

## Wellhead Closure Checklist

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

Additional attachments (optional):		Pit Closure <u>          </u>	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 (atastic 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="checkbox"/> 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="checkbox"/> 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:	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:		
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:				

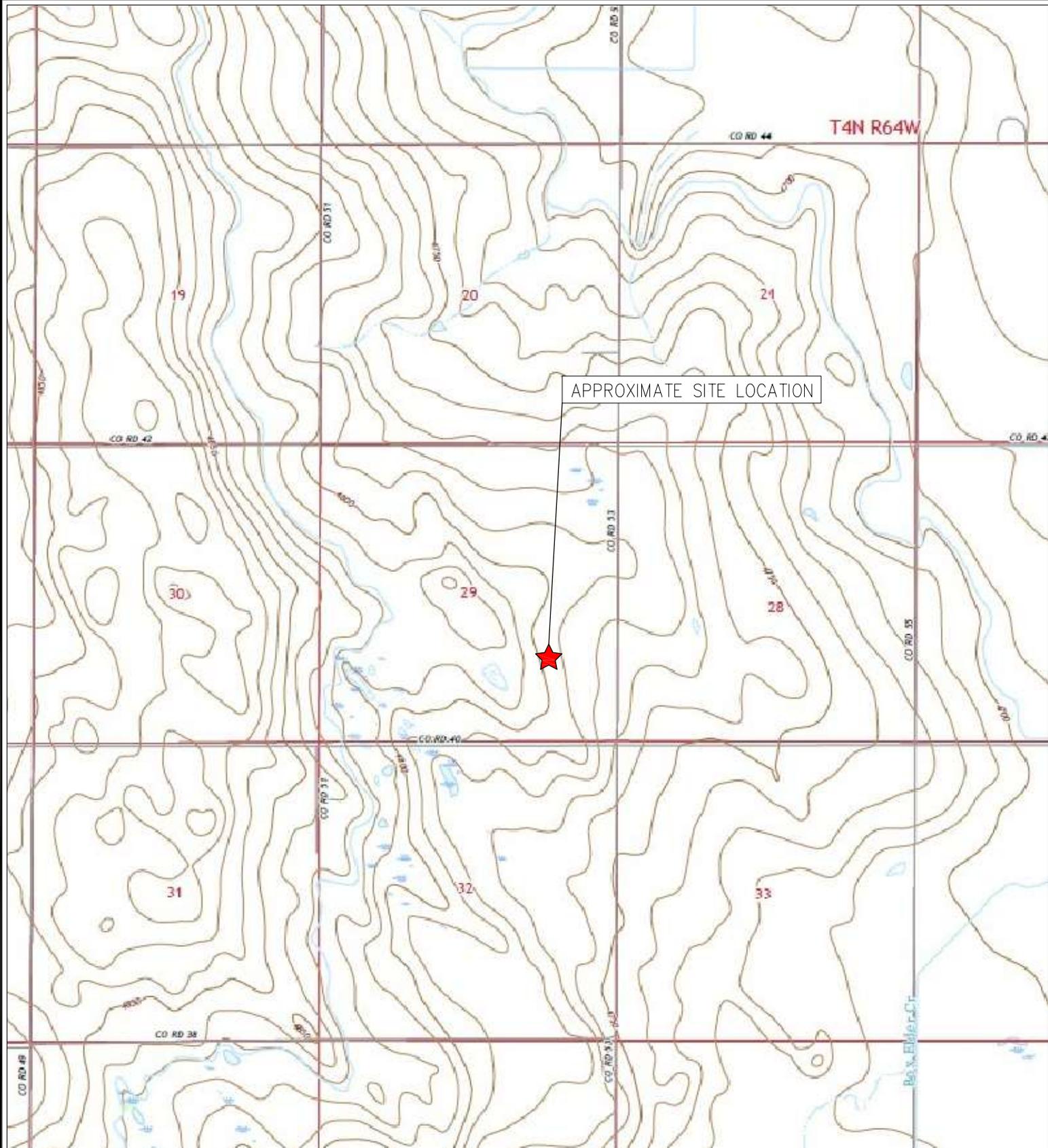


## **FIGURES**

**Figure 1: Topographic Site Location Map**

**Figure 2: Aerial Site Location Map**

**Figure 3: Soil Analytical Map**



APPROXIMATE SITE LOCATION



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

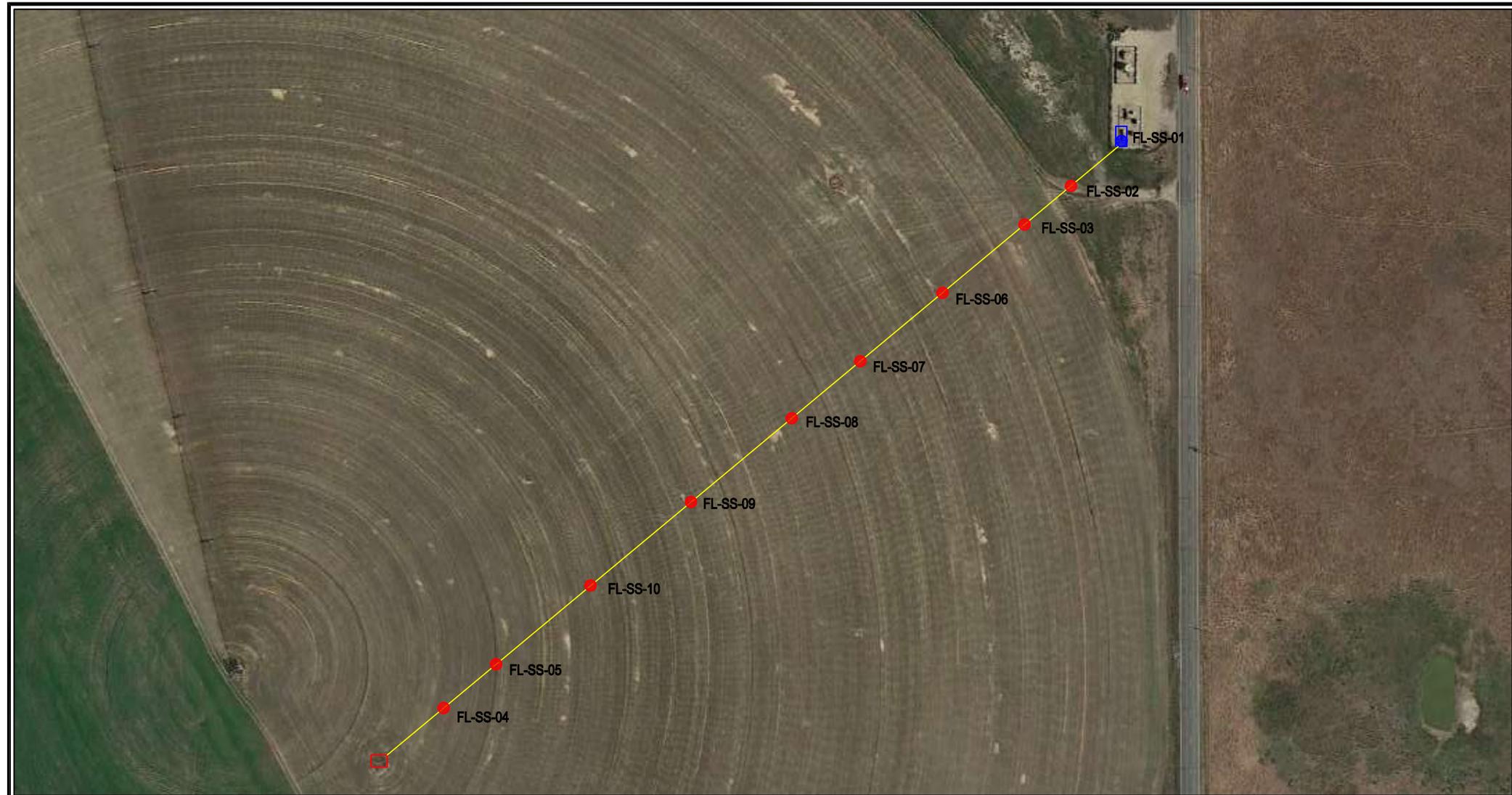


**EAGLE**  
**ENVIRONMENTAL**  
**CONSULTING, LLC**

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

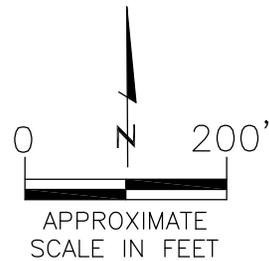
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP,  
 VALLEY VIEW SCHOOL, CO QUADRANGLE 2022

