



March 30, 2015

Mr. Jacob Evans  
Noble Energy, Inc.  
1600 Broadway, Suite 2200  
Denver, Colorado 80202

**RE:               Source Excavation and Groundwater Assessment Report**  
**Johnson #2, #11-16G6**  
**Dump Line Release**  
**40.499011 / -104.742371**  
**SW¼ SE¼ SEC.11 T6N R66W 6PM**  
**Weld County, Colorado**  
**API # 05-123-12389, 05-123-17881**

Dear Mr. Evans,

Eagle Environmental Consulting, Inc. (EAGLE) is pleased to present this Source Excavation and Groundwater Assessment Report for the above referenced site.

## **1.0     SITE BACKGROUND**

EAGLE was requested by Noble Energy, Inc. (Noble) to perform subsurface assessment activities at the site following repairs to a dump line associated with the Johnson #2 and #11-16G6 wells. On August 29, 2014, EAGLE collected soil samples SS-01 through SS-05 following repairs to the associated dump line. Groundwater was not observed within the excavated area.

Soil samples SS-01 through SS-05, collected from the sidewalls 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-04@4' and SS-05@5.5' contained concentrations of benzene and total petroleum hydrocarbons (TPH) exceeding the Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 Regulatory Limits, requiring remedial action at the site. The following narrative details excavation activities that were completed at the site.

## **2.0     SITE DESCRIPTION**

The Johnson #2, #11-16G6 site is located within the southwest quarter of the southeast quarter of Section 11, Township 6 north, Range 66 west of the 6<sup>th</sup> Prime Meridian. The repaired dump line was located at latitude: 40.499011 and longitude: -104.742371. A topographic site location map is presented as Figure 1. An aerial site location map is presented in Figure 2.

### **2.1     Site Hydrogeology**

The soil lithology observed beneath the release location, consists of a sandy silty clay from the surface to approximately 13 feet below ground surface (bgs). Depth to groundwater was observed during excavation

activities at a depth of approximately 11 to 11.5 feet bgs. Depth to groundwater was observed during groundwater sampling activities ranging from approximately 7.5 to 8.5 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 Assessment Activities**

Following repairs to the dump line associated with the Johnson #2 and #11-16G6 wells on August 29, 2014, 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. EAGLE submitted soil samples SS-01 through SS-05 to Origins Laboratory, Inc. (Origins), located in Denver, Colorado, under standard chain of custody procedures.

The soil samples were analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, total petroleum hydrocarbons – gasoline range organics (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.

Based on laboratory analytical results, soil samples SS-04@4' and SS-05@5.5' contained concentrations of benzene (5.32 milligrams per kilogram (mg/kg) and 12.4 mg/kg, respectively) and total petroleum hydrocarbons (TPH) (2,121 mg/kg and 6,070 mg/kg, respectively) exceeding the COGCC Table 910-1 regulatory limits of 0.17 mg/kg and 500 mg/kg, respectively. The laboratory analytical results confirmed additional source removal was required beneath the release area.

#### **3.2 Excavation Activities**

From December 8, 2014 through December 12, 2014, EAGLE supervised excavation activities to remove adsorbed petroleum hydrocarbon impacted soil beneath and adjacent to the dump line repair associated with the Johnson #2 and #11-16G6 wells. BG Services LLC (BG) provided the necessary equipment and personnel to remove and transport the petroleum hydrocarbon impacted soil from the site.

The soil lithology observed within the excavation was a sandy silty clay from surface to approximately 13 feet bgs, with groundwater being observed at a depth of approximately 11 to 11.5 feet bgs.

Waste characterization/confirmation soil samples (SS-06 through SS-47) were collected at various locations to determine the lateral and vertical extent of petroleum hydrocarbon impacts in the soil beneath and adjacent to the dump line release. 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 4-ounce glass jar and packed in an iced cooler for laboratory analysis.

Based on location and PID analysis, selected 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 laboratory received the soil samples within the required holding time for each laboratory analysis.

A total of 12 confirmation soil samples (SS-10@9', SS-11@9', SS-13@9', SS-16@9', SS-28@9', SS-34@9', SS-35@9', SS-37@9.5', SS-38@9', SS-42@9', SS-43@9.5', and SS-47@9') 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.

On December 9, 2014, a grab groundwater sample (GW-01) was collected from the excavation, placed in an iced cooler, and delivered to Origins, under standard chain of custody protocol, for laboratory analysis of BTEX. The laboratory received the groundwater sample within the required holding time for each laboratory analysis.

Following groundwater sample collection, a total of 150 pounds of granular activated carbon (GAC) and 150 pounds of gypsum were applied to the base during excavation activities. The excavation area was backfilled with pea gravel and structural fill at the end of each day.

The final limits of the Johnson #2 and #11-16G6 excavation extended approximately 30 feet north to south, 41 feet along the north wall, and 35 feet along the east wall. The excavation was advanced to a depth of approximately 13 feet bgs. Approximately 820 cubic yards of soil was 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 Laboratory Analytical Results - Excavation**

#### **3.3.1 Soil Analytical Results - Excavation**

Based on soil laboratory analytical results, confirmation soil samples (SS-10@9', SS-28@9', SS-34@9', SS-35@9', SS-37@9.5', SS-38@9', SS-42@9', SS-43@9.5', and SS-47@9') collected from the Johnson #2 and #11-16G6 excavation did not contain concentrations of BTEX, naphthalene, TPH-GRO, and TPH-DRO exceeding their respective COGCC Table 910-1 regulatory limits and/or laboratory reporting limits.

