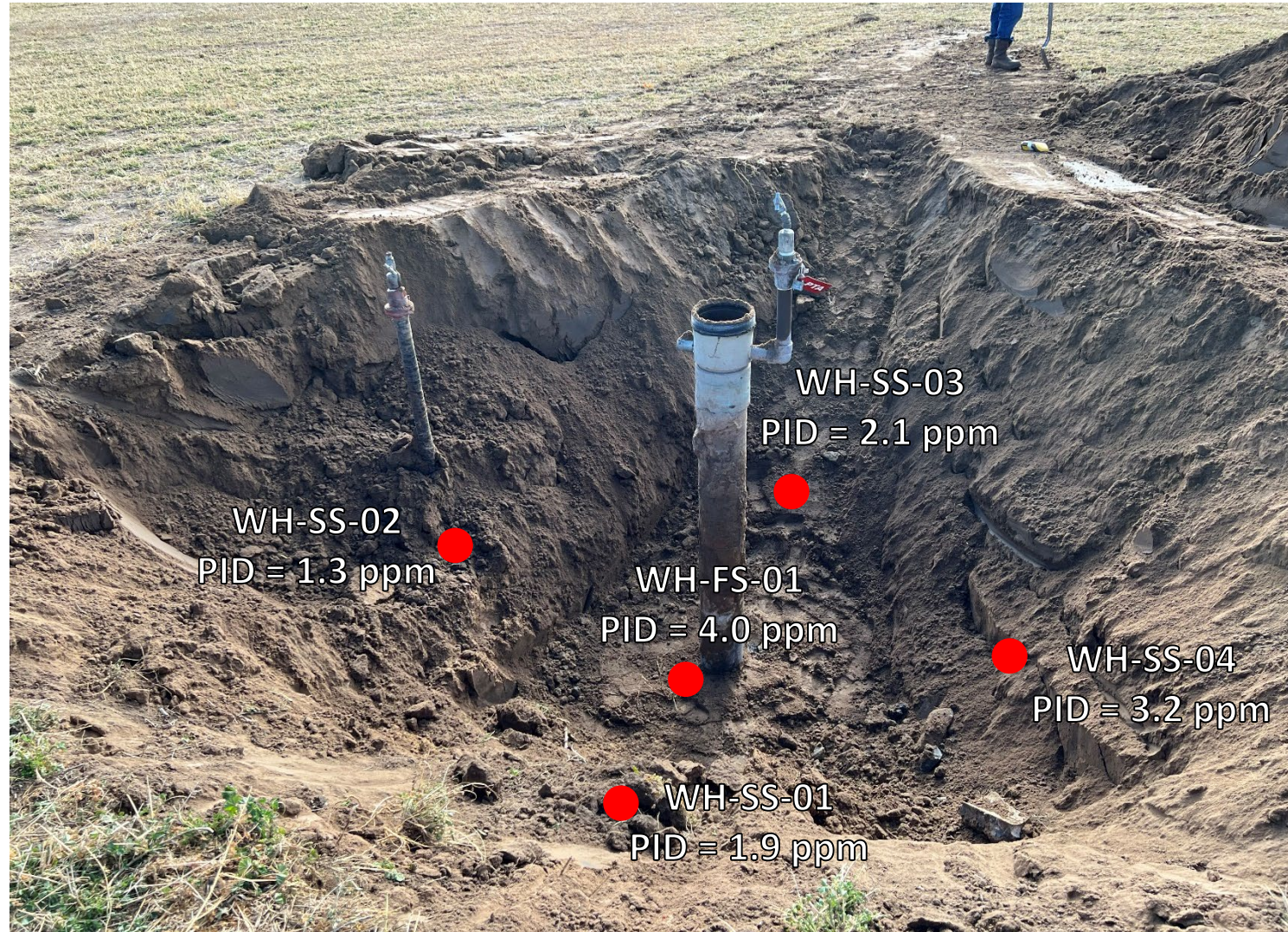
Johnson #20-29
API # 05-123-21693
Remediation # 25270