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  
 REMEDIATION # 25270

DRAWN BY:  
IM

FIGURE NO.  
2



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**LEGEND**

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

**PARAMETERS**

SAMPLE LOCATION  
DATE  
DEPTH (FEET)  
B = BENZENE (mg/kg)  
T = TOLUENE (mg/kg)  
E = ETHYLBENZENE (mg/kg)  
X = TOTAL XYLENES (mg/kg)  
G = TPH-GRO (mg/kg)  
D = TPH-DRO (mg/kg)  
R = TPH-RRO (mg/kg)  
1,2,4-TMB = 1,2,4 TRIMETHYLBENZENE (mg/kg)  
1,3,5-TMB = 1,3,5 TRIMETHYLBENZENE (mg/kg)  
Brr= 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

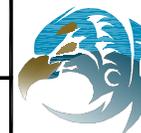
NOTES:  
VALUES PRESENTED IN **BOLD** EXCEED COGCC TABLE 915-1 REGULATORY LIMITS.

COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION

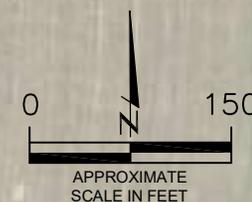
SOIL ANALYTICAL MAP  
JOHNSON #20-29  
CLOSURE ASSESSMENT  
40.279506 / -104.569422  
C SE¼ SEC.29 T4N R64W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-21693  
REMEDATION # 25270