Soil samples SS-11@9', SS-13@9', and SS-16@9' contained concentrations of benzene (0.345 mg/kg, 0.259 mg/kg, and 9.38 mg/kg, respectively) exceeding the COGCC Table 910-1 regulatory limit of 0.17 mg/kg. Soil sample SS-16@9' also contained a concentration of TPH (3,474 mg/kg) exceeding the COGCC Table 910-1 regulatory limit of 500 mg/kg. The excavation was continued laterally, and vertically to a total depth of approximately 13 feet bgs. Since groundwater was observed at approximately 11 to 11.5 feet bgs, confirmation soil samples were not collected to vertically define soil sample locations SS-11@9', SS-13@9', and SS-16@9'.

Soil analytical results are summarized in Table 1 and presented in Figure 4. The laboratory analytical reports for the soil samples collected during source removal activities at the Johnson #2 and #11-16G6 site are included in Attachment B.

#### **3.3.2 Groundwater Analytical Results - Excavation**

The groundwater sample (GW-01) collected on December 9, 2014, from the base of the Johnson #2 and #11-16G6 excavation, contained a concentration of benzene (9.9 micrograms per liter (µg/L)) exceeding the COGCC Table 910-1 regulatory limit of 5 µg/L. Groundwater analytical results are summarized in Table 2. The groundwater laboratory analytical report is included in Attachment B.

## **4.0 SOIL BORING ADVANCEMENT/MONITORING WELL INSTALLATION ACTIVITIES**

To assess dissolved BTEX impacts associated with the dump line release, EAGLE submitted a site map with proposed monitoring well locations to Noble on January 6, 2015. Six (6) initial monitoring wells (MW-01 through MW-06) were proposed for installation. EAGLE received Noble approval on January 28, 2015 and scheduled monitoring well installation activities.

### **4.1 Field Work Preparation and Planning**

The Utility Notification Center of Colorado (UNCC) was called at least 48 hours in advance of drilling activities to confirm that no unmarked utilities or other obstacles were present within the proposed drilling locations. Tier II facility owners were also contacted to confirm the necessary buried utility notifications were completed. Each boring location was also cleared to a depth of approximately 5 feet below ground surface (bgs), prior to the advancement of any proposed soil boring, with a pothole or “daylighting” rig, to ensure no unmarked utilities were present beneath the boring location.

### **4.2 Soil Boring Advancement/Monitoring Well Completion Activities**

On February 11, 2015, a total of six soil borings (MW-01 through MW-06) were advanced around the dump line release area. Each soil boring was completed as a 1-inch, groundwater monitoring well to define the extents of dissolved petroleum hydrocarbon impacts beneath the site. Soil boring advancement/monitoring well installation activities were completed by EAGLE using a 7822DT Series Geoprobe track rig.

Each location was logged in the field according to soil description, soil classification, moisture content, staining, and VOC concentrations. Monitoring wells, MW-01 through MW-06, were each completed with 1-inch, schedule 40, poly vinyl chloride (PVC) pipe to a total depth of approximately 15 feet bgs. Ten feet of 0.010 slot, 1-inch, PVC screen was placed at the bottom of the boring followed by five feet of PVC riser. The well annulus was backfilled with 10/20 silica sand to approximately 1 foot above the screened section followed by a hydrated bentonite seal to the surface. All monitoring wells (MW-01 through MW-06) were completed with 8-inch traffic rated steel flush mounts. EAGLE also recorded spatial locations of each monitoring well using a Trimble GeoXT 6000 series instrument.

Soil boring logs/monitoring well completion diagrams are included in Attachment A. Monitoring well locations are presented in Figure 5. A geological cross section is included as Figure 6.

### **4.3 Soil Sampling Procedures**

During soil boring advancement/monitoring well installation activities, soil samples were collected continuously within 5-foot, plastic sample liners. The samples within the plastic liners were separated in 2.5-foot intervals for soil identification and analysis. 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 4-ounce glass jar and packed in an iced cooler for laboratory analysis.

Based on PID reading and sample location above the observed saturated zone, one soil sample from each boring (MW-01 through MW-08) was submitted to Origins, following standard chain of custody procedures, for laboratory analysis. 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.



#### **4.4 Groundwater Sampling Procedures**

Groundwater samples were collected from monitoring wells MW-01 through MW-06 on February 11, 2015. Prior to groundwater sample collection, depth to groundwater data was collected using a decontaminated interface probe capable of measuring the depth to groundwater or light non aqueous phase liquid (LNAPL) to an accuracy of 0.01 feet.

Relative groundwater elevations within each monitoring well ranged from 90.54 feet (MW-04) to 91.82 feet (MW-02). The groundwater flow direction beneath the site during the February 2015 sampling event was predominantly to the east-southeast with an average hydraulic gradient of 0.019 feet per foot (measured from MW-02 to MW-04). Groundwater elevation data is summarized in Table 3 and presented in Figure 7.

Prior to groundwater sample collection, each monitoring well was developed through purging each location a minimum of ten well volumes using disposable PVC bailers. Following recharge, groundwater samples were collected from the bottom of each monitoring well in 40 milliliter (mL) amber vials. The groundwater samples were submitted for laboratory analysis for BTEX following EPA Method 8260C. The samples were transported in an iced cooler under standard chain-of-custody procedures to Origins Laboratory, Inc. located in Denver, Colorado, and were received within Quality Assurance/Quality Control (QA/QC) parameters.