Closure Assessment

December 2022 – February 2023



Wellhead Excavation – 12/05/22



Looking south-southwest

No petroleum hydrocarbon staining or odor observed

Flowline Removal – 02/21/23



Flowline Terminus/Pt. B at separator – submitted for laboratory analysis

No petroleum hydrocarbon staining or odor observed



Looking northeast at bellhole/cut point for removal – field screened

No petroleum hydrocarbon staining or odor observed

Flowline Removal – 02/21/23



Looking northeast at bellhole/cut point for removal – field screened

No petroleum hydrocarbon staining or odor observed



Looking northeast at bellhole/cut point for removal – field screened

No petroleum hydrocarbon staining or odor observed

Flowline Removal – 02/21/23 & 02/24/23



Looking northeast at bellhole/cut point for removal – field screened

No petroleum hydrocarbon staining or odor observed



Looking northeast at bellhole/cut point for removal – field screened

No petroleum hydrocarbon staining or odor observed

Flowline Removal – 02/24/23 & 02/27/23



Looking northeast at bellhole/cut point for removal – field screened

No petroleum hydrocarbon staining or odor observed



Looking northeast at bellhole/cut point for removal – field screened

No petroleum hydrocarbon staining or odor observed

Flowline Removal – 02/27/23



Looking northeast at bellhole/cut point for removal – field screened

No petroleum hydrocarbon staining or odor observed



Looking northeast at bellhole/cut point for removal – field screened

No petroleum hydrocarbon staining or odor observed



ATTACHMENT B

Laboratory Analytical Reports



December 14, 2022

Eagle Environmental Consulting, Inc.

Martin C Eckert III

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - Johnson #20-29

Project Number - [none]

Attached are your analytical results for Noble - Johnson #20-29 received by Origins Laboratory, Inc. December 05, 2022. This project is associated with Origins project number Y212096-01.

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 - Johnson #20-29

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-FS-01@6'	Y212096-01	Soil	December 5, 2022 10:40	12/05/2022 15:20

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.

Martin C Eckert III
Project Number: [none]
Project: Noble - Johnson #20-29

ORIGINS

LABORATORY, INC

www.originslaboratory.com

4212096

page | of |

Client: Eagle Environmental Consulting

Address: 800 W 4th Ave

Liberal Ridge, CO 80033

Telephone Number: 303-433-0479

Email Address: Mike3@eagle-enviro.com

Project Manager: Martin Eckert III

Project Name: Johnson #20-09

Project Number: 66

Samples Collected By: GK

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Dr Summ #		
WH-FS-01@6	12/05/02	1040	2	X				X			X	EC, SAR, pH by 1
												Scheduled risk prep 2
												MDLs needed 3
												4
												5
												6
												7
												8
												9
												10
Relinquished By: Cassatt kmj	Date: 12/05/02	1530										Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input checked="" type="checkbox"/> Standard
Relinquished By:	Date:											

Bill to Cole

Temp Received: 2.2

Date Results Needed

Noble

Origins Laboratory, Inc.

Byron

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 - Johnson #20-29

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4212090

Client: Eagle

Client Project ID: Johnson #20-29

Checklist Completed by: EH5/OE

Shipped Via: HD

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 12/5/22

Airbill #: NA

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

☐ Water

☐ Other: _____

Cooler Number/Temperature: 1 12.2 °C 1 °C 1 °C (Describe) 1 °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"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" 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"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽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"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water — is there headspace (> ¼ inch bubble) 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 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 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 date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) JB

Date/Time Reviewed 12-6-22

Origins Laboratory, Inc.

J. Bynon

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 - Johnson #20-29

WH-FS-01@6'

12/5/2022 10:40:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y212096-01 (Soil)

Boron (DTPA Sorbitol)

Boron	0.344	0.100	mg/L	1	B2L0607	12/06/2022	12/07/2022	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2L0601	12/06/2022	12/06/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	78.5 %	50-150	"	"	"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B2L0631	12/06/2022	12/07/2022	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	107 %	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 - Johnson #20-29

WH-FS-01@6'

12/5/2022 10:40:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y212096-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	97.9 %	70-130	B2L06 31	12/06/2022	12/07/2022
Surrogate: 4-Bromofluorobenzene	96.9 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	1.67	0.499	meq/L	10	[CALC]	12/06/2022	12/07/2022
Magnesium	0.851	0.823	"	"	"	"	"
Sodium	4.12	0.435	"	"	"	"	"

PAH by 8270D SIM

1-Methylnaphthalene	ND	0.00109	0.00201	mg/Kg	1	L652607	12/08/2022	12/08/2022
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.



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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 - Johnson #20-29

WH-FS-01@6'

12/5/2022 10:40:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y212096-01 (Soil)

PAH by 8270D SIM

Fluorene	ND	0.000286	0.00067	mg/Kg	1	L652607	12/08/2022	12/08/2022
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	56.9 %		33-122			"	"	"
Surrogate: Nitrobenzene-d5	46.5 %		29-110			"	"	"

pH in Soil by 9045D

pH	7.95			pH Units	1	B2L0611	12/06/2022	12/07/2022
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SAR by 20B Saturated Paste

SAR	3.67			SAR	1	B2L0605	12/06/2022	12/07/2022
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.757		0.00500	mmhos/cm	1	B2L0611	12/06/2022	12/07/2022
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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 - Johnson #20-29

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 B2L0601 - EPA 3580										
Blank (B2L0601-BLK1)					Prepared: 12/06/2022 Analyzed: 12/06/2022					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	24		"	24.9		95.4	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 - Johnson #20-29

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 B2L0601 - EPA 3580

LCS (B2L0601-BS1)