DRAWN BY:  
BPW

FIG. NO. 3

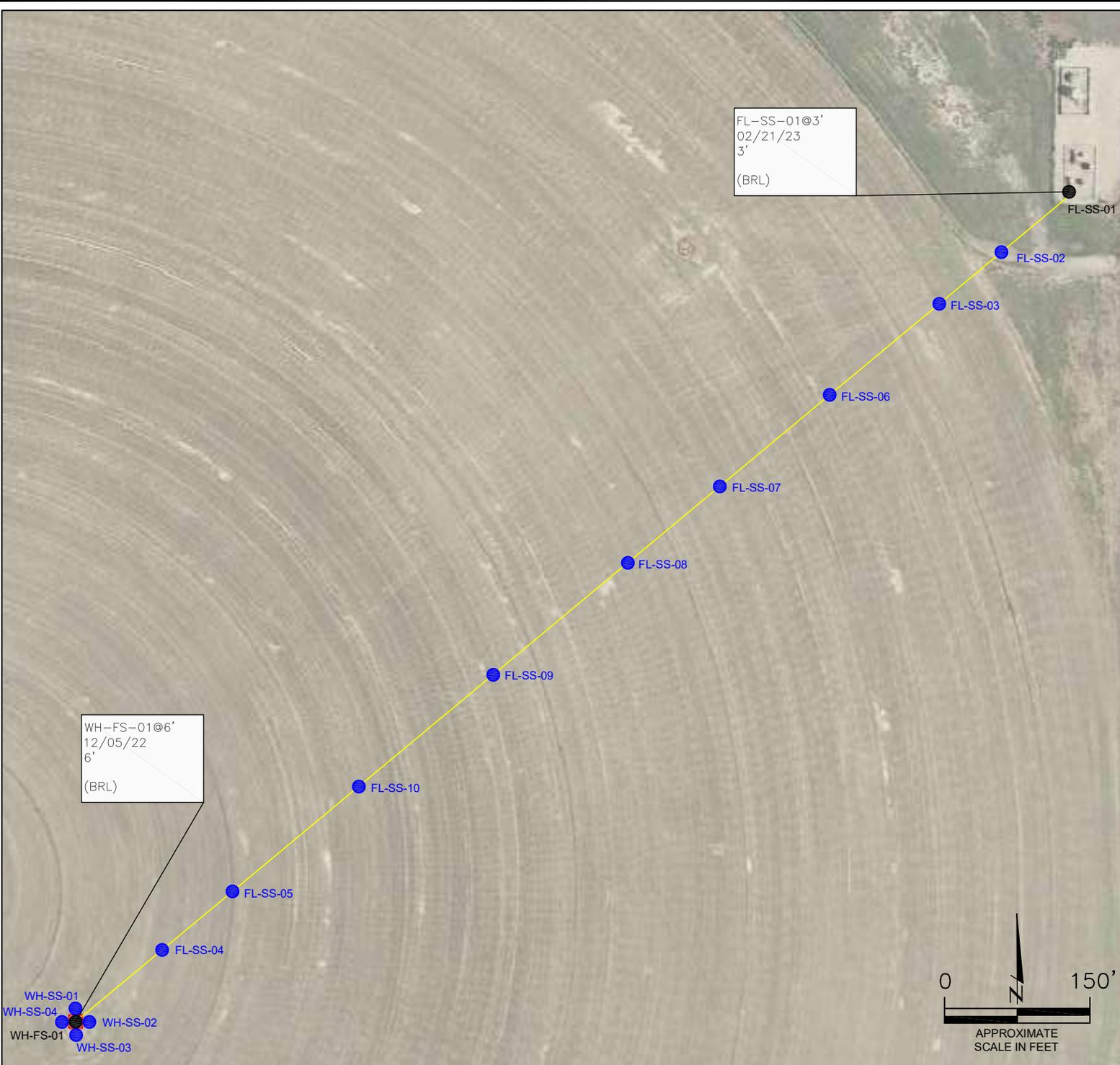


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FL-SS-01@3'  
02/21/23  
3'  
(BRL)

WH-FS-01@6'  
12/05/22  
6'  
(BRL)





## **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**  
**REMEDATION # 25270**

<b>Sample Location</b> (Latitude/Longitude)	<b>Date</b>	<b>Approximate Depth</b> (feet)	<b>PID Reading</b> (ppm-v)	<b>Lab Submission</b> (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		WH-FS-01 @ 6'		FL-SS-01 @ 3'	
(Latitude / Longitude)		(40.279505 / -104.569422)		(40.281908 / -104.565666)	
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		
<b>VOCs</b>					
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
<b>Total Petroleum Hydrocarbons</b>					
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
<b>Polycyclic Aromatics Hydrocarbons</b>					
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
<b>Soil Suitability (Inorganics)</b>					
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 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 Values presented in <b>BOLD</b> exceed COGCC Table 915-1 Regulatory Limits.					
VOCs - Volatile Organic Compounds RSSLs = Residential Soil Screening Levels GSSLs = Protection of Groundwater Soil Screening Levels TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics TPH-RRO = Total Petroleum Hydrocarbons - Residual Range Organics					



