



January 7, 2016

Mr. Jacob Evans
Noble Energy, Inc.
1625 Broadway, Suite 2200
Denver, Colorado 80202

**Source Assessment and Excavation Report – No Further Action Request
Haffner #41-23
Produced Water Release
40.130956 / -104.511323
NE1/4 NE1/4 Sec.23 T2N R64W 6PM
Weld County, Colorado
API # 05-123-21060**

Dear Mr. Evans,

Eagle Environmental Consulting, Inc. (EAGLE) is pleased to present this Source Assessment and Excavation Report – No Further Action Request for the Haffner #41-23 location (site).

1.0 SITE BACKGROUND

Noble Energy, Inc. (Noble) discovered a leak in the water vault associated with Haffner #41-23 during a draw down test. The water vault was removed on August 18, 2015, and EAGLE was requested by Noble to perform subsurface assessment activities at the site in conjunction with the water vault removal. Soil samples SS-01 through SS-05 were collected following removal of the water vault. Groundwater was not observed within the excavated area.

Soil samples SS-03@3' and SS-05@6', collected from the east wall and floor of the excavation, were submitted to Origins Laboratory, Inc. (Origins) for laboratory analysis, following standard chain of custody procedures.

Based on laboratory analytical results, soil samples SS-03@3' and SS-05@6' contained concentrations of total petroleum hydrocarbons (TPH) exceeding the Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 Regulatory Limits, requiring remedial action. The following narrative details excavation activities that were completed at the site.

2.0 SITE DESCRIPTION

The Haffner #41-23 site is located within the northeast quarter of the northeast quarter of Section 23, Township 2 north, Range 64 west, of the 6th Prime Meridian, in Weld County, Colorado. The removed water vault associated with the Haffner #41-23 site was located at latitude: 40.130956 and longitude: -104.511323. A topographic site location map is presented as Figure 1. An aerial site location map is presented as Figure 2.

Soil observed beneath the site is a soft sandy clay from surface to approximately 10.5 feet bgs, underlain by a weathered claystone observed to approximately 11 feet bgs. A detailed description of the subsurface lithology beneath the site is presented within the boring logs included in Attachment A.

3.0 SOIL EXCAVATION ACTIVITIES

3.1 Initial Assessment Activities

Following removal of the water vault associated with the Haffner #41-23 well on August 18, 2015, EAGLE collected soil samples, SS-01 through SS-05, to determine if adsorbed petroleum hydrocarbon impacts existed above COGCC Table 910-1 regulatory limits. A portion of each soil sample was placed in a sealable plastic bag for volatile organic compound (VOC) headspace analysis utilizing a field calibrated photoionization detector (PID). Another portion of the soil sample was placed in a 4-ounce glass jar and packed in an iced cooler for laboratory analysis. Based on location and PID readings, EAGLE submitted soil samples SS-03@3' and SS-05@6' to Origins, under standard chain of custody procedures.

The soil samples were analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, TPH-GRO, and total petroleum hydrocarbons – diesel range organics (TPH-DRO) following modified Environmental Protection Agency (EPA) Methods 8260c and 8015. The soil samples were received within the required holding time for each laboratory analysis.

3.1.1 Laboratory Analytical Results

Based on laboratory analytical results, soil samples SS-03@3' and SS-05@6' contained concentrations of TPH (2831.1 milligrams per kilogram (mg/kg) and 688.6 mg/kg, respectively) exceeding the COGCC Table 910-1 Regulatory Limit of 500 mg/kg. The laboratory analytical results confirmed additional source removal was required beneath the release area.

Soil analytical results are summarized in Table 1 and included in Figure 3. The laboratory analytical report is included in Attachment B.

3.2 Soil Boring Advancement Activities

On August 27, 2015, EAGLE advanced five soil borings (SB-01 through SB-05) to assess the lateral and vertical extents of the produced water release. Utilizing a 3-inch stainless steel hand auger, EAGLE advanced each soil boring to approximately 6-7 feet below ground surface (bgs). Groundwater was not observed within the soil borings.

During soil boring advancement activities, soil samples were collected in 0.5 foot intervals for soil identification and analysis. Each soil boring was logged in the field according to soil description, soil classification, moisture content, staining, and VOC concentrations. A portion from each interval was placed in a sealable plastic bag, for VOC headspace analysis utilizing a field calibrated PID. Another portion of the soil sample was placed in a 2-ounce glass jar and packed in an iced cooler for laboratory analysis.

Based on PID reading and sample location, one soil sample from each boring (SB-01 through SB-05) was submitted to Origins, for laboratory analysis following standard chain of custody procedures. Each soil sample was analyzed for BTEX, naphthalene, TPH-GRO, and TPH-DRO, following modified EPA

Methods 8260c and 8015. The laboratory received the soil samples within the required holding time for each laboratory analysis.

EAGLE recorded spatial locations of each soil boring using a Trimble GeoXT 6000 series instrument. Soil boring logs/monitoring well completion diagrams are included in Attachment A.

3.2.1 Laboratory Analytical Results

Based on laboratory analytical results, none of the soil samples collected from borings SB-01 through SB-05 contained concentrations of BTEX, naphthalene, or TPH exceeding applicable COGCC Table 910-1 regulatory limits.

Soil boring analytical results are summarized in Table 1 and summarized in Figure 3. The laboratory analytical report is included in Attachment B.

3.3 Excavation Activities

From September 8, 2015 through September 10, 2015, Noble and EAGLE supervised excavation activities to remove adsorbed petroleum hydrocarbon impacts beneath the tank battery associated with the Haffner #41-23 well. BG Services LLC (BG) provided the necessary equipment and personnel to remove and transport petroleum hydrocarbon impacted soil from the site.

The soil lithology observed within the excavation was sandy clay from the surface to approximately 10.5 feet below ground surface (bgs), underlain by a weathered claystone. Groundwater was not observed within the excavation.

Confirmation soil samples (SS-06 through SS-19) were collected along the side walls and base of the excavation. A portion of each soil sample was placed in a sealable plastic bag, for VOC headspace analysis utilizing a field calibrated PID. Another portion of the soil sample was placed in a 2-ounce glass jar and packed in an iced cooler for laboratory analysis. Jarred soil samples were submitted to Origins, under standard chain of custody procedures, for analysis of BTEX, naphthalene, TPH-GRO and TPH-DRO following modified EPA Methods 8260c and 8015. The soil samples were received within the required holding time for each laboratory analysis.

A total of thirteen confirmation soil samples (SS-06@11', SS-07@9.5', SS-08@9.5', SS-09@9.5', SS-10@9.5', SS-12@9.5-10', SS-13@9.5-10', SS-14@11', SS-15@9.5', SS-16@9.5-10', SS-17@9.5-10', SS-18@9.5', and SS-19@11') collected from the excavation were submitted for laboratory analysis. Spatial location of each soil sample was recorded using a Trimble GeoXT 6000 series instrument. A site map presenting the limits of the excavation, as well as soil sample locations, is included as Figure 3.

The final limits of the Haffner #41-23 excavation extended approximately 25 feet north to south, and 32 feet east to west. The excavation was advanced to a depth of approximately 11 feet bgs. Approximately 370 cubic yards of soil were removed during excavation activities, and transported offsite for disposal at an appropriately permitted facility.

Following collection of confirmatory soil samples, the excavation was backfilled with clean structural fill and compacted to grade.

3.3.1 Laboratory Analytical Results

Based on laboratory analytical results, soil samples SS-07@9.5' and SS-09@9.5' contained concentrations of TPH exceeding the COGCC Table 910-1 regulatory limit. The excavation was extended laterally and vertically to 11 feet bgs. Soil samples SS-14@11' and SS-19@11' were collected to confirm the impacted area where SS-07 and SS-09 were advanced had been removed.

Soil samples SS-06@11', SS-08@9.5', SS-10@9.5', SS-12@9.5-10', SS-13@9.5-10', SS-14@11', SS-15@9.5', SS-16@9.5-10', SS-17@9.5-10', SS-18@9.5', and SS-19@11' collected from the Haffner #41-23 excavation did not contain concentrations of BTEX, naphthalene, or TPH exceeding applicable COGCC Table 910-1 regulatory limits.

Soil analytical results are summarized in Table 1 and are presented in Figure 3. Laboratory analytical reports for the soil samples collected during source removal activities at the Haffner #41-23 site are included in Attachment B.

4.0 CONCLUSIONS

Based on the information presented in this report, EAGLE concludes the following:

- Soil samples SS-03@3' and SS-05@6', collected during water vault removal activities on August 18, 2015, contained concentrations of TPH exceeding the COGCC Table 910-1 regulatory limit.
- Soil borings SB-01 through SB-05, advanced on August 27, 2015, did not contain concentrations of BTEX, naphthalene, or TPH exceeding applicable COGCC Table 910-1 regulatory limits.
- From September 8, 2015 through September 10, 2015, approximately 370 cubic yards of soil were removed from the Haffner #41-23 excavation.
- Confirmation soil samples (SS-06@11', SS-08@9.5', SS-10@9.5', SS-12@9.5-10', SS-13@9.5-10', SS-14@11', SS-15@9.5', SS-16@9.5-10', SS-17@9.5-10', SS-18@9.5', and SS-19@11') collected from the sidewalls and floor of the Haffner #41-23 excavation did not contain concentrations of BTEX, naphthalene, or TPH exceeding their respective COGCC Table 910-1 Regulatory Limits.

RECOMMENDATIONS

Based on the information presented in this report, EAGLE recommends the following:

- No further assessment or remediation appears warranted for the Haffner #41-23 produced water release at this time.