Prepared: 12/06/2022 Analyzed: 12/06/2022

Diesel (C10-C28)	1080	50.0	mg/kg	1000		108	70-130			
Residual Range Organics (C28-C40)	1060	200	"	1000		106	70-130			
Surrogate: o-Terphenyl	49		"	49.8		97.8	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 - Johnson #20-29

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 B2L0601 - EPA 3580

Matrix Spike (B2L0601-MS1)		Source: Y212079-01			Prepared: 12/06/2022 Analyzed: 12/06/2022					
Diesel (C10-C28)	1110	50.0	mg/kg	1000	ND	111	70-130			
Residual Range Organics (C28-C40)	1100	200	"	1000	ND	110	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 - Johnson #20-29

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 B2L0601 - EPA 3580										
Matrix Spike Dup (B2L0601-MSD1)		Source: Y212079-01			Prepared: 12/06/2022 Analyzed: 12/06/2022					
Diesel (C10-C28)	1140	50.0	mg/kg	1000	ND	114	70-130	2.12	35	
Residual Range Organics (C28-C40)	1050	200	"	1000	ND	105	70-130	4.70	35	
Surrogate: o-Terphenyl	47		"	49.8		94.7	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 - Johnson #20-29

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 B2L0631 - EPA 5030 (soil)										
Blank (B2L0631-BLK1)					Prepared: 12/06/2022 Analyzed: 12/07/2022					
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	0.12		"	0.125		99.2	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.9	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 - Johnson #20-29

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 B2L0631 - EPA 5030 (soil)

LCS (B2L0631-BS1)

Prepared: 12/06/2022 Analyzed: 12/07/2022

1,2,4-Trimethylbenzene	0.0931	0.00200	mg/kg	0.100		93.1	70-130			
1,3,5-Trimethylbenzene	0.0926	0.00200	"	0.100		92.6	70-130			
Benzene	0.0925	0.00200	"	0.100		92.5	70-130			
Ethylbenzene	0.0911	0.00200	"	0.100		91.1	70-130			
Naphthalene	0.0919	0.00380	"	0.100		91.9	70-130			
Toluene	0.0906	0.00200	"	0.100		90.6	70-130			
o-Xylene	0.0904	0.00200	"	0.100		90.4	70-130			
m,p-Xylene	0.184	0.00400	"	0.200		91.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.0	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.3	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 - Johnson #20-29

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 B2L0631 - EPA 5030 (soil)

Matrix Spike (B2L0631-MS1)		Source: Y212060-01			Prepared: 12/06/2022 Analyzed: 12/07/2022					
1,2,4-Trimethylbenzene	0.0901	0.00200	mg/kg	0.100	ND	90.1	70-130			
1,3,5-Trimethylbenzene	0.0885	0.00200	"	0.100	ND	88.5	70-130			
Benzene	0.0948	0.00200	"	0.100	ND	94.8	70-130			
Ethylbenzene	0.0905	0.00200	"	0.100	ND	90.5	70-130			
Naphthalene	0.0835	0.00380	"	0.100	ND	83.5	70-130			
Toluene	0.0924	0.00200	"	0.100	ND	92.4	70-130			
o-Xylene	0.0896	0.00200	"	0.100	ND	89.6	70-130			
m,p-Xylene	0.182	0.00400	"	0.200	ND	91.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		93.3	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		100	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 - Johnson #20-29

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
Batch B2L0631 - EPA 5030 (soil)										
Matrix Spike Dup (B2L0631-MSD1)		Source: Y212060-01			Prepared: 12/06/2022 Analyzed: 12/07/2022					
1,2,4-Trimethylbenzene	0.0872	0.00200	mg/kg	0.100	ND	87.2	70-130	3.27	20	
1,3,5-Trimethylbenzene	0.0866	0.00200	"	0.100	ND	86.6	70-130	2.24	20	
Benzene	0.0931	0.00200	"	0.100	ND	93.1	70-130	1.81	20	
Ethylbenzene	0.0894	0.00200	"	0.100	ND	89.4	70-130	1.20	20	
Naphthalene	0.0799	0.00380	"	0.100	ND	79.9	70-130	4.48	20	
Toluene	0.0910	0.00200	"	0.100	ND	91.0	70-130	1.53	20	
o-Xylene	0.0886	0.00200	"	0.100	ND	88.6	70-130	1.14	20	
m,p-Xylene	0.180	0.00400	"	0.200	ND	90.0	70-130	1.25	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		100	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	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 - Johnson #20-29

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 B2L0605 - Saturated Paste Metals

Blank (B2L0605-BLK1)

Prepared: 12/06/2022 Analyzed: 12/07/2022

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

Duplicate (B2L0605-DUP1)