## **ATTACHMENT A**

### **Photo Log**

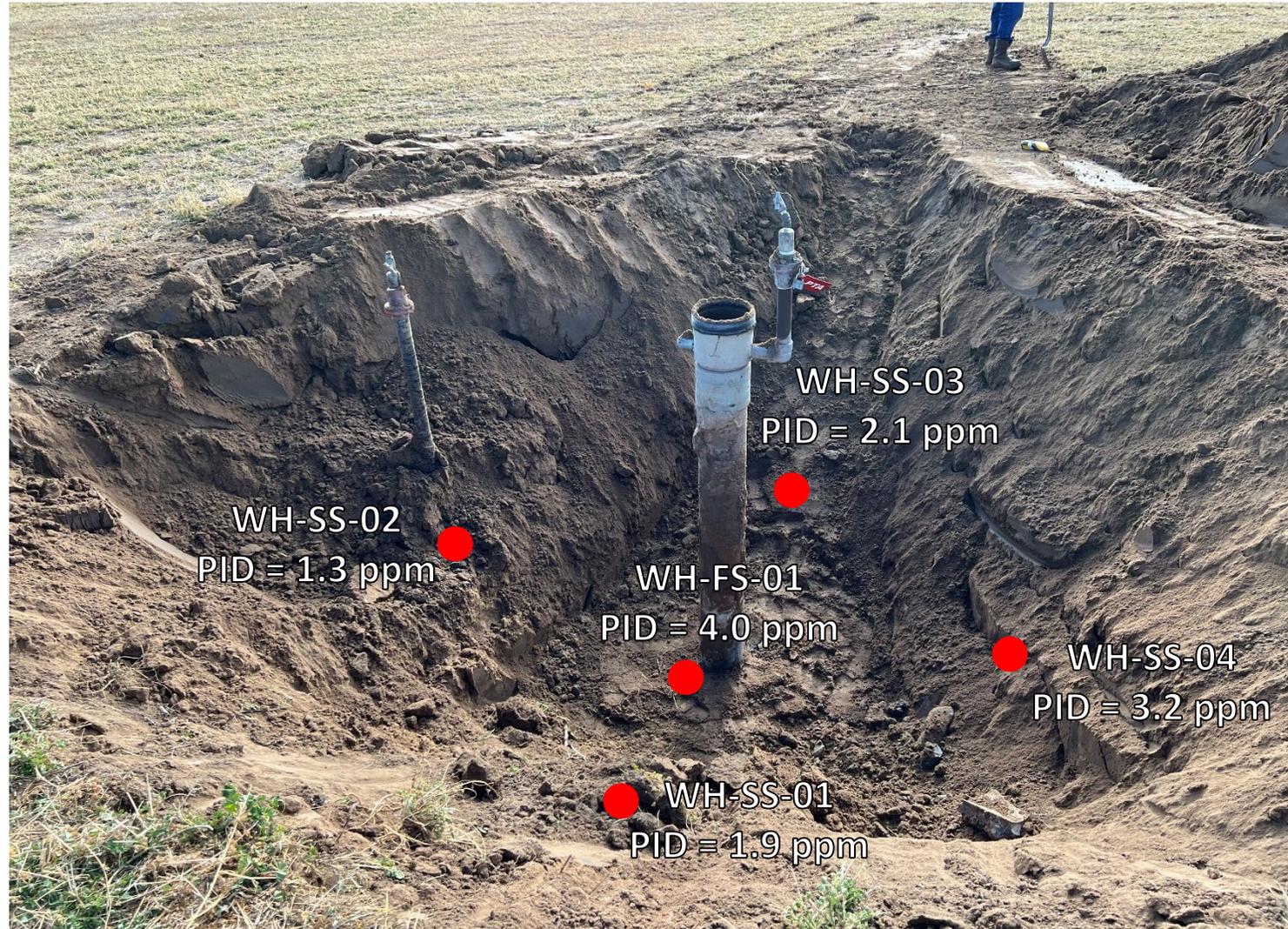
Johnson #20-29  
API # 05-123-21693  
Remediation # 25270

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

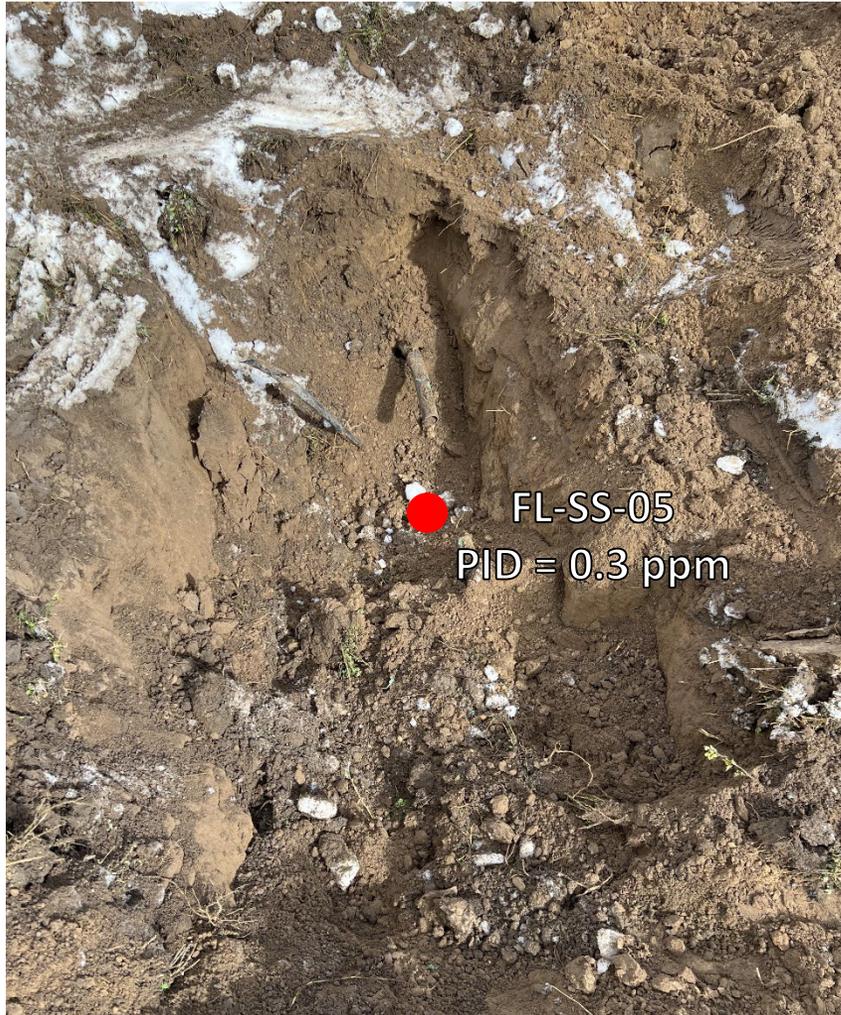
No petroleum hydrocarbon staining or odor observed