EAGLE sincerely appreciates the opportunity to provide our services. If you have any questions or require further information, please contact us at (303) 433-0479.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.



Robin Lockwood
Project Scientist



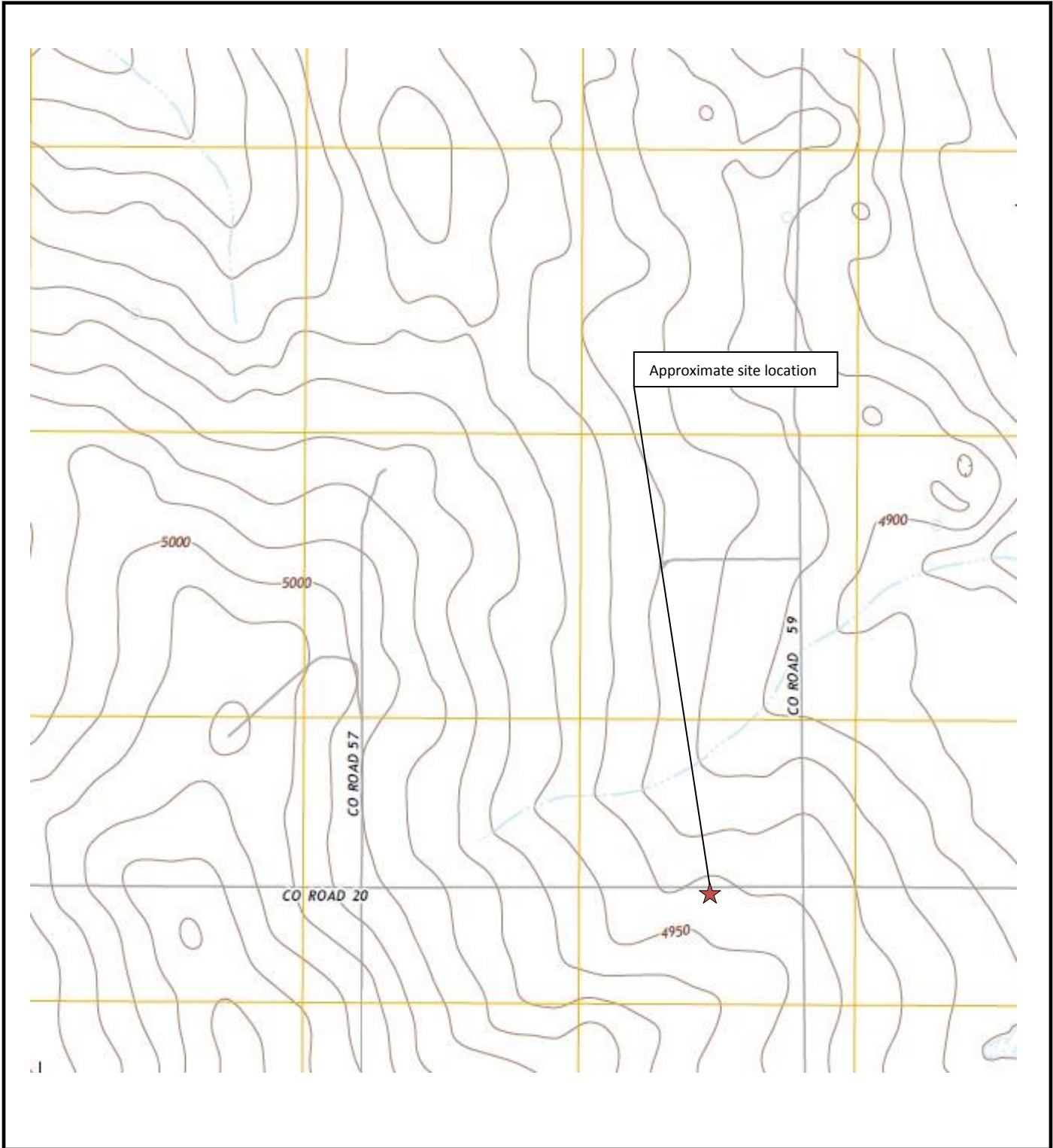
Martin Eckert III
Senior Project Manager

FIGURES

Figure 1: Topographic Site Location Map

Figure 2: Aerial Site Location Map

Figure 3: Soil Analytical Map

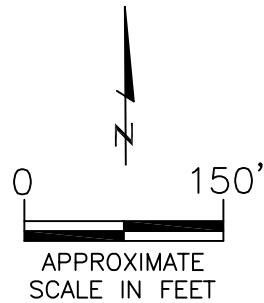


	<p>Topographic Site Location Map Haffner #41-23 Produced Water Release 40.130956/-104.511323 NE¼ NE¼ SEC.23 T2N R64W 6PM Weld County, Colorado API # 05-123-21060</p>	<p>EAGLE ENVIRONMENTAL CONSULTING, INC.</p>
<p>Source: USGS 7.5 Minute Topographic Map, Klug Ranch, CO Quadrangle 2013</p>	<p>Figure 1</p>	



LEGEND

- HAFFNER #41-23 TANK BATTERY
- HAFFNER #41-23 WELL PAD (40.12935 / -104.51168)
- APPROXIMATE LOCATION OF WATER VAULT REMOVAL/EXCAVATION



AERIAL SITE LOCATION MAP
 HAFFNER #41-23
 PRODUCED WATER RELEASE
 40.130956 / -104.511323
 NE1/4 NE1/4 SEC.23 T2N R64W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-21060

DATE: 08/17/15

FIG. NO. 2 DRAWN BY: AMN



EAGLE

ENVIRONMENTAL
CONSULTING, INC.

4101 INCA STREET, DENVER, CO 80211
Ph: 303-433-0479 • F: 303-325-5449

LEGEND

- APPROXIMATE REMOVED WATER VAULT EXTENTS
- APPROXIMATE EXCAVATION BOUNDARIES

- SB-01 APPROXIMATE SOIL BORING LOCATIONS
- SS-02 APPROXIMATE LOCATION OF SOIL SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

PARAMETERS

SOIL SAMPLE LOCATION	
DATE	
DEPTH (FEET)	
B = BENZENE (mg/kg)	
T = TOLUENE (mg/kg)	
E = ETHYLBENZENE (mg/kg)	
X = TOTAL XYLENES (mg/kg)	
N = NAPHTHALENE (mg/kg)	
G = TPH-GRO (mg/kg)	
D = TPH-DRO (mg/kg)	

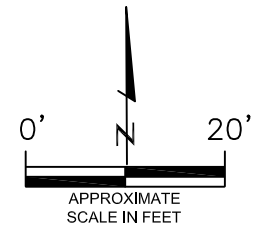
mg/kg = MILLIGRAMS PER KILOGRAM

TPH-GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS

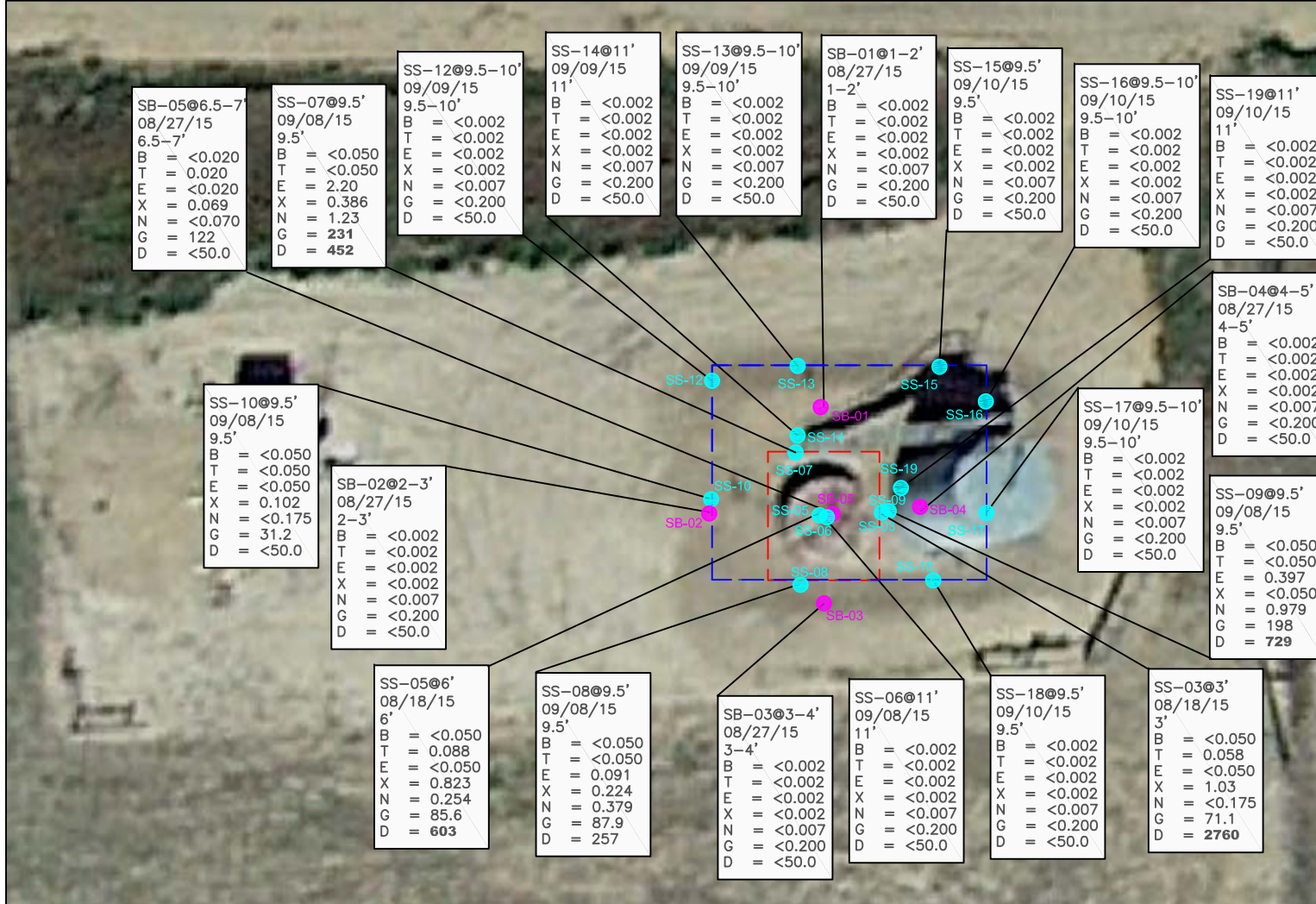
TPH-DRO = TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE ORGANICS