Source: Y212084-09

Prepared: 12/06/2022 Analyzed: 12/07/2022

Calcium PPM	156	10.0	mg/L	158	1.40	50
SAR	0.00		SAR	2.22	200	200
Magnesium PPM	44.1	10.0	mg/L	43.2	1.99	50
Sodium PPM	121	10.0	"	122	0.986	50

Batch B2L0607 - DTPA Sorbitol Preparation

Blank (B2L0607-BLK1)

Prepared: 12/06/2022 Analyzed: 12/07/2022

Boron	ND	0.100	mg/L
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Duplicate (B2L0607-DUP1)

Source: Y212041-01

Prepared: 12/06/2022 Analyzed: 12/07/2022

Boron	0.504	0.100	mg/L	0.436	14.5	50
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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 - Johnson #20-29

Saturated Paste - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2L0611 - Saturated Paste pH/EC										
Blank (B2L0611-BLK1)					Prepared: 12/06/2022 Analyzed: 12/07/2022					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B2L0611-DUP1)					Source: Y212084-09 Prepared: 12/06/2022 Analyzed: 12/07/2022					
Specific Conductance (EC)	1.57	0.00500	mmhos/cm		1.56			0.755	25	
pH	8.18		pH Units		8.24			0.731	25	

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 - Johnson #20-29

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 L652607 - 3550B

MSD (L 98936-MSD-L652607)		Source: 98936			Prepared: 12/08/2022 Analyzed: 12/08/2022					
2-Methylnaphthalene	0.0826	0.00201	mg/Kg	0.162	<0.00194	50.9	30-130	6.5	30	
Fluorene	0.083	0.00067	"	0.162	<0.000286	51.2	30-130	4.5	30	
Pyrene	0.0825	0.00067	"	0.162	<0.000643	50.9	30-130	9.6	30	
Indeno(1,2,3-cd)pyrene	0.072	0.00067	"	0.162	<0.000627	44.4	30-130	5.6	30	
Fluoranthene	0.0843	0.00067	"	0.162	<0.000394	52	30-130	9.2	30	
Dibenz(a,h)anthracene	0.0882	0.00067	"	0.162	<0.000614	54.4	30-130	1.6	30	
Chrysene	0.0901	0.00067	"	0.162	<0.000624	55.6	30-130	2.9	30	
Naphthalene	0.0837	0.00201	"	0.162	<0.00145	51.6	30-130	3.9	30	
1-Methylnaphthalene	0.0869	0.00201	"	0.162	<0.00109	53.6	30-130	6	30	
Benzo(k)fluoranthene	0.0718	0.00067	"	0.162	<0.000437	44.3	30-130	7.8	30	
Acenaphthene	0.0828	0.00067	"	0.162	<0.000304	51.1	30-130	3.6	30	
Anthracene	0.0815	0.00067	"	0.162	<0.000334	50.3	30-130	11.2	30	
Benzo(a)anthracene	0.0864	0.00067	"	0.162	<0.000493	53.3	30-130	5.2	30	
Benzo(a)pyrene	0.0878	0.00067	"	0.162	<0.000468	54.1	30-130	3.9	30	
Benzo(b)fluoranthene	0.0784	0.00067	"	0.162	<0.000585	48.3	30-130	4	30	
Surrogate: 2-Fluorobiphenyl	50.4		"	0.325	171	50.4	33-115			
Surrogate: Nitrobenzene-d5	48.9		"	0.325	156	48.9	29-110			
Surrogate: 4-Terphenyl-d14	56.3		"	0.325	180	56.3	33-122			

MS (L 98936-MS-L652607)		Source: 98936			Prepared: 12/08/2022 Analyzed: 12/08/2022					
Benzo(k)fluoranthene	0.0777	0.00067	mg/Kg	0.167	<0.000437	46.5	30-130			
Acenaphthene	0.0859	0.00067	"	0.167	<0.000304	51.4	30-130			
Naphthalene	0.0871	0.00201	"	0.167	<0.00145	52.1	30-130			
Indeno(1,2,3-cd)pyrene	0.0762	0.00067	"	0.167	<0.000627	45.6	30-130			
Fluorene	0.0869	0.00067	"	0.167	<0.000286	52	30-130			
Fluoranthene	0.0925	0.00067	"	0.167	<0.000394	55.3	30-130			
Dibenz(a,h)anthracene	0.0897	0.00067	"	0.167	<0.000614	53.7	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 - Johnson #20-29