#### **4.5 Laboratory Analytical Results**

##### ***4.5.1 Soil Analytical Results***

Based on laboratory analytical results, soil samples collected from monitoring wells MW-01 through MW-06 did not contain concentrations of BTEX, naphthalene, TPH-GRO, and TPH-DRO exceeding their respective COGCC Table 910-1 regulatory limits and/or laboratory reporting limits. Soil analytical results are summarized in Table 1 and included in Figure 5. Soil sample laboratory analytical reports are included in Attachment B.

##### ***4.5.2 Groundwater Analytical Results***

Based on laboratory analytical results, groundwater samples collected from monitoring wells MW-01 through MW-06 did not contain concentrations of BTEX exceeding their respective COGCC Table 910-1 regulatory limits. EAGLE will return to site in June 2015 to complete 2<sup>nd</sup> quarter 2015 groundwater sampling activities.

Groundwater analytical results are summarized in Table 2 and presented in Figure 8. The groundwater laboratory analytical reports are included in Attachment B.

#### **5.0 CONCLUSIONS**

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

- Approximately 820 cubic yards of soil was removed from the Johnson #2 and #11-16G6 excavation from December 8, 2014 through December 12, 2014.
- Confirmation soil samples (SS-10@9', SS-28@9', SS-34@9', SS-35@9', SS-37@9.5', SS-38@9', SS-42@9', SS-43@9.5', and SS-47@9') collected from the Johnson #2 and #11-16G6

excavation did not contain concentrations of BTEX, naphthalene, TPH-GRO, and TPH-DRO exceeding their respective COGCC Table 910-1 regulatory limits and/or laboratory reporting limits.

- Soil samples SS-11@9', SS-13@9', and SS-16@9' contained concentrations of benzene exceeding the COGCC Table 910-1 regulatory limit. Soil sample SS-16@9' also contained a concentration of TPH exceeding the COGCC Table 910-1 regulatory limit. The excavation was continued laterally, and vertically to a total depth of approximately 13 feet bgs. Since groundwater was observed at approximately 11 to 11.5 feet bgs, confirmation soil samples were not collected to vertically define soil sample locations SS-11@9', SS-13@9', and SS-16@9'.
- Grab groundwater sample, GW-01, collected from the base of the excavation on December 9, 2014, contained a concentration of benzene exceeding the COGCC Table 910-1 regulatory limit.
- Following groundwater sample collection, a total of 150 pounds of granular activated carbon (GAC) and 150 pounds of gypsum were applied to the base during excavation activities.
- On February 11, 2015, EAGLE installed six (6) groundwater monitoring wells (MW-01 through MW-06) at the site.
- Groundwater samples collected from monitoring wells MW-01 through MW-06 did not contain concentrations of BTEX exceeding their respective COGCC Table 910-1 regulatory limits or laboratory reporting limit.
- The groundwater flow direction beneath the site during the February 2015 sampling event was predominantly to the east-southeast with an average hydraulic gradient of 0.019 feet per foot (measured from MW-02 to MW-04).

## 6.0 RECOMMENDATIONS

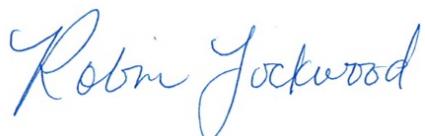
Based on the information presented in this report, EAGLE recommends the following:

- Complete groundwater sampling activities in June 2015 to confirm BTEX concentrations in monitoring wells remain below COGCC Table 910-1 regulatory limits.

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: Excavation Soil Sample Location Map**

**Figure 4: Excavation Soil Sample Analytical Map**

**Figure 5: Monitoring Well Soil Sample Analytical Map**

**Figure 6: Geologic Cross Section (A-A')**

**Figure 7: Groundwater Elevation Map**

**Figure 8: Groundwater Sample Location Map**



**Topographic Site Location Map**

Johnson #2, #11-16G6  
 Dump Line Release  
 40.499011/-104.742371  
 SW¼ SE¼ SEC.11 T6N R66W 6PM  
 Weld County, Colorado  
 API # 05-123-12389, 05-123-17881



Source: USGS 7.5 Minute Topographic  
 Map, Greeley, CO Quadrangle 2013

**Figure 1**



**EAGLE**  
 ENVIRONMENTAL  
 CONSULTING, INC.



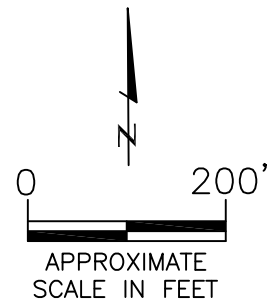


#### LEGEND

LATITUDE/LONGITUDE OF INFRASTRUCTURE:

X RELEASE LOCATION (40.499011/-104.742371)

□ APPROXIMATE JOHNSON #2, #11-16G6 TANK BATTERY LOCATION



#### AERIAL SITE LOCATION MAP

JOHNSON #2, #11-16G6  
DUMP LINE RELEASE

40.499011/-104.742371

SW1/4 SE1/4 SEC.11 T6N R66W 6PM

WELD COUNTY, COLORADO

API # 05-123-12389, 05-123-17881

DATE:  
03/25/15

FIG. NO.  
2

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amn

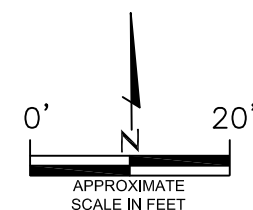


**EAGLE**  
ENVIRONMENTAL  
CONSULTING, INC.  
4101 INCA STREET, DENVER, CO 80211  
Ph: 303-433-0479 • F: 303-325-5449



# LEGEND

- X APPROXIMATE RELEASE LOCATION
- APPROXIMATE EXCAVATION EXTENTS
- APPROXIMATE UNDERGROUND UTILITY LOCATION
- SS-01 APPROXIMATE LOCATION OF SOIL SAMPLES ANALYZED WITH PHOTOIONIZATION DETECTOR (PID)
- SS-01 APPROXIMATE LOCATION OF SOIL SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