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

VALUES PRESENTED IN BOLD CONTAIN CONCENTRATIONS EXCEEDING THEIR RESPECTIVE COGCC TABLE 910-1 STANDARDS



SOIL ANALYTICAL MAP
 HAFFNER #41-23
 PRODUCED WATER RELEASE
 40.130956/-104.511323
 NE1/4 NE1/4 SEC.23 T2N R64W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-21060



SB-05@6.5-7'
08/27/15
6.5-7'

B = <0.020
T = 0.020
E = <0.020
X = 0.069
N = <0.070
G = 122
D = <50.0

SS-07@9.5'
09/08/15
9.5'

B = <0.050
T = <0.050
E = 2.20
X = 0.386
N = 1.23
G = **231**
D = **452**

SS-12@9.5-10'
09/09/15
9.5-10'

B = <0.002
T = <0.002
E = <0.002
X = <0.002
N = <0.007
G = <0.200
D = <50.0

SS-14@11'
09/09/15
11'

B = <0.002
T = <0.002
E = <0.002
X = <0.002
N = <0.007
G = <0.200
D = <50.0

SS-13@9.5-10'
09/09/15
9.5-10'

B = <0.002
T = <0.002
E = <0.002
X = <0.002
N = <0.007
G = <0.200
D = <50.0

SB-01@1-2'
08/27/15
1-2'

B = <0.002
T = <0.002
E = <0.002
X = <0.002
N = <0.007
G = <0.200
D = <50.0

SS-15@9.5'
09/10/15
9.5'

B = <0.002
T = <0.002
E = <0.002
X = <0.002
N = <0.007
G = <0.200
D = <50.0

SS-16@9.5-10'
09/10/15
9.5-10'

B = <0.002
T = <0.002
E = <0.002
X = <0.002
N = <0.007
G = <0.200
D = <50.0

SS-19@11'
09/10/15
11'

B = <0.002
T = <0.002
E = <0.002
X = <0.002
N = <0.007
G = <0.200
D = <50.0

SS-10@9.5'
09/08/15
9.5'

B = <0.050
T = <0.050
E = <0.050
X = 0.102
N = <0.175
G = 31.2
D = <50.0

SB-02@2-3'
08/27/15
2-3'

B = <0.002
T = <0.002
E = <0.002
X = <0.002
N = <0.007
G = <0.200
D = <50.0

SS-05@6'
08/18/15
6'

B = <0.050
T = 0.088
E = <0.050
X = 0.823
N = 0.254
G = 85.6
D = **603**

SS-08@9.5'
09/08/15
9.5'

B = <0.050
T = <0.050
E = 0.091
X = 0.224
N = 0.379
G = 87.9
D = 257

SB-03@3-4'
08/27/15
3-4'

B = <0.002
T = <0.002
E = <0.002
X = <0.002
N = <0.007
G = <0.200
D = <50.0

SS-06@11'
09/08/15
11'

B = <0.002
T = <0.002
E = <0.002
X = <0.002
N = <0.007
G = <0.200
D = <50.0

SS-18@9.5'
09/10/15
9.5'

B = <0.002
T = <0.002
E = <0.002
X = <0.002
N = <0.007
G = <0.200
D = <50.0

SS-03@3'
08/18/15
3'

B = <0.050
T = 0.058
E = <0.050
X = 1.03
N = <0.175
G = 71.1
D = **2760**

DATE: 12/1/15

FIG. NO. 3

DRAWN BY: amn



TABLE

Table 1: Soil Analytical Results Summary

TABLE 1
SOIL ANALYTICAL RESULTS SUMMARY
HAFFNER #41-23
PRODUCED WATER RELEASE
40.130956 / -104.511323
NE¼ NE¼ SEC.23 T2N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-20160

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	Specific Conductance (mmhos/cm)	pH (pH units)	SAR
COGCC Table 910-1 Regulatory Limits (mg/kg)			0.17	85	100	175	23	500		<4	6 to 9	<12[^]5
SS-03 @ 3' (40.130967 / -104.511298)	08/18/15	3	<0.050	0.058	<0.050	1.03	<0.175	71.1	2760	0.286	7.84	0.1
SS-05 @ 6' (40.130987334 / -104.511327626)	08/18/15	6	<0.050	0.088	<0.050	0.823	0.254	85.6	603	NA	NA	NA
SB-01 @ 1-2' (40.130991914 / -104.51129336)	08/27/15	1-2	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
SB-02 @ 2-3' (40.13096115 / -104.511348154)	08/27/15	2-3	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
SB-03 @ 3-4' (40.130941282 / -104.511308464)	08/27/15	3-4	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
SB-04 @ 4-5' (40.130961 / -104.511285)	08/27/15	4-5	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
SB-05 @ 6.5-7' (40.130967312 / -104.511302033)	08/27/15	6.5-7	<0.020	0.020	<0.020	0.069	<0.070	122	<50.0	NA	NA	NA
SS-06 @ 11' (40.130956 / -104.511320)	09/08/15	11	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
SS-07 @ 9.5' (40.130979 / -104.511339)	09/08/15	9.5	<0.050	<0.050	2.20	0.386	1.23	231	452	NA	NA	NA
SS-08 @ 9.5' (40.130935 / -104511331)	09/08/15	9.5	<0.050	<0.050	0.091	0.224	0.379	87.9	257	NA	NA	NA
SS-09 @ 9.5' (40.130954 / -104.511296)	09/08/15	9.5	<0.050	<0.050	0.397	<0.050	0.979	198	729	NA	NA	NA
SS-10 @ 9.5' (40.130958 / -104511366)	09/08/15	9.5	<0.050	<0.050	<0.050	0.102	<0.175	31.2	<50.0	NA	NA	NA



TABLE 1
SOIL ANALYTICAL RESULTS SUMMARY
HAFFNER #41-23
PRODUCED WATER RELEASE
40.130956 / -104.511323
NE¼ NE¼ SEC.23 T2N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-20160

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	Specific Conductance (mmhos/cm)	pH (pH units)	SAR
COGCC Table 910-1 Regulatory Limits (mg/kg)			0.17	85	100	175	23	500		<4	6 to 9	<12[^]5
SS-12 @ 9.5-10' (40.131002 / -104.511369)	09/09/15	9.5-10	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
SS-13 @ 9.5-10' (40.131004 / -104.511335)	09/09/15	9.5-10	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
SS-14 @ 11' (40.130982 / -104.511332)	09/09/15	11	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
SS-15 @ 9.5' (40.131004 / -104.511270)	09/10/15	9.5	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
SS-16 @ 9.5-10' (40.130994 / -104.511251)	09/10/15	9.5-10	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
SS-17 @ 9.5-10' (40.130955 / -104.511251)	09/10/15	9.5-10	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
SS-18 @ 9.5' (40.130935 / -104.511270)	09/10/15	9.5	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
SS-19 @ 11' (40.130962 / -104.511291)	09/10/15	11	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA

COGCC = Colorado Oil and Gas Conservation Commission

mg/kg = milligrams per kilogram

mmhos/cm = millimhos per centimeter

NA - Not Analyzed

TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics

TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics

SAR = Sodium Adsorption Ratio

Note: Values presented with a less than symbol (<) did not contain concentrations at or above the laboratory reporting limit.

Values presented in bold contained concentrations exceeding the COGCC Table 910-1 regulatory limits.