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 L652607 - 3550B

MS (L 98936-MS-L652607)		Source: 98936			Prepared: 12/08/2022 Analyzed: 12/08/2022					
Chrysene	0.0928	0.00067	mg/Kg	0.167	<0.000624	55.5	30-130			
1-Methylnaphthalene	0.0923	0.00201	"	0.167	<0.00109	55.2	30-130			
Benzo(a)pyrene	0.0913	0.00067	"	0.167	<0.000468	54.6	30-130			
Anthracene	0.0912	0.00067	"	0.167	<0.000334	54.6	30-130			
Pyrene	0.0909	0.00067	"	0.167	<0.000643	54.4	30-130			
2-Methylnaphthalene	0.0882	0.00201	"	0.167	<0.00194	52.8	30-130			
Benzo(b)fluoranthene	0.0816	0.00067	"	0.167	<0.000585	48.8	30-130			
Benzo(a)anthracene	0.0911	0.00067	"	0.167	<0.000493	54.5	30-130			
Surrogate: Nitrobenzene-d5	49.5		"	0.333	156	49.5	29-110			
Surrogate: 4-Terphenyl-d14	60.6		"	0.333	180	60.6	33-122			
Surrogate: 2-Fluorobiphenyl	54.3		"	0.333	171	54.3	33-115			

LCS (LCS-L652607)		Prepared: 12/08/2022 Analyzed: 12/08/2022								
Chrysene	0.0942	0.00067	mg/Kg	0.167		56.4	30-130			
Dibenz(a,h)anthracene	0.106	0.00067	"	0.167		63.4	30-130			
Fluoranthene	0.0891	0.00067	"	0.167		53.3	30-130			
Fluorene	0.0862	0.00067	"	0.167		51.6	30-130			
Indeno(1,2,3-cd)pyrene	0.0871	0.00067	"	0.167		52.1	30-130			
Naphthalene	0.086	0.00201	"	0.167		51.4	30-130			
Benzo(k)fluoranthene	0.081	0.00067	"	0.167		48.5	30-130			
Pyrene	0.0889	0.00067	"	0.167		53.2	30-130			
Benzo(a)pyrene	0.0923	0.00067	"	0.167		55.2	30-130			
Benzo(a)anthracene	0.0935	0.00067	"	0.167		55.9	30-130			
Anthracene	0.0897	0.00067	"	0.167		53.7	30-130			
Acenaphthene	0.0846	0.00067	"	0.167		50.6	30-130			
2-Methylnaphthalene	0.0836	0.00201	"	0.167		50	30-130			
1-Methylnaphthalene	0.0869	0.00201	"	0.167		52	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 - Johnson #20-29

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
Batch L652607 - 3550B										
LCS (LCS-L652607)					Prepared: 12/08/2022 Analyzed: 12/08/2022					
Benzo(b)fluoranthene	0.0855	0.00067	mg/Kg	0.167		51.1	30-130			
Surrogate: Nitrobenzene-d5	54		"	0.333		54	29-110			
Surrogate: 4-Terphenyl-d14	66.6		"	0.333		66.6	33-122			
Surrogate: 2-Fluorobiphenyl	57		"	0.333		57	33-115			
LRB (LRB-L652607)					Prepared: 12/08/2022 Analyzed: 12/08/2022					
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	57.6		"	0.333		57.6	29-110			
Surrogate: 4-Terphenyl-d14	66.3		"	0.333		66.3	33-122			
Surrogate: 2-Fluorobiphenyl	60.6		"	0.333		60.6	33-115			

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 - Johnson #20-29

Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on a wet weight basis.

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.



February 28, 2023

Eagle Environmental Consulting, Inc.

Martin C Eckert III

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - Johnson #20-29

Project Number - [none]

Attached are your analytical results for Noble - Johnson #20-29 received by Origins Laboratory, Inc. February 21, 2023. This project is associated with Origins project number Y302432-01.

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 - Johnson #20-29

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL-SS-01@3'	Y302432-01	Soil	February 21, 2023 11:08	02/21/2023 14:45

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 - Johnson #20-29

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: YB02432

Client: Eagle Environmental
Client Project ID: Johnson #20-29

Checklist Completed by: TSH/CMS

Shipped Via: 110
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 2/22/23

Airbill #: NA

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

Cooler Number/Temperature: 1 / 54 °C / °C / °C (Describe)

Thermometer ID: T004

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"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" 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"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽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"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) 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 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 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 date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) [Signature]

Date/Time Reviewed 2/23/23

Origins Laboratory, Inc.

[Signature]

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 - Johnson #20-29

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 - Johnson #20-29

FL-SS-01@3'

2/21/2023 11:08:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y302432-01 (Soil)

Boron (DTPA Sorbitol)

Boron	0.185	0.100	mg/L	1	B3B2401	02/24/2023	02/27/2023	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B3B2202	02/22/2023	02/23/2023	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	95.3 %	50-150	"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B3B2233	02/22/2023	02/23/2023	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	92.9 %	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 - Johnson #20-29

FL-SS-01@3'

2/21/2023 11:08:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y302432-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	94.3 %		70-130			B3B22 33	02/22/2023	02/23/2023
Surrogate: 4-Bromofluorobenzene	93.5 %		70-130			"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	2.06		0.499	meq/L	10	[CALC]	02/24/2023	02/27/2023
Magnesium	ND		0.823	"	"	"	"	"
Sodium	ND		0.435	"	"	"	"	"

PAH by 8270D SIM

1-Methylnaphthalene	ND	0.00109	0.00201	mg/Kg	1	L666121	02/24/2023	02/27/2023
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.