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

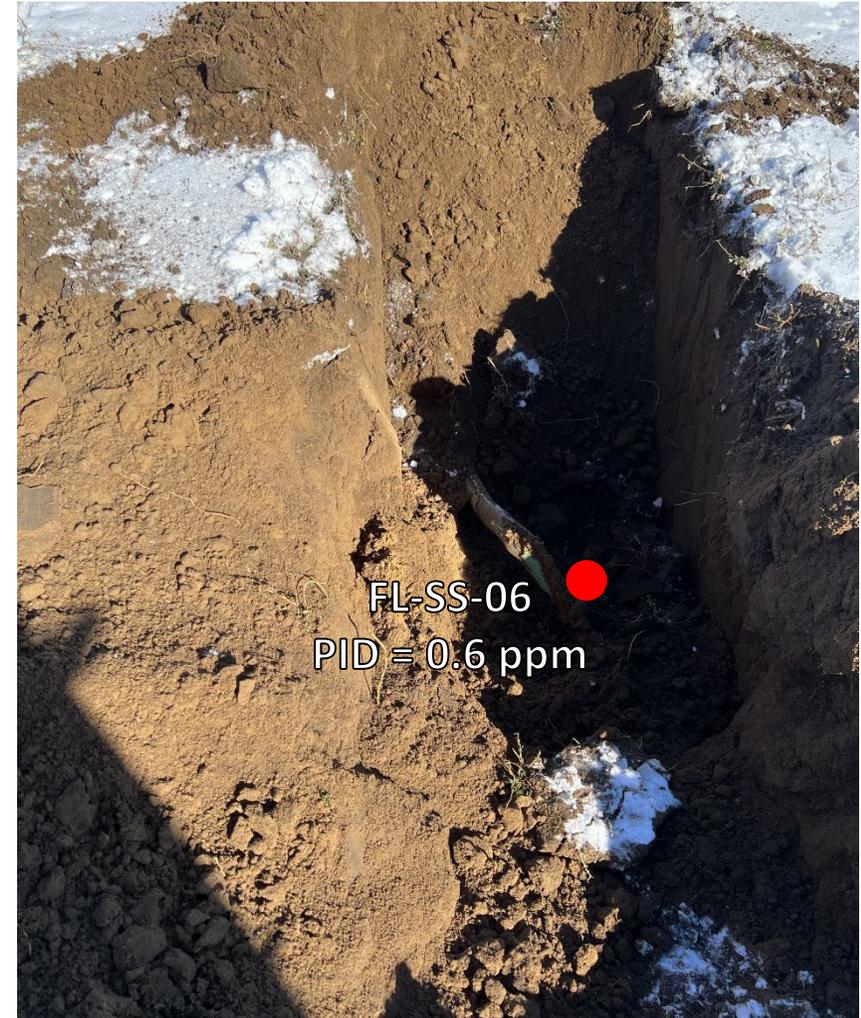
No petroleum hydrocarbon staining or odor observed

## 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.*





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.