ATTACHMENT A

Soil Boring Logs

Boring Log/Well Completion Diagram: SB-01

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0	(0-7') silty sandy CLAY - brown, mod. moist, soft, low plasticity, well-sorted with 10-30% fine grained sand and 5% silt, N/O, N/S @3-5' - 35% sand @5-7' - 10% sand	CL	HA	1	-	18.7	N/A			
			HA	2	-	19.6	N/A			
2.5			HA	3	-	1.0	N/A	2.5		
			HA	4	-	1.9	N/A			
			HA	5	-	0.9	N/A			
5			HA	6	-	1.4	N/A	5		
			HA	7	-	0.1	N/A			
7.5	BoB @ 7'						7.5			
10							10			
12.5							12.5			
15										


HC - Hydrocarbon
 BoB - Bottom of Boring
 N/O - no odor
 N/S - no staining
 TOC - top of casing
 bgs - below ground
 surface

START/COMPLETION DATE: 08/27/15		SAND PACK INTERVAL (FEET): N/A	
PROJECT: HAFFNER #41-23		BENTONITE/GROUT INTERVAL (FEET): N/A	
LOGGED BY: AN/JS		WELL SCREEN INTERVAL (FEET): N/A	
DRILLING COMPANY/EQUIPMENT: EAGLE/HAND AUGER		WELL DIAMETER (INCHES): N/A	
BORING DEPTH (FEET): 7	WELL DEPTH (FEET): N/A	 <p> EAGLE ENVIRONMENTAL CONSULTING, INC. 4101 INCA STREET, DENVER, CO 80211 Ph: 303-433-0479 • F: 303-325-5449 </p>	
PID INSTRUMENT: MiniRAE 3000 - PID #6			
TIME STARTED/COMPLETED: 830 / 925			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 1-2 / 910			

Boring Log/Well Completion Diagram: SB-02

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0	(0-3') sandy silty CLAY - brown, dry to slightly moist, soft, low plasticity, well-sorted with 30% silt and 10% fine grained sand, N/O, N/S	CL	HA	1	-	3.3	N/A			
			HA	2	-	5.9	N/A			
2.5			HA	3	-	6.1	N/A	2.5		
	(3-4') silty clayey SAND - brown, moist, loose, fine to medium grained, sub rounded, well-sorted with 15% clay, trace silt, N/O, N/S	SC	HA	4	-	0.2	N/A			
5	(4-7') sandy CLAY - brown, moist, soft, low-mod. plasticity, well-sorted with 25% fine grained sand, N/O, N/S @ 6.5' - 40% sand	CL	HA	5	-	0.8	N/A	5		
			HA	6	-	0.8	N/A			
			HA	7	-	0.6	N/A			
7.5	BoB @ 7'							7.5		
10								10		
12.5								12.5		
15								15		


HC - Hydrocarbon
 BoB - Bottom of Boring
 N/O - no odor
 N/S - no staining
 TOC - top of casing
 bgs - below ground surface

START/COMPLETION DATE: 08/27/15		SAND PACK INTERVAL (FEET): N/A	
PROJECT: HAFFNER #41-23		BENTONITE/GROUT INTERVAL (FEET): N/A	
LOGGED BY: AN/JS		WELL SCREEN INTERVAL (FEET): N/A	
DRILLING COMPANY/EQUIPMENT: EAGLE/HAND AUGER		WELL DIAMETER (INCHES): N/A	
BORING DEPTH (FEET): 7	WELL DEPTH (FEET): N/A	 <p>EAGLE ENVIRONMENTAL CONSULTING, INC. 4101 INCA STREET, DENVER, CO 80211 Ph: 303-433-0479 • F: 303-325-5449</p>	
PID INSTRUMENT: MiniRAE 3000 - PID #6			
TIME STARTED/COMPLETED: 930 / 1010			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 2-3 / 945			

Boring Log/Well Completion Diagram: SB-03

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0	(0-7') sandy silty CLAY - brown, dry, med. stiff, low plasticity, well-sorted with 25-40% sand, 5% silt, N/O, N/S @1-3' - 35% sand @4-7 - 30% sand	CL	HA	1	-	0.4	N/A			
			HA	2	-	1.0	N/A			
2.5			HA	3	-	0.5	N/A	2.5		
			HA	4	-	1.5	N/A			
			HA	5	-	0.6	N/A			
5			HA	6	-	0.4	N/A	5		
			HA	7	-	0.8	N/A			
7.5	BoB @ 7'						7.5			
10							10			
12.5							12.5			
15							15			


HC - Hydrocarbon
BoB - Bottom of Boring
N/O - no odor
N/S - no staining
TOC - top of casing
bgs - below ground surface

START/COMPLETION DATE: 08/27/15		SAND PACK INTERVAL (FEET): N/A	
PROJECT: HAFFNER #41-23		BENTONITE/GROUT INTERVAL (FEET): N/A	
LOGGED BY: AN/JS		WELL SCREEN INTERVAL (FEET): N/A	
DRILLING COMPANY/EQUIPMENT: EAGLE/HAND AUGER		WELL DIAMETER (INCHES): N/A	
BORING DEPTH (FEET): 7	WELL DEPTH (FEET): N/A	 <p>EAGLE ENVIRONMENTAL CONSULTING, INC. 4101 INCA STREET, DENVER, CO 80211 Ph: 303-433-0479 • F: 303-325-5449</p>	
PID INSTRUMENT: MiniRAE 3000 - PID #6			
TIME STARTED/COMPLETED: 1015 / 1105			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 3-4 / 1050			

Boring Log/Well Completion Diagram: SB-04

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0	(0-3') silty sandy CLAY - brown, dry, med stiff, low plasticity, well-sorted with 30% sand, 5% silt, N/O, N/S (3-6') sandy CLAY - brown, slightly moist, soft, mod plasticity, well-sorted with 30% fine grained sand, N/O, N/S	CL	HA	1	-	0.6	N/A	2.5		
2.5			HA	2	-	0.8	N/A			
5			HA	3	-	1.2	N/A			
5			HA	4	-	0.7	N/A			
7.5	BoB @ 6'									


HC - Hydrocarbon
 BoB - Bottom of Boring
 N/O - no odor
 N/S - no staining
 TOC - top of casing
 bgs - below ground surface

START/COMPLETION DATE: 08/27/15		SAND PACK INTERVAL (FEET): N/A	
PROJECT: HAFFNER #41-23		BENTONITE/GROUT INTERVAL (FEET): N/A	
LOGGED BY: AN/JS		WELL SCREEN INTERVAL (FEET): N/A	
DRILLING COMPANY/EQUIPMENT: EAGLE/HAND AUGER		WELL DIAMETER (INCHES): N/A	
BORING DEPTH (FEET): 6	WELL DEPTH (FEET): N/A	 <p>EAGLE ENVIRONMENTAL CONSULTING, INC. 4101 INCA STREET, DENVER, CO 80211 Ph: 303-433-0479 • F: 303-325-5449</p>	
PID INSTRUMENT: MiniRAE 3000 - PID #6			
TIME STARTED/COMPLETED: 1110 / 1150			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 4-5 / 1145			

Boring Log/Well Completion Diagram: SB-05

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0	(0-6') FILL									
2.5										
5										
6.5	(6-7') sandy CLAY - grayish brown, very moist, soft, mod. plasticity, well-sorted with 30% fine grained sand, slight odor, slight weathered gray HC staining	CL	HA	1	-	58.1 63.7	N/A			
7.5	BoB @ 7'									
10										
12.5										
15										

HC - Hydrocarbon
 BoB - Bottom of Boring
 N/O - no odor
 N/S - no staining
 TOC - top of casing
 bgs - below ground surface

START/COMPLETION DATE: 08/27/15		SAND PACK INTERVAL (FEET): N/A	
PROJECT: HAFFNER #41-23		BENTONITE/GROUT INTERVAL (FEET): N/A	
LOGGED BY: AN/JS		WELL SCREEN INTERVAL (FEET): N/A	
DRILLING COMPANY/EQUIPMENT: EAGLE/HAND AUGER		WELL DIAMETER (INCHES): N/A	
BORING DEPTH (FEET): 7	WELL DEPTH (FEET): N/A	 <p>EAGLE ENVIRONMENTAL CONSULTING, INC. 4101 INCA STREET, DENVER, CO 80211 Ph: 303-433-0479 • F: 303-325-5449</p>	
PID INSTRUMENT: MiniRAE 3000 - PID #6			
TIME STARTED/COMPLETED: 1150 / 1230			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 6.5-7 / 1220			

ATTACHMENT B

Laboratory Analytical Reports



August 20, 2015

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - Haffner #41-23

Project Number - [none]

Attached are your analytical results for Noble - Haffner #41-23 received by Origins Laboratory, Inc. August 18, 2015. This project is associated with Origins project number X508210-01.

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.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Haffner #41-23

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-03 @ 3'	X508210-01	Soil	August 18, 2015 11:30	08/18/2015 16:50
SS-05 @ 6'	X508210-02	Soil	August 18, 2015 11:40	08/18/2015 16:50

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President

Eagle Environmental Consulting, Inc.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X50820

Client: Eagle Environmental
 Client Project ID: Noble - Haffner #41-23

Checklist Completed by: J. Pellegrini
 Date/time completed: 8/15/15 17:23

Shipped Via: H/D
 (URS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: NA

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
 Cooler Number/Temperature: 1 / 4.1 °C _____ / _____ °C _____ / _____ °C (Describe)
 Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input checked="" type="checkbox"/>			<u>PH</u>
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

J. M. Smith
 Reviewed by (Project Manager)

8/15/15
 Date/Time Reviewed

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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SS-03 @ 3'
8/18/2015 11:30:00AM

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

Origins Laboratory, Inc.
X508210-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	2760	200	mg/kg	4	5H18014	08/18/2015	08/18/2015
------------------	------	-----	-------	---	---------	------------	------------

Surrogate: <i>o</i> -Terphenyl	131 %	59-131			"	"	"
--------------------------------	-------	--------	--	--	---	---	---

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	71.1	5.00	mg/kg	25	5H18013	08/18/2015	08/18/2015
-----------------------------	------	------	-------	----	---------	------------	------------

Benzene	ND	0.050	"	"	"	"	"
---------	----	-------	---	---	---	---	---

Toluene	0.058	0.050	"	"	"	"	"
---------	-------	-------	---	---	---	---	---

Ethylbenzene	ND	0.050	"	"	"	"	"
--------------	----	-------	---	---	---	---	---

Xylenes, total	1.03	0.050	"	"	"	"	"
----------------	------	-------	---	---	---	---	---

Naphthalene	ND	0.175	"	"	"	"	"
-------------	----	-------	---	---	---	---	---

Surrogate: 1,2-Dichloroethane-d4	101 %	70-130			"	"	"
----------------------------------	-------	--------	--	--	---	---	---