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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 - Johnson #20-29

FL-SS-01@3'

2/21/2023 11:08:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y302432-01 (Soil)

PAH by 8270D SIM

Fluorene	ND	0.000286	0.00067	mg/Kg	1	L666121	02/24/2023	02/27/2023
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	49.5 %	33-115	"	"	"
Surrogate: 4-Terphenyl-d14	61.1 %	33-122	"	"	"
Surrogate: Nitrobenzene-d5	52.6 %	29-110	"	"	"

pH in Soil by 9045D

pH	8.05	pH Units	1	B3B2404	02/24/2023	02/25/2023
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SAR by 20B Saturated Paste

SAR	0.229	SAR	1	B3B2403	02/24/2023	02/27/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.334	0.00500	mmhos/cm	1	B3B2404	02/24/2023	02/25/2023
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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 - Johnson #20-29

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 B3B2202 - EPA 3580										
Blank (B3B2202-BLK1)					Prepared: 02/22/2023 Analyzed: 02/22/2023					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	22		"	24.9		89.5	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 - Johnson #20-29

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 B3B2202 - EPA 3580

LCS (B3B2202-BS1)

Prepared: 02/22/2023 Analyzed: 02/22/2023

Diesel (C10-C28)	717	50.0	mg/kg	1000		71.7	70-130			
Residual Range Organics (C28-C40)	817	200	"	1000		81.7	70-130			
Surrogate: o-Terphenyl	51		"	49.8		102	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 - Johnson #20-29

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 B3B2202 - EPA 3580										
Matrix Spike (B3B2202-MS1)		Source: Y302402-02			Prepared: 02/22/2023 Analyzed: 02/22/2023					
Diesel (C10-C28)	766	50.0	mg/kg	1000	108	65.8	70-130			QM-07
Residual Range Organics (C28-C40)	789	200	"	1000	73.0	71.6	70-130			
Surrogate: o-Terphenyl	42		"	49.8		84.1	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 - Johnson #20-29

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 B3B2202 - EPA 3580										
Matrix Spike Dup (B3B2202-MSD1)		Source: Y302402-02			Prepared: 02/22/2023 Analyzed: 02/22/2023					
Diesel (C10-C28)	903	50.0	mg/kg	1000	108	79.5	70-130	16.4	35	
Residual Range Organics (C28-C40)	881	200	"	1000	73.0	80.8	70-130	11.0	35	
Surrogate: o-Terphenyl	46		"	49.8		91.8	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 - Johnson #20-29

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 B3B2233 - EPA 5030 (soil)										
Blank (B3B2233-BLK1)					Prepared: 02/22/2023 Analyzed: 02/23/2023					
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	0.11		"	0.125		87.4	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		92.6	70-130			

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 - Johnson #20-29

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 B3B2233 - EPA 5030 (soil)

LCS (B3B2233-BS1)

Prepared: 02/22/2023 Analyzed: 02/23/2023

1,2,4-Trimethylbenzene	0.106	0.00200	mg/kg	0.100		106	70-130			
1,3,5-Trimethylbenzene	0.107	0.00200	"	0.100		107	70-130			
Benzene	0.0946	0.00200	"	0.100		94.6	70-130			
Ethylbenzene	0.102	0.00200	"	0.100		102	70-130			
Naphthalene	0.103	0.00380	"	0.100		103	70-130			
Toluene	0.0941	0.00200	"	0.100		94.1	70-130			
o-Xylene	0.108	0.00200	"	0.100		108	70-130			
m,p-Xylene	0.195	0.00400	"	0.200		97.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		85.1	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		92.2	70-130			

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 - Johnson #20-29

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
Batch B3B2233 - EPA 5030 (soil)										
Matrix Spike (B3B2233-MS1)		Source: Y302381-01			Prepared: 02/22/2023 Analyzed: 02/23/2023					
1,2,4-Trimethylbenzene	0.0963	0.00200	mg/kg	0.100	ND	96.3	70-130			
1,3,5-Trimethylbenzene	0.0955	0.00200	"	0.100	ND	95.5	70-130			
Benzene	0.0891	0.00200	"	0.100	ND	89.1	70-130			
Ethylbenzene	0.0945	0.00200	"	0.100	ND	94.5	70-130			
Naphthalene	0.0905	0.00380	"	0.100	0.00110	89.4	70-130			
Toluene	0.0876	0.00200	"	0.100	ND	87.6	70-130			
o-Xylene	0.100	0.00200	"	0.100	ND	100	70-130			
m,p-Xylene	0.179	0.00400	"	0.200	0.00212	88.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		90.0	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		94.2	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 - Johnson #20-29