*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)

**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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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
<b>Batch B2L0601 - EPA 3580</b>										
<b>Blank (B2L0601-BLK1)</b>										
					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			

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 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			

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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**

<b>Matrix Spike (B2L0601-MS1)</b>	<b>Source: Y212079-01</b>			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			

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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
<b>Batch B2L0601 - EPA 3580</b>										
<b>Matrix Spike Dup (B2L0601-MSD1)</b>					<b>Source: Y212079-01</b>					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			

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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 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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 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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 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			

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 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 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			

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 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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 8000 W 44th Ave  
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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
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**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

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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 L652607 - 3550B**

<b>MSD (L 98936-MSD-L652607)</b>		<b>Source: 98936</b>			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			

<b>MS (L 98936-MS-L652607)</b>		<b>Source: 98936</b>			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			

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 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**

<b>MS (L 98936-MS-L652607)</b>		<b>Source: 98936</b>			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			

<b>LCS (LCS-L652607)</b>		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
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**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			

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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

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**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.



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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.



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 8000 W 44th Ave  
 Wheat Ridge CO 80033

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

www.originslaboratory.com

4302732

page 1 of 1



Client: Eagle Environmental Consulting  
 Address: 8000 W 44th Ave  
Wheat Ridge, CO 80033  
 Telephone Number: 303-433-0479  
 Email Address: mc3@eagle-enviro.com

Project Manager: Martin Eckert III  
 Project Name: Johnson #20-29  
 Project Number:           
 Samples Collected By: GK

Fax: 303.265.9645 | Phone: 303.433.1322 | Denver, CO 80211

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions	Turnaround Time			
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa Canister #	Other	EC	SAB	pH by		Other	Same Day	48 Hr	72 Hr
FL-SS-0103	2/2/13	1108	2	X				X				X	X	X	X	EC, SAB, pH by	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
																Stinked mask pop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
																MDBs needed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Relinquished By: Samuel Date: 2/2/13 Time: 1445  
 Relinquished By:          Date:          Time:         

Received By: EHF Date: 2/2/13 Time: 1445  
 Received By:          Date:          Time:         

Temp Received: 5.4 Date Results Needed: 8/1/13

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

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: 4302432

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

Checklist Completed by: TSH/CHS  
 Date/time completed: 2/22/23

Shipped Via: HQ  
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Airbill #: NA

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

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

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 <sup>(1)</sup> ?	/			
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 <sup>(1)</sup> ?	/			
Was adequate sample volume provided <sup>(1)</sup> ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		/		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	/			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	/			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	/			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? <b>If yes, contact client and note in narrative.</b>			/	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (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 <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)			/	
Additional Comments (if any):				

<sup>(1)</sup>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]

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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

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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)

**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	<b>2.06</b>		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	"	"	"	"	"	

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 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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 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
<b>Batch B3B2202 - EPA 3580</b>										
<b>Blank (B3B2202-BLK1)</b>										
					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.  
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 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**

<b>Matrix Spike (B3B2202-MS1)</b>	<b>Source: Y302402-02</b>			<b>Prepared: 02/22/2023 Analyzed: 02/22/2023</b>						
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			

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 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**

<b>Matrix Spike Dup (B3B2202-MSD1)</b>	<b>Source: Y302402-02</b>		<b>Prepared: 02/22/2023 Analyzed: 02/22/2023</b>							
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	
<i>Surrogate: o-Terphenyl</i>	46		"	49.8		91.8	50-150			

Origins Laboratory, Inc.



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 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 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.



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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 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.



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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 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.  
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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)

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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Martin C Eckert III  
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 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
<b>Batch B3B2404 - Saturated Paste pH/EC</b>										
<b>Blank (B3B2404-BLK1)</b>					Prepared: 02/24/2023 Analyzed: 02/25/2023					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
<b>Duplicate (B3B2404-DUP1)</b>					<b>Source: Y302433-01</b> 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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 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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 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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 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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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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