Surrogate: Toluene-d8	103 %	70-130			"	"	"
-----------------------	-------	--------	--	--	---	---	---

Surrogate: 4-Bromofluorobenzene	106 %	70-130			"	"	"
---------------------------------	-------	--------	--	--	---	---	---

Metals by 6010C

Calcium, Total Recoverable	18400	4.5	mg/Kg	1	242890	08/19/2015	08/19/2015
----------------------------	-------	-----	-------	---	--------	------------	------------

Magnesium, Total Recoverable	4820	4.5	"	"	"	"	"
------------------------------	------	-----	---	---	---	---	---

Sodium, Total Recoverable	481	23	"	"	"	"	"
---------------------------	-----	----	---	---	---	---	---

pH in Soil by EPA 9045D

pH	7.84		pH Units	1	5H18006	08/18/2015	08/18/2015
----	------	--	----------	---	---------	------------	------------

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.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Haffner #41-23

SS-03 @ 3'

8/18/2015 11:30:00AM

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

Origins Laboratory, Inc.
X508210-01 (Soil)

Sodium Absorption Ration

Sodium Absorption Ratio	0.1	0.01	NONE	1	'[none]'
-------------------------	-----	------	------	---	----------

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.286		mmhos/cm	1	5H18007	08/18/2015	08/18/2015
---------------------------	-------	--	----------	---	---------	------------	------------

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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SS-05 @ 6'

8/18/2015 11:40:00AM

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

Origins Laboratory, Inc.
X508210-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	603	50.0	mg/kg	1	5H18014	08/18/2015	08/18/2015
------------------	------------	------	-------	---	---------	------------	------------

Surrogate: <i>o</i> -Terphenyl	98.0 %	59-131			"	"	"
--------------------------------	--------	--------	--	--	---	---	---

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	85.6	5.00	mg/kg	25	5H18013	08/18/2015	08/18/2015
Benzene	ND	0.050	"	"	"	"	"
Toluene	0.088	0.050	"	"	"	"	"
Ethylbenzene	ND	0.050	"	"	"	"	"
Xylenes, total	0.823	0.050	"	"	"	"	"
Naphthalene	0.254	0.175	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	99.9 %	70-130			"	"	"
Surrogate: Toluene-d8	103 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	106 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5H18013 - EPA 5030 (soil)

Blank (5H18013-BLK1)

Prepared: 08/18/2015 Analyzed: 08/18/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Naphthalene	ND	0.007	"							
Surrogate: 1,2-Dichloroethane-d4	68		ug/kg	62.5		109	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.5	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5H18013 - EPA 5030 (soil)

LCS (5H18013-BS1)

Prepared: 08/18/2015 Analyzed: 08/18/2015

Benzene	0.097	0.002	mg/kg	0.100		96.6	70-130			
Toluene	0.096	0.002	"	0.100		95.9	70-130			
Ethylbenzene	0.093	0.002	"	0.100		92.9	70-130			
m,p-Xylene	0.187	0.004	"	0.200		93.5	70-130			
o-Xylene	0.094	0.002	"	0.100		94.4	70-130			
Naphthalene	0.101	0.007	"	0.100		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.2	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5H18013 - EPA 5030 (soil)

Matrix Spike (5H18013-MS1)	Source: X508206-01			Prepared: 08/18/2015 Analyzed: 08/18/2015						
Benzene	0.089	0.002	mg/kg	0.100	ND	89.1	70-130			
Toluene	0.085	0.002	"	0.100	ND	85.4	70-130			
Ethylbenzene	0.084	0.002	"	0.100	ND	84.3	70-130			
m,p-Xylene	0.168	0.004	"	0.200	ND	84.1	70-130			
o-Xylene	0.085	0.002	"	0.100	ND	84.8	70-130			
Naphthalene	0.102	0.007	"	0.100	ND	102	70-130			
Surrogate: 1,2-Dichloroethane-d4	69		ug/kg	62.5		111	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.1	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.2	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5H18013 - EPA 5030 (soil)

Matrix Spike Dup (5H18013-MSD1)	Source: X508206-01			Prepared: 08/18/2015 Analyzed: 08/18/2015						
Benzene	0.090	0.002	mg/kg	0.100	ND	89.9	70-130	0.894	20	
Toluene	0.087	0.002	"	0.100	ND	87.1	70-130	1.99	20	
Ethylbenzene	0.086	0.002	"	0.100	ND	85.5	70-130	1.51	20	
m,p-Xylene	0.171	0.004	"	0.200	ND	85.6	70-130	1.76	20	
o-Xylene	0.086	0.002	"	0.100	ND	85.7	70-130	1.06	20	
Naphthalene	0.097	0.007	"	0.100	ND	97.2	70-130	5.25	20	
Surrogate: 1,2-Dichloroethane-d4	68		ug/kg	62.5		108	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.8	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.5	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

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

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

Batch 5H18014 - EPA 3580

Blank (5H18014-BLK1)

Prepared: 08/18/2015 Analyzed: 08/18/2015

Diesel (C10-C28)	ND	50.0	mg/kg							
Surrogate: o-Terphenyl	38		"	50.0		75.9	59-131			

LCS (5H18014-BS1)

Prepared: 08/18/2015 Analyzed: 08/18/2015

Diesel (C10-C28)	710	50.0	mg/kg	1000		71.0	64-121			
Surrogate: o-Terphenyl	39		"	50.0		77.0	59-131			

Matrix Spike (5H18014-MS1)

Source: X508206-01

Prepared: 08/18/2015 Analyzed: 08/18/2015

Diesel (C10-C28)	973	50.0	mg/kg	1000	20.9	95.2	53-125			
Surrogate: o-Terphenyl	47		"	50.0		93.1	59-131			

Matrix Spike Dup (5H18014-MSD1)

Source: X508206-01

Prepared: 08/18/2015 Analyzed: 08/18/2015

Diesel (C10-C28)	736	50.0	mg/kg	1000	20.9	71.5	53-125	27.7	20	QM-07
Surrogate: o-Terphenyl	39		"	50.0		77.8	59-131			

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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5H18006 - NO PREP										
Duplicate (5H18006-DUP1)		Source: X508191-05			Prepared: 08/18/2015 Analyzed: 08/18/2015					
pH	5.56		pH Units		5.45			2.00	25	
Batch 5H18007 - NO PREP										
Blank (5H18007-BLK1)		Prepared: 08/18/2015 Analyzed: 08/18/2015								
Specific Conductance (EC)	0.00250		mmhos/cm							
Duplicate (5H18007-DUP1)		Source: X508191-05			Prepared: 08/18/2015 Analyzed: 08/18/2015					
Specific Conductance (EC)	0.0580		mmhos/cm		0.0615			5.86	25	

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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

Metals by 6010C - Quality Control
ALG-J

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

Batch 242890 - EPA 3050B

Blank (2428901-BLK)		Source: 2428901-BLK			Prepared: 08/19/2015 Analyzed: 08/19/2015					
Calcium, Total Recoverable	ND	5	mg/Kg				-			U
Magnesium, Total Recoverable	ND	5	"				-			U
Sodium, Total Recoverable	10	25	"				-			J
LCS (2428901-LCS)		Source: 2428901-LCS			Prepared: 08/19/2015 Analyzed: 08/19/2015					
Calcium, Total Recoverable	256	5	mg/Kg	250		102	80-120			
Magnesium, Total Recoverable	254	5	"	250		102	80-120			
Sodium, Total Recoverable	1290	25	"	1250		104	80-120			
LCSD (2428901-LCSD)		Source: 2428901-LCSD			Prepared: 08/19/2015 Analyzed: 08/19/2015					
Sodium, Total Recoverable	1290	25	mg/Kg	1250		104	80-120			
Calcium, Total Recoverable	256	5	"	250		102	80-120			
Magnesium, Total Recoverable	254	5	"	250		102	80-120			

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.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Haffner #41-23

Notes and Definitions

- U The compound was analyzed for, but was not detected (Non-detect) at or above the MRL/MDL.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- J The result is detected between the MDL and PQL.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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.

Jen Pellegrini For Noelle Doyle Mathis, President



August 28, 2015

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - Haffner #41-23

Project Number - [none]

Attached are your analytical results for Noble - Haffner #41-23 received by Origins Laboratory, Inc. August 27, 2015. This project is associated with Origins project number X508337-01.