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
Batch B3B2233 - EPA 5030 (soil)										
Matrix Spike Dup (B3B2233-MSD1)			Source: Y302381-01		Prepared: 02/22/2023 Analyzed: 02/23/2023					
1,2,4-Trimethylbenzene	0.0881	0.00200	mg/kg	0.100	ND	88.1	70-130	8.91	20	
1,3,5-Trimethylbenzene	0.0865	0.00200	"	0.100	ND	86.5	70-130	9.87	20	
Benzene	0.0875	0.00200	"	0.100	ND	87.5	70-130	1.83	20	
Ethylbenzene	0.0880	0.00200	"	0.100	ND	88.0	70-130	7.14	20	
Naphthalene	0.0862	0.00380	"	0.100	0.00110	85.1	70-130	4.91	20	
Toluene	0.0849	0.00200	"	0.100	ND	84.9	70-130	3.13	20	
o-Xylene	0.0930	0.00200	"	0.100	ND	93.0	70-130	7.28	20	
m,p-Xylene	0.164	0.00400	"	0.200	0.00212	81.2	70-130	8.56	20	
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		89.3	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		92.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		91.6	70-130			

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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 - Johnson #20-29

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 B3B2401 - DTPA Sorbitol Preparation

Blank (B3B2401-BLK1)

Prepared: 02/24/2023 Analyzed: 02/27/2023

Boron ND 0.100 mg/L

Duplicate (B3B2401-DUP1)

Source: Y302431-01

Prepared: 02/24/2023 Analyzed: 02/27/2023

Boron 0.181 0.100 mg/L 0.164 9.51 50

Batch B3B2403 - Saturated Paste Metals

Blank (B3B2403-BLK1)

Prepared: 02/24/2023 Analyzed: 02/27/2023

SAR 0.00 SAR

Calcium PPM ND 10.0 mg/L

Magnesium PPM ND 10.0 "

Sodium PPM ND 10.0 "

Duplicate (B3B2403-DUP1)

Source: Y302433-01

Prepared: 02/24/2023 Analyzed: 02/27/2023

SAR 0.00 SAR 0.222 200 200

Calcium PPM 39.6 10.0 mg/L 39.5 0.440 50

Magnesium PPM 7.62 10.0 " 7.53 1.21 50

Sodium PPM 5.85 10.0 " 5.81 0.566 50

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Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: Noble - Johnson #20-29

Saturated Paste - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3B2404 - Saturated Paste pH/EC										
Blank (B3B2404-BLK1)					Prepared: 02/24/2023 Analyzed: 02/25/2023					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B3B2404-DUP1)					Source: Y302433-01 Prepared: 02/24/2023 Analyzed: 02/25/2023					
pH	7.37		pH Units		8.05		8.82	25		
Specific Conductance (EC)	0.312	0.00500	mmhos/cm		0.332		6.16	25		

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Eagle Environmental Consulting, Inc.
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Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: Noble - Johnson #20-29

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 L666121 - 3550B

MSD (L 91172-MSD-L666121)		Source: 91172			Prepared: 02/24/2023 Analyzed: 02/27/2023					
2-Methylnaphthalene	0.184	0.00201	mg/Kg	0.166	0.0593	75.1	30-130	3.8	30	
Fluorene	0.13	0.00067	"	0.166	0.0159	68.7	30-130	0.7	30	
Pyrene	0.109	0.00067	"	0.166	0.00223	64.3	30-130	1.8	30	
Indeno(1,2,3-cd)pyrene	0.102	0.00067	"	0.166	<0.000627	61.4	30-130	22.9	30	
Fluoranthene	0.11	0.00067	"	0.166	0.000445	65.9	30-130	2.6	30	
Dibenz(a,h)anthracene	0.118	0.00067	"	0.166	<0.000614	71	30-130	22.4	30	
Chrysene	0.115	0.00067	"	0.166	0.00474	66.4	30-130	3.4	30	
Naphthalene	0.105	0.00201	"	0.166	0.00867	58	30-130	3.7	30	
1-Methylnaphthalene	0.159	0.00201	"	0.166	0.0383	72.7	30-130	2.5	30	
Benzo(k)fluoranthene	0.0901	0.00067	"	0.166	<0.000437	54.2	30-130	20.5	30	
Acenaphthene	0.108	0.00067	"	0.166	0.00595	61.4	30-130	3.6	30	
Anthracene	0.0879	0.00067	"	0.166	0.00105	52.3	30-130	14.8	30	
Benzo(a)anthracene	0.111	0.00067	"	0.166	0.00121	66.1	30-130	5.2	30	
Benzo(a)pyrene	0.112	0.00067	"	0.166	<0.000468	67.4	30-130	3.5	30	
Benzo(b)fluoranthene	0.0824	0.00067	"	0.166	0.000942	49	30-130	6.1	30	
Surrogate: 2-Fluorobiphenyl	56.4		"	0.331	165	56.4	33-115			
Surrogate: Nitrobenzene-d5	57		"	0.331	183	57	29-110			
Surrogate: 4-Terphenyl-d14	60.1		"	0.331	202	60.1	33-122			