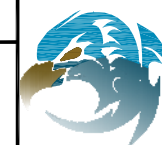


SOIL SAMPLE LOCATION MAP  
JOHNSON #2, #11-16G6  
DUMP LINE RELEASE  
40.499011/-104.742371  
SW1/4 SE1/4 SEC. 11 T6N R66W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-12389, 05-123-17881

DATE: 03/11/15

FIG. NO. 3

DRAWN BY: amn



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# LEGEND

- X APPROXIMATE RELEASE LOCATION
- - - APPROXIMATE EXCAVATION EXTENTS
- - - APPROXIMATE UNDERGROUND UTILITY LOCATION
- SS-01 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

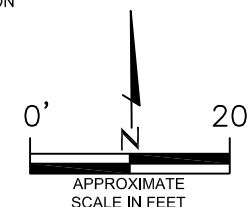
TPH-GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS

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** EXCEED THE COGCC TABLE 910-1 REGULATORY LIMITS FOR THAT COMPOUND

COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION



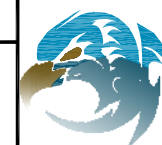
## SOIL SAMPLE ANALYTICAL MAP

JOHNSON #2, #11-16G6  
DUMP LINE RELEASE  
40.499011/-104.742371  
SW1/4 SE1/4 SEC.11 T6N R66W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-12389, 05-123-17881