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.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Haffner #41-23

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-01 @ 1-2'	X508337-01	Soil	August 27, 2015 9:10	08/27/2015 13:32
SB-02 @ 2-3'	X508337-02	Soil	August 27, 2015 9:45	08/27/2015 13:32
SB-03 @ 3-4'	X508337-03	Soil	August 27, 2015 10:50	08/27/2015 13:32
SB-04 @ 4-5'	X508337-04	Soil	August 27, 2015 11:45	08/27/2015 13:32
SB-05 @ 6.5-7'	X508337-05	Soil	August 27, 2015 12:20	08/27/2015 13:32

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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X508337

Client: Eagle

Client Project ID: Haffner #41-23

Checklist Completed by: JFSm

Shipped Via: H/D
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 8/27/15

Airbill #: NA

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

Cooler Number/Temperature: 1 / 4.8 °C _____ / _____ °C _____ / _____ °C (Describe)

Thermometer ID: 203

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

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

JFSm
 Reviewed by (Project Manager)

8/27/15
 Date/Time Reviewed

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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SB-01 @ 1-2'
8/27/2015 9:10:00AM

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

Origins Laboratory, Inc.
X508337-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5H27009	08/27/2015	08/27/2015	
<i>Surrogate: o-Terphenyl</i>	61.8 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5H27010	08/27/2015	08/27/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	126 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	105 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	106 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SB-02 @ 2-3'
8/27/2015 9:45:00AM

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

Origins Laboratory, Inc.
X508337-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5H27009	08/27/2015	08/27/2015	
<i>Surrogate: o-Terphenyl</i>	75.0 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5H27010	08/27/2015	08/27/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	129 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	104 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	109 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SB-03 @ 3-4'
8/27/2015 10:50:00AM

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

Origins Laboratory, Inc.
X508337-03 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5H27009	08/27/2015	08/27/2015	
Surrogate: <i>o</i> -Terphenyl	84.9 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5H27010	08/27/2015	08/27/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	129 %	70-130			"	"	"	
Surrogate: Toluene-d8	104 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	109 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SB-04 @ 4-5'
8/27/2015 11:45:00AM

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

Origins Laboratory, Inc.
X508337-04 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5H27009	08/27/2015	08/27/2015	
Surrogate: <i>o</i> -Terphenyl	88.2 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5H27010	08/27/2015	08/27/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	124 %	70-130			"	"	"	
Surrogate: Toluene-d8	102 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	108 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SB-05 @ 6.5-7'
8/27/2015 12:20:00PM

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

Origins Laboratory, Inc.
X508337-05 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5H27009	08/27/2015	08/27/2015	
Surrogate: <i>o</i> -Terphenyl	72.8 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	122	2.00	mg/kg	10	5H27010	08/27/2015	08/28/2015	
Benzene	ND	0.020	"	"	"	"	"	
Toluene	0.020	0.020	"	"	"	"	"	
Ethylbenzene	ND	0.020	"	"	"	"	"	
Xylenes, total	0.069	0.020	"	"	"	"	"	
Naphthalene	ND	0.070	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	97.7 %	70-130			"	"	"	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.9 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5H27010 - EPA 5030 (soil)

Blank (5H27010-BLK1)

Prepared: 08/27/2015 Analyzed: 08/27/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Naphthalene	ND	0.007	"							
Surrogate: 1,2-Dichloroethane-d4	73		ug/kg	62.5		116	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		108	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5H27010 - EPA 5030 (soil)

LCS (5H27010-BS1)

Prepared: 08/27/2015 Analyzed: 08/27/2015

Benzene	0.100	0.002	mg/kg	0.100		100	70-130			
Toluene	0.096	0.002	"	0.100		95.5	70-130			
Ethylbenzene	0.088	0.002	"	0.100		87.6	70-130			
m,p-Xylene	0.177	0.004	"	0.200		88.5	70-130			
o-Xylene	0.091	0.002	"	0.100		91.0	70-130			
Naphthalene	0.107	0.007	"	0.100		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	74		ug/kg	62.5		118	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		108	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5H27010 - EPA 5030 (soil)

Matrix Spike (5H27010-MS1)	Source: X508337-01			Prepared: 08/27/2015 Analyzed: 08/27/2015						
Benzene	0.102	0.002	mg/kg	0.100	ND	102	70-130			
Toluene	0.098	0.002	"	0.100	ND	98.4	70-130			
Ethylbenzene	0.090	0.002	"	0.100	ND	90.0	70-130			
m,p-Xylene	0.179	0.004	"	0.200	ND	89.5	70-130			
o-Xylene	0.090	0.002	"	0.100	ND	90.1	70-130			
Naphthalene	0.101	0.007	"	0.100	0.0009	99.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	75		ug/kg	62.5		120	70-130			
Surrogate: Toluene-d8	67		"	62.5		108	70-130			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		109	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5H27010 - EPA 5030 (soil)

Matrix Spike Dup (5H27010-MSD1)	Source: X508337-01			Prepared: 08/27/2015 Analyzed: 08/27/2015						
Benzene	0.090	0.002	mg/kg	0.100	ND	90.4	70-130	11.6	20	
Toluene	0.086	0.002	"	0.100	ND	86.0	70-130	13.4	20	
Ethylbenzene	0.081	0.002	"	0.100	ND	80.9	70-130	10.7	20	
m,p-Xylene	0.161	0.004	"	0.200	ND	80.6	70-130	10.4	20	
o-Xylene	0.079	0.002	"	0.100	ND	79.1	70-130	13.0	20	
Naphthalene	0.092	0.007	"	0.100	0.0009	90.7	70-130	9.55	20	
Surrogate: 1,2-Dichloroethane-d4	74		ug/kg	62.5		119	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		108	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

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

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

Batch 5H27009 - EPA 3580

Blank (5H27009-BLK1)

Prepared: 08/27/2015 Analyzed: 08/27/2015

Diesel (C10-C28)	ND	50.0	mg/kg							
Surrogate: o-Terphenyl	38		"	50.0		76.2	59-131			

LCS (5H27009-BS1)

Prepared: 08/27/2015 Analyzed: 08/27/2015

Diesel (C10-C28)	929	50.0	mg/kg	1000		92.9	64-121			
Surrogate: o-Terphenyl	50		"	50.0		100	59-131			

Matrix Spike (5H27009-MS1)

Source: X508322-01

Prepared: 08/27/2015 Analyzed: 08/27/2015

Diesel (C10-C28)	1080	50.0	mg/kg	1000	62.4	102	53-125			
Surrogate: o-Terphenyl	50		"	50.0		101	59-131			

Matrix Spike Dup (5H27009-MSD1)

Source: X508322-01

Prepared: 08/27/2015 Analyzed: 08/27/2015

Diesel (C10-C28)	967	50.0	mg/kg	1000	62.4	90.5	53-125	11.0	20	
Surrogate: o-Terphenyl	52		"	50.0		103	59-131			

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.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Haffner #41-23

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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.

Jen Pellegrini For Noelle Doyle Mathis, President

September 09, 2015

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - Haffner #41-23

Project Number - [none]

Attached are your analytical results for Noble - Haffner #41-23 received by Origins Laboratory, Inc. September 08, 2015. This project is associated with Origins project number X509097-01.

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

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

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

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

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

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



Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Haffner #41-23

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-06@11'	X509097-01	Soil	September 8, 2015 11:50	09/08/2015 16:25
SS-07@9.5'	X509097-02	Soil	September 8, 2015 11:53	09/08/2015 16:25
SS-08@9.5'	X509097-03	Soil	September 8, 2015 11:56	09/08/2015 16:25
SS-09@9.5'	X509097-04	Soil	September 8, 2015 12:00	09/08/2015 16:25
SS-10@9.5'	X509097-05	Soil	September 8, 2015 12:05	09/08/2015 16:25

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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X509097

Client: Eagle Environmental

Client Project ID: Haffner #41-23

Checklist Completed by: J. Pellegrini

Shipped Via: H/P
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 9/8/15 1626

Airbill #: NA

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

Cooler Number/Temperature: 1 / _____ °C _____ / _____ °C _____ / _____ °C _____ / _____ °C

Thermometer ID: T003

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

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

Reviewed by (Project Manager)

Date/Time Reviewed

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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SS-06@11'
 9/8/2015 11:50:00AM

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

Origins Laboratory, Inc.
 X509097-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5108010	09/08/2015	09/08/2015	
Surrogate: <i>o</i> -Terphenyl	61.3 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5108009	09/08/2015	09/09/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	113 %	70-130			"	"	"	
Surrogate: Toluene-d8	94.9 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	93.8 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SS-07@9.5'
 9/8/2015 11:53:00AM

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

Origins Laboratory, Inc.
 X509097-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	452	50.0	mg/kg	1	5108010	09/08/2015	09/08/2015	
Surrogate: <i>o</i> -Terphenyl	98.0 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	231	5.00	mg/kg	25	5108009	09/08/2015	09/09/2015	
Benzene	ND	0.050	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	
Ethylbenzene	2.20	0.050	"	"	"	"	"	
Xylenes, total	0.386	0.050	"	"	"	"	"	
Naphthalene	1.23	0.175	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	93.3 %	70-130			"	"	"	
Surrogate: Toluene-d8	96.9 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	105 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SS-08@9.5'

9/8/2015 11:56:00AM

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

Origins Laboratory, Inc.
 X509097-03 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	257	50.0	mg/kg	1	5108010	09/08/2015	09/08/2015	
Surrogate: o-Terphenyl	86.7 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	87.9	5.00	mg/kg	25	5108009	09/08/2015	09/09/2015	
Benzene	ND	0.050	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	
Ethylbenzene	0.091	0.050	"	"	"	"	"	
Xylenes, total	0.224	0.050	"	"	"	"	"	
Naphthalene	0.379	0.175	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	98.6 %	70-130			"	"	"	
Surrogate: Toluene-d8	104 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	105 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SS-09@9.5'
9/8/2015 12:00:00PM

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

Origins Laboratory, Inc.
X509097-04 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	729	50.0	mg/kg	1	5108010	09/08/2015	09/08/2015	
------------------	-----	------	-------	---	---------	------------	------------	--

Surrogate: o-Terphenyl	102 %	59-131			"	"	"	
------------------------	-------	--------	--	--	---	---	---	--

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	198	5.00	mg/kg	25	5108009	09/08/2015	09/09/2015	
-----------------------------	-----	------	-------	----	---------	------------	------------	--

Benzene	ND	0.050	"	"	"	"	"	
---------	----	-------	---	---	---	---	---	--

Toluene	ND	0.050	"	"	"	"	"	
---------	----	-------	---	---	---	---	---	--

Ethylbenzene	0.397	0.050	"	"	"	"	"	
--------------	-------	-------	---	---	---	---	---	--