MS (L 91172-MS-L666121)		Source: 91172			Prepared: 02/24/2023 Analyzed: 02/27/2023					
Benzo(k)fluoranthene	0.0733	0.00067	mg/Kg	0.164	<0.000437	44.6	30-130			
Acenaphthene	0.112	0.00067	"	0.164	0.00595	64.6	30-130			
Naphthalene	0.109	0.00201	"	0.164	0.00867	61.1	30-130			
Indeno(1,2,3-cd)pyrene	0.081	0.00067	"	0.164	<0.000627	49.3	30-130			
Fluorene	0.129	0.00067	"	0.164	0.0159	68.9	30-130			
Fluoranthene	0.113	0.00067	"	0.164	0.000445	68.6	30-130			
Dibenz(a,h)anthracene	0.0942	0.00067	"	0.164	<0.000614	57.4	30-130			

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Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: Noble - Johnson #20-29

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 L666121 - 3550B

MS (L 91172-MS-L666121)		Source: 91172			Prepared: 02/24/2023 Analyzed: 02/27/2023					
Chrysene	0.119	0.00067	mg/Kg	0.164	0.00474	69.6	30-130			
1-Methylnaphthalene	0.155	0.00201	"	0.164	0.0383	71.1	30-130			
Benzo(a)pyrene	0.116	0.00067	"	0.164	<0.000468	70.7	30-130			
Anthracene	0.102	0.00067	"	0.164	0.00105	61.5	30-130			
Pyrene	0.111	0.00067	"	0.164	0.00223	66.3	30-130			
2-Methylnaphthalene	0.177	0.00201	"	0.164	0.0593	71.7	30-130			
Benzo(b)fluoranthene	0.0775	0.00067	"	0.164	0.000942	46.6	30-130			
Benzo(a)anthracene	0.117	0.00067	"	0.164	0.00121	70.6	30-130			
Surrogate: Nitrobenzene-d5	65		"	0.329	183	65	29-110			
Surrogate: 4-Terphenyl-d14	62.9		"	0.329	202	62.9	33-122			
Surrogate: 2-Fluorobiphenyl	60.7		"	0.329	165	60.7	33-115			

LCS (LCS-L666121)		Prepared: 02/24/2023 Analyzed: 02/27/2023								
Chrysene	0.122	0.00067	mg/Kg	0.167		73	30-130			
Dibenz(a,h)anthracene	0.105	0.00067	"	0.167		62.8	30-130			
Fluoranthene	0.12	0.00067	"	0.167		71.8	30-130			
Fluorene	0.114	0.00067	"	0.167		68.2	30-130			
Indeno(1,2,3-cd)pyrene	0.0923	0.00067	"	0.167		55.2	30-130			
Naphthalene	0.104	0.00201	"	0.167		62.2	30-130			
Benzo(k)fluoranthene	0.0872	0.00067	"	0.167		52.2	30-130			
Pyrene	0.119	0.00067	"	0.167		71.2	30-130			
Benzo(a)pyrene	0.12	0.00067	"	0.167		71.8	30-130			
Benzo(a)anthracene	0.119	0.00067	"	0.167		71.2	30-130			
Anthracene	0.118	0.00067	"	0.167		70.6	30-130			
Acenaphthene	0.11	0.00067	"	0.167		65.8	30-130			
2-Methylnaphthalene	0.102	0.00201	"	0.167		61	30-130			
1-Methylnaphthalene	0.106	0.00201	"	0.167		63.4	30-130			

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Martin C Eckert III
Project Number: [none]
Project: Noble - Johnson #20-29

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 L666121 - 3550B

LCS (LCS-L666121)

Prepared: 02/24/2023 Analyzed: 02/27/2023

Benzo(b)fluoranthene	0.0869	0.00067	mg/Kg	0.167		52	30-130			
Surrogate: Nitrobenzene-d5	63.9		"	0.333		63.9	29-110			
Surrogate: 4-Terphenyl-d14	75.6		"	0.333		75.6	33-122			
Surrogate: 2-Fluorobiphenyl	57.6		"	0.333		57.6	33-115			

LRB (LRB-L666121)

Prepared: 02/24/2023 Analyzed: 02/27/2023

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	61.2		"	0.333		61.2	29-110			
Surrogate: 4-Terphenyl-d14	72.6		"	0.333		72.6	33-122			
Surrogate: 2-Fluorobiphenyl	58.2		"	0.333		58.2	33-115			

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Martin C Eckert III
Project Number: [none]
Project: Noble - Johnson #20-29

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.

Calculated results may use J-flag data (instead of reported "ND") as part of calculation to provide a more accurate result.

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