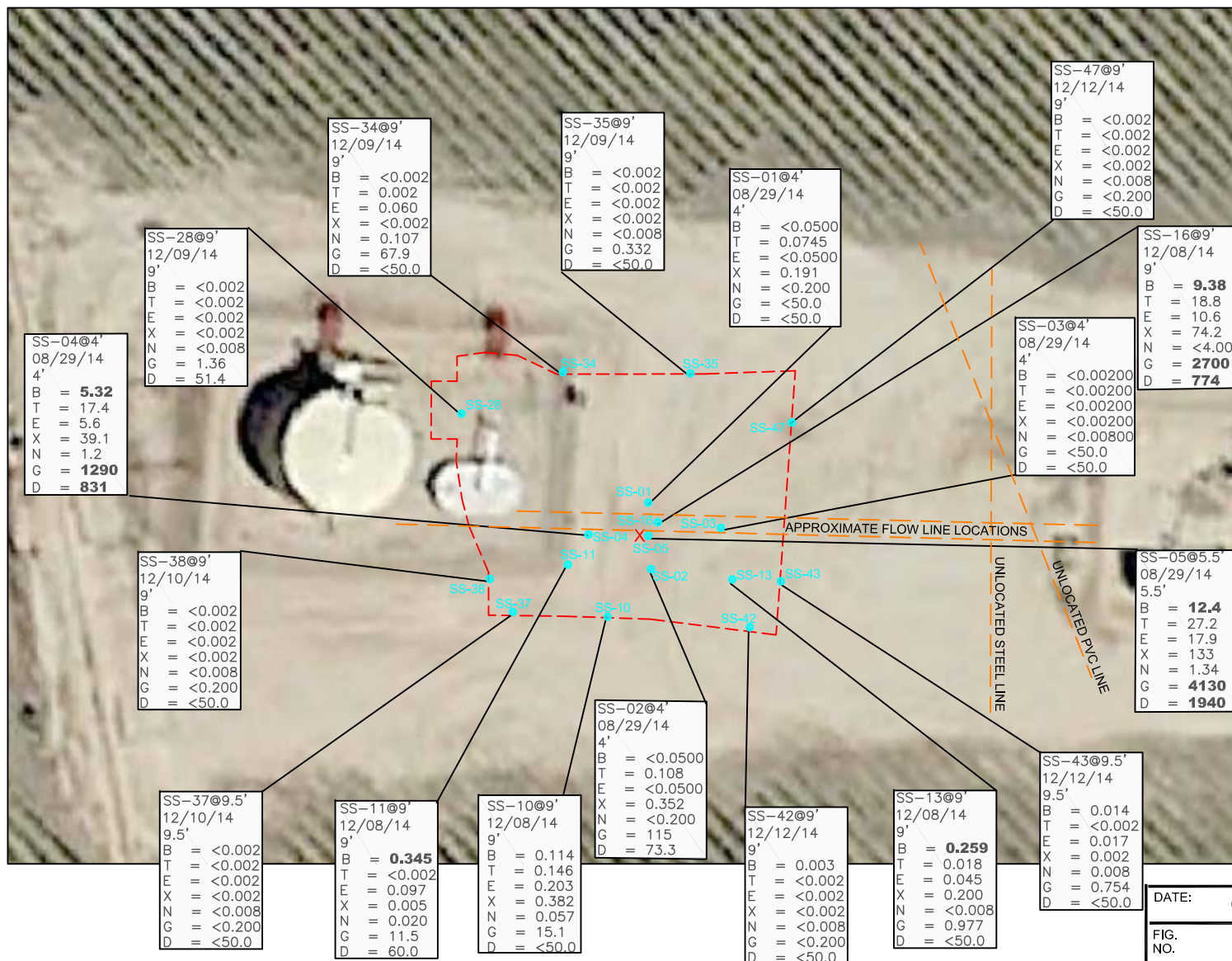
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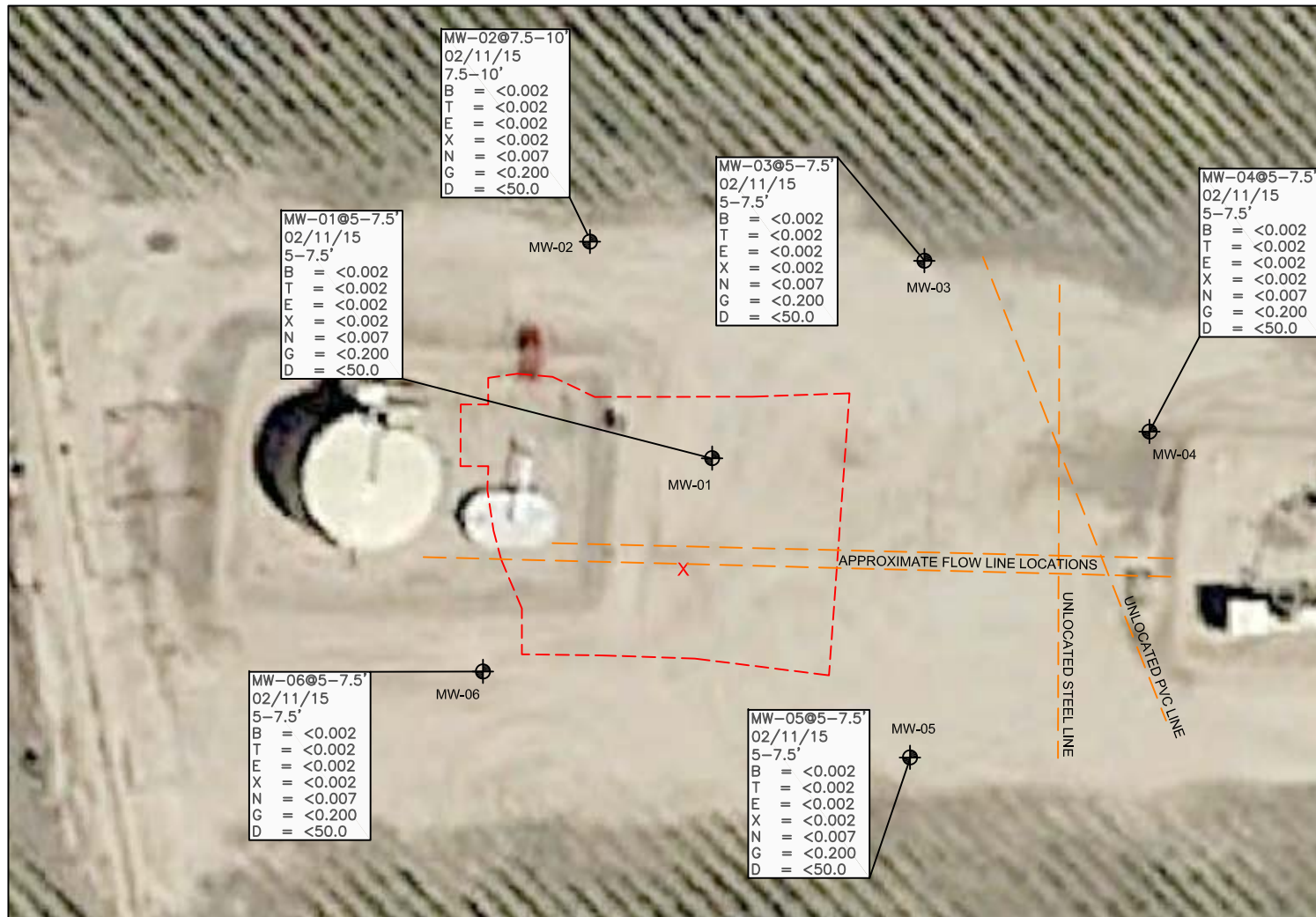
FIG. NO. 4

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# LEGEND

- X APPROXIMATE RELEASE LOCATION
- APPROXIMATE EXCAVATION EXTENTS
- APPROXIMATE UNDERGROUND UTILITY LOCATION
- ⊕ APPROXIMATE MONITORING WELL LOCATIONS

## 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

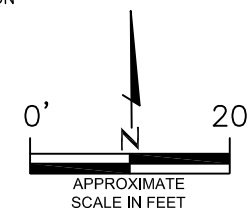
TPH-GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS

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** EXCEED THE COGCC TABLE 910-1 REGULATORY LIMITS FOR THAT COMPOUND

COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION



MONITORING WELL SOIL ANALYTICAL MAP  
JOHNSON #2, #11-16G6  
DUMP LINE RELEASE  
40.499011/-104.742371  
SW1/4 SE1/4 SEC.11 T6N R66W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-12389, 05-123-17881

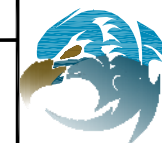
DATE: 03/11/15

FIG. NO.