Xylenes, total	ND	0.050	"	"	"	"	"	
----------------	----	-------	---	---	---	---	---	--

Naphthalene	0.979	0.175	"	"	"	"	"	
-------------	-------	-------	---	---	---	---	---	--

Surrogate: 1,2-Dichloroethane-d4	98.9 %	70-130			"	"	"	
----------------------------------	--------	--------	--	--	---	---	---	--

Surrogate: Toluene-d8	101 %	70-130			"	"	"	
-----------------------	-------	--------	--	--	---	---	---	--

Surrogate: 4-Bromofluorobenzene	107 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SS-10@9.5'
9/8/2015 12:05:00PM

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

Origins Laboratory, Inc.
X509097-05 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5108010	09/08/2015	09/08/2015	
Surrogate: <i>o</i> -Terphenyl	82.1 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	31.2	5.00	mg/kg	25	5108009	09/08/2015	09/09/2015	
Benzene	ND	0.050	"	"	"	"	09/09/2015	
Toluene	ND	0.050	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	
Xylenes, total	0.102	0.050	"	"	"	"	"	
Napthalene	ND	0.175	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	92.0 %	70-130			"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.1 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5108009 - EPA 5030 (soil)

Blank (5108009-BLK1)

Prepared: 09/08/2015 Analyzed: 09/08/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Naphthalene	ND	0.007	"							
Surrogate: 1,2-Dichloroethane-d4	90		ug/kg	62.5		144	70-130			
Surrogate: Toluene-d8	58		"	62.5		92.1	70-130			
Surrogate: 4-Bromofluorobenzene	54		"	62.5		86.4	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5108009 - EPA 5030 (soil)

LCS (5108009-BS1)

Prepared: 09/08/2015 Analyzed: 09/08/2015

Benzene	0.092	0.002	mg/kg	0.100		91.8	70-130			
Toluene	0.091	0.002	"	0.100		91.5	70-130			
Ethylbenzene	0.098	0.002	"	0.100		97.6	70-130			
m,p-Xylene	0.192	0.004	"	0.200		96.1	70-130			
o-Xylene	0.095	0.002	"	0.100		94.8	70-130			
Naphthalene	0.090	0.007	"	0.100		90.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	59		ug/kg	62.5		94.9	70-130			
Surrogate: Toluene-d8	60		"	62.5		95.7	70-130			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		95.0	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5108009 - EPA 5030 (soil)

Matrix Spike (5108009-MS1)	Source: X509060-01			Prepared: 09/08/2015 Analyzed: 09/08/2015						
Benzene	0.082	0.002	mg/kg	0.100	ND	82.5	70-130			
Toluene	0.076	0.002	"	0.100	ND	75.8	70-130			
Ethylbenzene	0.078	0.002	"	0.100	ND	78.0	70-130			
m,p-Xylene	0.148	0.004	"	0.200	ND	73.8	70-130			
o-Xylene	0.075	0.002	"	0.100	ND	74.7	70-130			
Naphthalene	0.032	0.007	"	0.100	ND	32.2	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	72		ug/kg	62.5		115	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.2	70-130			
Surrogate: 4-Bromofluorobenzene	55		"	62.5		88.4	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5108009 - EPA 5030 (soil)

Matrix Spike Dup (5108009-MSD1)	Source: X509060-01			Prepared: 09/08/2015 Analyzed: 09/08/2015						
Benzene	0.081	0.002	mg/kg	0.100	ND	81.3	70-130	1.47	20	
Toluene	0.073	0.002	"	0.100	ND	72.9	70-130	3.79	20	
Ethylbenzene	0.074	0.002	"	0.100	ND	74.4	70-130	4.73	20	
m,p-Xylene	0.145	0.004	"	0.200	ND	72.4	70-130	1.98	20	
o-Xylene	0.073	0.002	"	0.100	ND	72.7	70-130	2.74	20	
Naphthalene	0.031	0.007	"	0.100	ND	30.9	70-130	4.25	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	71		ug/kg	62.5		114	70-130			
Surrogate: Toluene-d8	60		"	62.5		95.5	70-130			
Surrogate: 4-Bromofluorobenzene	56		"	62.5		90.0	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

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

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

Batch 5I08010 - EPA 3580

Blank (5I08010-BLK1)

Prepared: 09/08/2015 Analyzed: 09/08/2015

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 37 " 50.0 74.4 59-131

LCS (5I08010-BS1)

Prepared: 09/08/2015 Analyzed: 09/08/2015

Diesel (C10-C28) 869 50.0 mg/kg 64-121

Surrogate: o-Terphenyl 50 " 50.0 99.5 59-131

Matrix Spike (5I08010-MS1)

Source: X509060-01

Prepared: 09/08/2015 Analyzed: 09/08/2015

Diesel (C10-C28) 797 50.0 mg/kg ND 53-125

Surrogate: o-Terphenyl 43 " 50.0 86.8 59-131

Matrix Spike Dup (5I08010-MSD1)

Source: X509060-01

Prepared: 09/08/2015 Analyzed: 09/08/2015

Diesel (C10-C28) 770 50.0 mg/kg ND 53-125 3.39 20

Surrogate: o-Terphenyl 31 " 50.0 62.2 59-131

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.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Haffner #41-23

Notes and Definitions

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 at 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.

Jen Pellegrini For Noelle Doyle Mathis, President

September 10, 2015

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - Haffner #41-23

Project Number - [none]

Attached are your analytical results for Noble - Haffner #41-23 received by Origins Laboratory, Inc. September 09, 2015. This project is associated with Origins project number X509107-01.

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

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

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

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

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

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



Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Haffner #41-23

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-12 @ 9.5-10'	X509107-01	Soil	September 9, 2015 12:30	09/09/2015 13:30
SS-13 @ 9.5-10'	X509107-02	Soil	September 9, 2015 12:35	09/09/2015 13:30
SS-14 @ 11'	X509107-03	Soil	September 9, 2015 12:45	09/09/2015 13:30

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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: XS09107 Client: Eagle
 Client Project ID: Haffner #41-23
 Checklist Completed by: Jef Smith Shipped Via: HTD
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Date/time completed: 9/9/15 Airbill #: N/A
 Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
 Cooler Number/Temperature: 1 / 1.3 °C 1 °C 1 °C 1 °C (Describe)
 Thermometer ID: T003

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

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

Reviewed by (Project Manager) [Signature] Date/Time Reviewed 9/9/15

Origins Laboratory, Inc.

Jef Pellegrini

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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SS-12 @ 9.5-10'
9/9/2015 12:30:00PM

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

Origins Laboratory, Inc.
X509107-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5109005	09/09/2015	09/09/2015	
<i>Surrogate: o-Terphenyl</i>	97.5 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5109006	09/09/2015	09/09/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	118 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	94.7 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	101 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SS-13 @ 9.5-10'
9/9/2015 12:35:00PM

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

Origins Laboratory, Inc.
X509107-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5109005	09/09/2015	09/09/2015	
Surrogate: <i>o</i> -Terphenyl	85.0 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5109006	09/09/2015	09/09/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	111 %	70-130			"	"	"	
Surrogate: Toluene-d8	96.3 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SS-14 @ 11'
 9/9/2015 12:45:00PM

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

Origins Laboratory, Inc.
 X509107-03 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5109005	09/09/2015	09/09/2015	
Surrogate: <i>o</i> -Terphenyl	91.2 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5109006	09/09/2015	09/09/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	119 %	70-130			"	"	"	
Surrogate: Toluene-d8	95.1 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5109006 - EPA 5030 (soil)

Blank (5109006-BLK1)

Prepared: 09/09/2015 Analyzed: 09/09/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Naphthalene	ND	0.007	"							
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5109006 - EPA 5030 (soil)

LCS (5109006-BS1)

Prepared: 09/09/2015 Analyzed: 09/09/2015

Benzene	0.092	0.002	mg/kg	0.100		91.6	70-130			
Toluene	0.092	0.002	"	0.100		91.8	70-130			
Ethylbenzene	0.096	0.002	"	0.100		95.8	70-130			
m,p-Xylene	0.193	0.004	"	0.200		96.4	70-130			
o-Xylene	0.097	0.002	"	0.100		96.8	70-130			
Naphthalene	0.084	0.007	"	0.100		84.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	60		ug/kg	62.5		96.4	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5109006 - EPA 5030 (soil)

Matrix Spike (5109006-MS1)	Source: X509083-01			Prepared: 09/09/2015 Analyzed: 09/09/2015						
Benzene	0.103	0.002	mg/kg	0.100	ND	103	70-130			
Toluene	0.099	0.002	"	0.100	ND	99.3	70-130			
Ethylbenzene	0.105	0.002	"	0.100	ND	105	70-130			
m,p-Xylene	0.209	0.004	"	0.200	ND	105	70-130			
o-Xylene	0.103	0.002	"	0.100	ND	103	70-130			
Naphthalene	0.089	0.007	"	0.100	ND	89.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		99.1	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.2	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		103	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5109006 - EPA 5030 (soil)

Matrix Spike Dup (5109006-MSD1)	Source: X509083-01			Prepared: 09/09/2015 Analyzed: 09/09/2015						
Benzene	0.104	0.002	mg/kg	0.100	ND	104	70-130	0.964	20	
Toluene	0.100	0.002	"	0.100	ND	100	70-130	0.762	20	
Ethylbenzene	0.105	0.002	"	0.100	ND	105	70-130	0.399	20	
m,p-Xylene	0.209	0.004	"	0.200	ND	105	70-130	0.0478	20	
o-Xylene	0.104	0.002	"	0.100	ND	104	70-130	0.829	20	
Naphthalene	0.087	0.007	"	0.100	ND	87.5	70-130	1.77	20	
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		105	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