5

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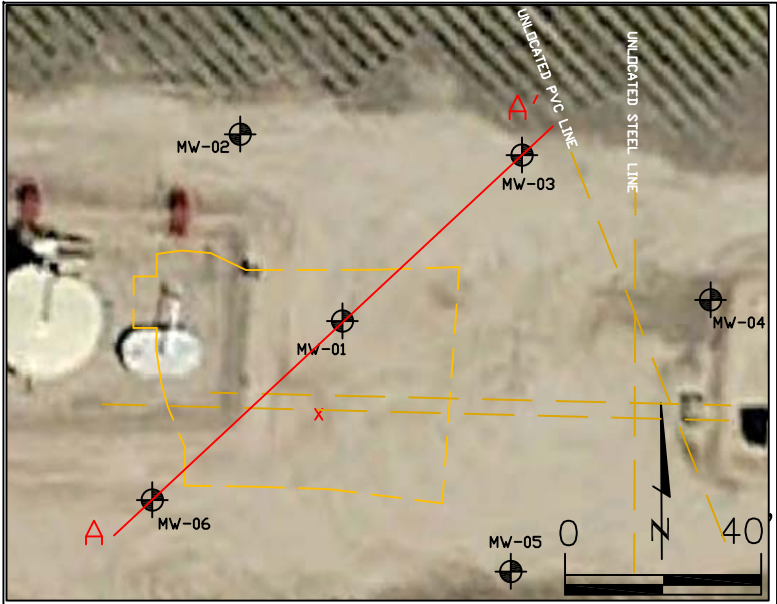
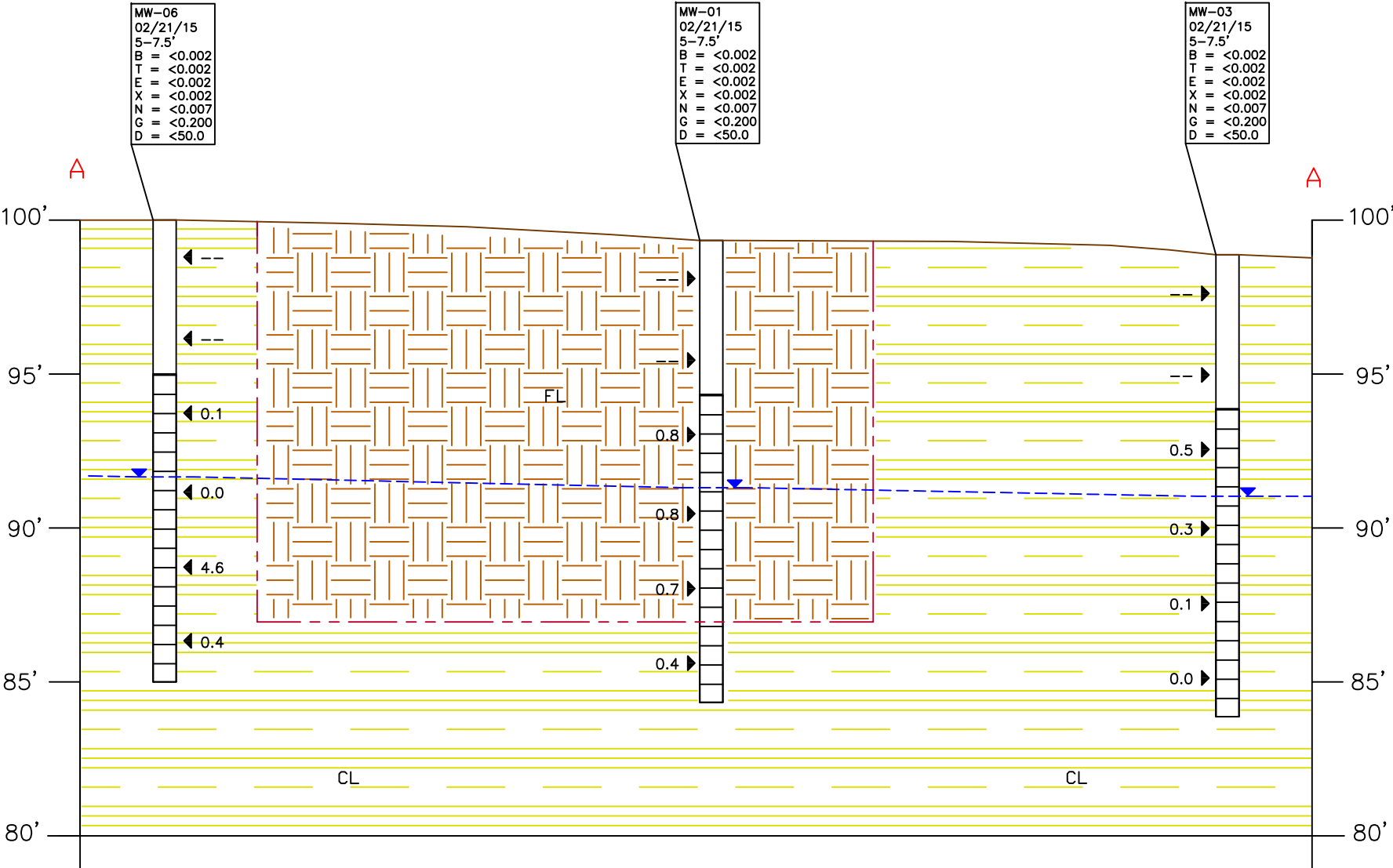
amn



**EAGLE**  
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Ph: 303-433-0479 • F: 303-325-5449



GEOLOGIC CROSS-SECTION A-A'



LEGEND

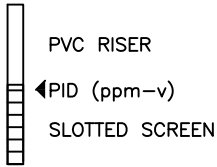
- FL FILL (SILTS/SANDS AND CLAYS)
- CL SANDY CLAY
- GROUND SURFACE
- EXCAVATION BOUNDARIES
- OBSERVED CONTACT
- INFERRED CONTACT
- OBSERVED GROUNDWATER (03/05/15)
- A — A' LINE OF CROSS SECTION

PARAMETERS

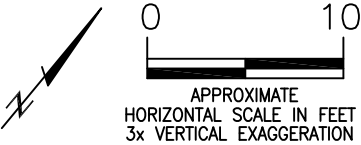
SAMPLE LOCATION  
DATE  
DEPTH (FEET)  
B = BENZENE (mg/kg)  
T = TOLUENE (mg/kg)  
E = ETHYLBENZENE (mg/kg)  
X = TOTAL XYLENES (mg/kg)  
N = NAPHTHALENE (mg/kg)  
G = TPH-GRO (mg/kg)  
D = TPH-DRO (mg/kg)

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 THE LABORATORY REPORTING LIMIT



ppm-v = PARTS PER MILLION BY VOLUME



**GEOLOGIC CROSS SECTION (A-A')**  
JOHNSON #2, #11-16G6  
DUMP RELEASE  
40.499011 / -104.742371  
SW1/4 SE1/4 SEC.11 T6N R66W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-10980, 05-123-17881

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FIG. NO. 6 DATE: 03/12/15 DRAWN BY: AMN



# LEGEND

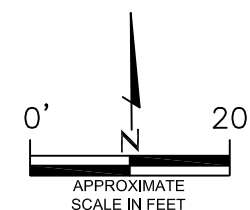
- X APPROXIMATE RELEASE LOCATION
- APPROXIMATE EXCAVATION EXTENTS
- APPROXIMATE UNDERGROUND UTILITY LOCATION
- ⊕ APPROXIMATE MONITORING WELL LOCATIONS

(4748.25) GROUNDWATER ELEVATION (FT.)

- INFERRED GROUNDWATER ELEVATION CONTOUR (FT.)
- APPROXIMATE GROUNDWATER FLOW DIRECTION

FT. = FEET

NOTE: GROUNDWATER ELEVATION DATA WAS COLLECTED 03/05/15.



## GROUNDWATER ELEVATION MAP

JOHNSON #2, #11-16G6  
DUMP LINE RELEASE  
40.499011/-104.742371  
SW1/4 SE1/4 SEC.11 T6N R66W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-12389, 05-123-17881

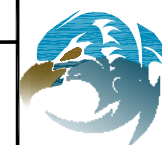
DATE: 03/11/15

FIG.  
NO.