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

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

Batch 5I09005 - EPA 3580

Blank (5I09005-BLK1)

Prepared: 09/09/2015 Analyzed: 09/09/2015

Diesel (C10-C28)	ND	50.0	mg/kg							
Surrogate: o-Terphenyl	37		"	50.0		74.3	59-131			

LCS (5I09005-BS1)

Prepared: 09/09/2015 Analyzed: 09/09/2015

Diesel (C10-C28)	711	50.0	mg/kg	1000		71.1	64-121			
Surrogate: o-Terphenyl	38		"	50.0		75.3	59-131			

Matrix Spike (5I09005-MS1)

Source: X509078-01

Prepared: 09/09/2015 Analyzed: 09/09/2015

Diesel (C10-C28)	751	50.0	mg/kg	1000	ND	75.1	53-125			
Surrogate: o-Terphenyl	42		"	50.0		84.9	59-131			

Matrix Spike Dup (5I09005-MSD1)

Source: X509078-01

Prepared: 09/09/2015 Analyzed: 09/09/2015

Diesel (C10-C28)	845	50.0	mg/kg	1000	ND	84.5	53-125	11.7	20	
Surrogate: o-Terphenyl	42		"	50.0		84.0	59-131			

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.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Haffner #41-23

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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.

Jen Pellegrini For Noelle Doyle Mathis, President



September 11, 2015

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - Haffner #41-23

Project Number - [none]

Attached are your analytical results for Noble - Haffner #41-23 received by Origins Laboratory, Inc. September 10, 2015. This project is associated with Origins project number X509128-01.

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.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Haffner #41-23

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-15 @ 9.5'	X509128-01	Soil	September 10, 2015 11:12	09/10/2015 15:25
SS-16 @ 9.5-10'	X509128-02	Soil	September 10, 2015 11:15	09/10/2015 15:25
SS-17 @ 9.5-10'	X509128-03	Soil	September 10, 2015 11:18	09/10/2015 15:25
SS-18 @ 9.5'	X509128-04	Soil	September 10, 2015 11:22	09/10/2015 15:25
SS-19 @ 11'	X509128-05	Soil	September 10, 2015 11:25	09/10/2015 15:25

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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

www.originslaboratory.com

1509120

ORIGINS
 LABORATORY, INC

page / of /

Client: Eagle Env. Consulting, Inc.
 Address: 4101 Inca Street
Denver, CO, 80211
 Telephone Number: (303) 433-0479
 Email Address: MCCS@eagle-enviro.com

Project Manager: Martin Eckert III
 Project Name: Haffner #41-23
 Project Number: ---
 Samples Collected By: AN / JS

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

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis		Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa	Conister #	Other		6.8TEX
SS-15@9.5'	9/10/15	1112	2	X				X				X	X	1
SS-16@9.5-10'		1115												2
SS-17@9.5-10'		1118												3
SS-18@9.5'		1122												4
SS-19@11'		1125												5
														6
														7
														8
														9
														10

Relinquished By: ADD Date: 9/10/15 Time: 1528
 Relinquished By: ADD Date: 9/10/15 Time: 1525

Received By: ADD Date: 9/10/15 Time: 1525
 Received By: ADD Date: 9/10/15 Time: 1525

Turnaround Time: Same Day 24 Hr 48 Hr 72 Hr Standard

Temp Received: 60 Date Results Needed: 9/10/15

Origins Laboratory, Inc.

Jefe Pellegrini

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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: XS09128

Client: Eagle

Client Project ID: Haffner# 41-23

Checklist Completed by: Jefe Smith

Shipped Via: H/D

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

Date/time completed: 9/10/15

Airbill #: NA

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

Cooler Number/Temperature: 1 / 6.0 °C _____ °C _____ °C _____ °C (Describe)

Thermometer ID: T203

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		X		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	
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 HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			X	
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

9/10/15
 Date/Time Reviewed

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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SS-15 @ 9.5'
9/10/2015 11:12:00AM

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

Origins Laboratory, Inc.
X509128-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5110006	09/10/2015	09/10/2015	
Surrogate: <i>o</i> -Terphenyl	83.2 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5110005	09/10/2015	09/10/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	117 %	70-130			"	"	"	
Surrogate: Toluene-d8	95.2 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SS-16 @ 9.5-10'
9/10/2015 11:15:00AM

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

Origins Laboratory, Inc.
X509128-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5110006	09/10/2015	09/10/2015	
Surrogate: <i>o</i> -Terphenyl	69.2 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5110005	09/10/2015	09/10/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	116 %	70-130			"	"	"	
Surrogate: Toluene-d8	94.9 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SS-17 @ 9.5-10'
9/10/2015 11:18:00AM

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

Origins Laboratory, Inc.
X509128-03 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5110006	09/10/2015	09/10/2015	
<i>Surrogate: o-Terphenyl</i>	62.2 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5110005	09/10/2015	09/10/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	116 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	94.8 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	102 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SS-18 @ 9.5'
 9/10/2015 11:22:00AM

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

Origins Laboratory, Inc.
 X509128-04 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5110006	09/10/2015	09/10/2015	
Surrogate: <i>o</i> -Terphenyl	79.7 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5110005	09/10/2015	09/10/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	117 %	70-130			"	"	"	
Surrogate: Toluene-d8	94.4 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

SS-19 @ 11'
 9/10/2015 11:25:00AM

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

Origins Laboratory, Inc.
 X509128-05 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5110006	09/10/2015	09/10/2015	
Surrogate: <i>o</i> -Terphenyl	59.4 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5110005	09/10/2015	09/10/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	131 %	70-130			"	"	"	
Surrogate: Toluene-d8	92.3 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5110005 - EPA 5030 (soil)

Blank (5110005-BLK1)

Prepared: 09/10/2015 Analyzed: 09/10/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Naphthalene	ND	0.007	"							
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.1	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		105	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5110005 - EPA 5030 (soil)

LCS (5110005-BS1)

Prepared: 09/10/2015 Analyzed: 09/10/2015

Benzene	0.090	0.002	mg/kg	0.100		90.0	70-130			
Toluene	0.088	0.002	"	0.100		87.9	70-130			
Ethylbenzene	0.095	0.002	"	0.100		94.5	70-130			
m,p-Xylene	0.188	0.004	"	0.200		94.1	70-130			
o-Xylene	0.094	0.002	"	0.100		94.3	70-130			
Naphthalene	0.078	0.007	"	0.100		78.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		97.4	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.7	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5110005 - EPA 5030 (soil)

Matrix Spike (5110005-MS1)		Source: X509105-03			Prepared: 09/10/2015 Analyzed: 09/10/2015					
Benzene	0.101	0.002	mg/kg	0.100	ND	101	70-130			
Toluene	0.103	0.002	"	0.100	ND	103	70-130			
Ethylbenzene	0.137	0.002	"	0.100	ND	137	70-130			QM-07
m,p-Xylene	0.255	0.004	"	0.200	ND	127	70-130			
o-Xylene	0.122	0.002	"	0.100	ND	122	70-130			
Naphthalene	0.037	0.007	"	0.100	ND	37.2	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	67		"	62.5		107	70-130			
Surrogate: 4-Bromofluorobenzene	77		"	62.5		123	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

Batch 5110005 - EPA 5030 (soil)

Matrix Spike Dup (5110005-MSD1)	Source: X509105-03			Prepared: 09/10/2015 Analyzed: 09/10/2015						
Benzene	0.082	0.002	mg/kg	0.100	ND	82.1	70-130	20.7	20	QR-03
Toluene	0.072	0.002	"	0.100	ND	72.4	70-130	35.0	20	QR-03
Ethylbenzene	0.088	0.002	"	0.100	ND	87.8	70-130	43.9	20	QR-03
m,p-Xylene	0.154	0.004	"	0.200	ND	76.9	70-130	49.3	20	QR-03
o-Xylene	0.072	0.002	"	0.100	ND	71.7	70-130	52.2	20	QR-03
Naphthalene	0.010	0.007	"	0.100	ND	9.86	70-130	116	20	QR-03
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		99.9	70-130			
Surrogate: Toluene-d8	65		"	62.5		104	70-130			
Surrogate: 4-Bromofluorobenzene	78		"	62.5		125	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.
 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Haffner #41-23

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

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

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

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

Batch 5I10006 - EPA 3580

Blank (5I10006-BLK1)

Prepared: 09/10/2015 Analyzed: 09/10/2015

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 47 " 50.0 93.5 59-131

LCS (5I10006-BS1)

Prepared: 09/10/2015 Analyzed: 09/10/2015

Diesel (C10-C28) 848 50.0 mg/kg 64-121

Surrogate: o-Terphenyl 46 " 50.0 92.6 59-131

Matrix Spike (5I10006-MS1)

Source: X509105-03

Prepared: 09/10/2015 Analyzed: 09/10/2015

Diesel (C10-C28) 926 50.0 mg/kg ND 53-125

Surrogate: o-Terphenyl 50 " 50.0 100 59-131

Matrix Spike Dup (5I10006-MSD1)

Source: X509105-03

Prepared: 09/10/2015 Analyzed: 09/10/2015

Diesel (C10-C28) 836 50.0 mg/kg ND 53-125 10.2 20

Surrogate: o-Terphenyl 46 " 50.0 91.6 59-131

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.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Haffner #41-23

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- 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 at 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.