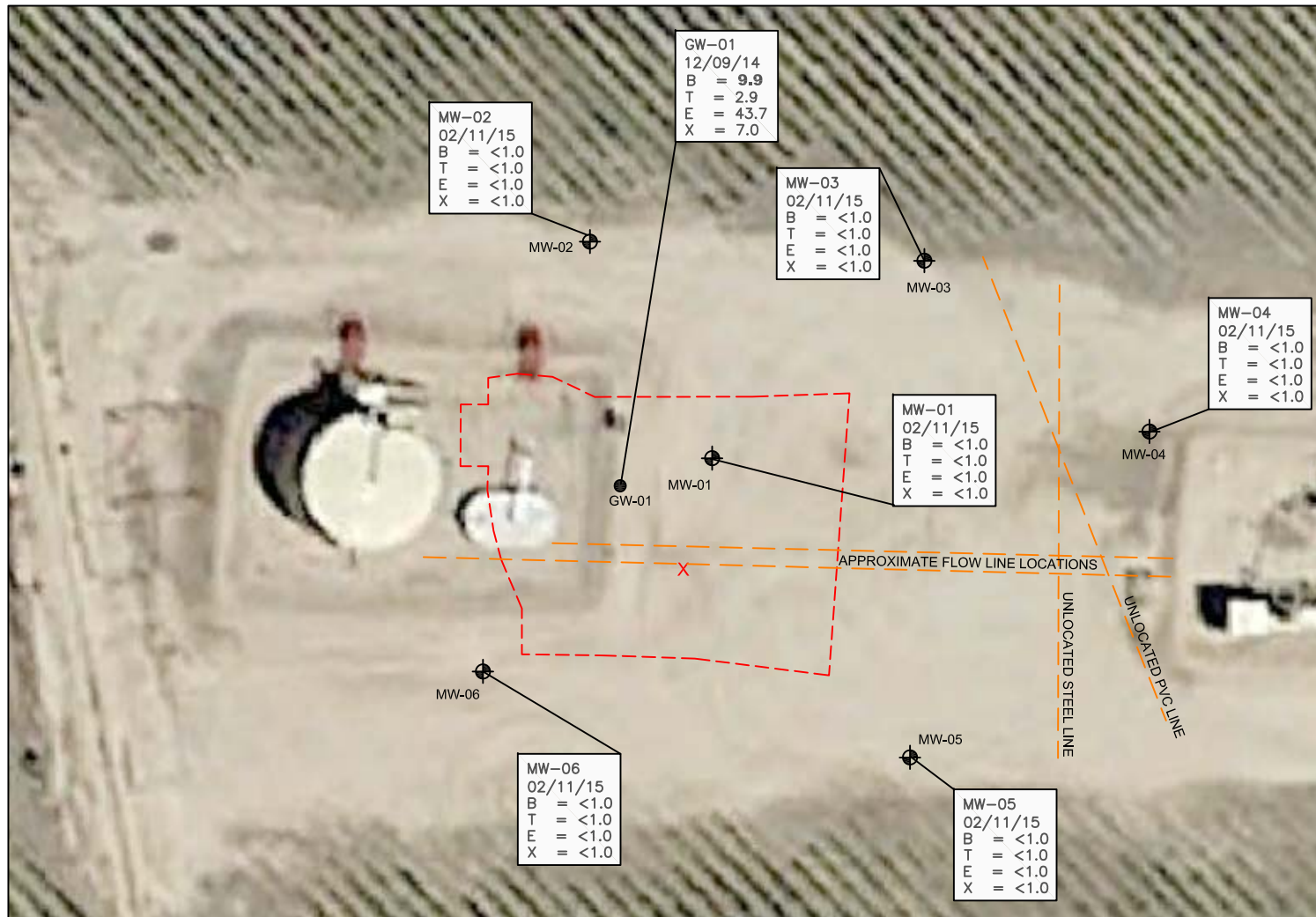
7

DRAWN BY:

amn



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# LEGEND

- X APPROXIMATE RELEASE LOCATION
- APPROXIMATE EXCAVATION EXTENTS
- APPROXIMATE UNDERGROUND UTILITY LOCATION
- ⊕ APPROXIMATE MONITORING WELL LOCATIONS
- GROUNDWATER SAMPLE LOCATION  
GW-01

## PARAMETERS

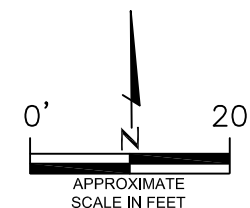
GROUNDWATER SAMPLE LOCATION  
DATE  
B = BENZENE (µg/L)  
T = TOLUENE (µg/L)  
E = ETHYLBENZENE (µg/L)  
X = TOTAL XYLENES (µg/L)

µg/L = MILLIGRAMS PER LITER

VALUES PRESENTED IN **BOLD** EXCEED THE COGCC TABLE 910-1 REGULATORY LIMITS FOR THAT COMPOUND

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

COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION



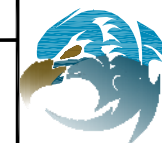
## GROUNDWATER ANALYTICAL MAP

JOHNSON #2, #11-16G6  
DUMP LINE RELEASE  
40.499011/-104.742371  
SW1/4 SE1/4 SEC.11 T6N R66W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-12389, 05-123-17881

DATE: 03/11/15

FIG. NO. 8

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## **TABLES**

**Table 1:     Soil Analytical Results Summary**

**Table 2:     Groundwater Analytical Results Summary**

**Table 3:     Groundwater Elevation Summary**

TABLE 1  
SOIL ANALYTICAL RESULTS SUMMARY  
JOHNSON #2, #11-16G6  
DUMP LINE RELEASE  
40.499011 / -104.742371  
SW¼ SEC.11 T6N R66W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-12389, 05-123-17881

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)
<b>COGCC Table 910-1 Regulatory Limits (mg/kg)</b>			<b>0.17</b>	<b>85</b>	<b>100</b>	<b>175</b>	<b>23</b>	<b>500</b>	
SS-01 @ 4' (40.499029217 / -104.742351901)	08/29/14	4	<0.0500	0.0745	<0.0500	0.191	<0.200	<50.0	<50.0
SS-02 @ 4' (40.499004736 / -104.742352323)	08/29/14	4	<0.0500	0.108	<0.0500	0.352	<0.200	115	73.3
SS-03 @ 4' (40.499017869 / -104.742314637)	08/29/14	4	<0.00200	<0.00200	<0.00200	<0.00200	<0.00800	<50.0	<50.0
SS-04 @ 4' (40.499020157 / -104.74237763)	08/29/14	4	<b>5.32</b>	17.4	5.60	39.1	1.20	<b>1290</b>	<b>831</b>
SS-05 @ 5.5' (40.499015426 / -104.742350888)	08/29/14	5.5	<b>12.4</b>	27.2	17.9	133	1.34	<b>4130</b>	<b>1940</b>
SS-10 @ 9' (40.498977266 / -104.742357059)	12/08/14	9	0.114	0.146	0.203	0.382	0.057	15.1	<50.0
SS-11 @ 9' (40.498992366 / -104.742389034)	12/08/14	9	<b>0.345</b>	<0.002	0.097	0.005	0.020	11.5	60.0
SS-13 @ 9' (40.498987804 / -104.742328856)	12/08/14	9	<b>0.259</b>	0.018	0.045	0.200	<0.008	0.977	<50.0
SS-16 @ 9' (40.498976746 / -104.742394597)	12/08/14	9	<b>9.38</b>	18.8	10.6	74.2	<4.00	<b>2700</b>	<b>774</b>
SS-28 @ 9' (40.499062889 / -104.742447337)	12/09/14	9	<0.002	<0.002	<0.002	<0.002	<0.008	1.36	51.4
SS-34 @ 9' (40.499060037 / -104.742378755)	12/09/14	9	<0.002	0.002	0.060	<0.002	0.107	67.9	<50.0
SS-35 @ 9' (40.499049051 / -104.742322883)	12/09/14	9	<0.002	<0.002	<0.002	<0.002	<0.008	0.332	<50.0
SS-37 @ 9.5' (40.498981994 / -104.742425425)	12/10/14	9.5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.200	<50.0
SS-38 @ 9' (40.49900641 / -104.742451837)	12/10/14	9	<0.002	<0.002	<0.002	<0.002	<0.008	<0.200	<50.0
SS-42 @ 9' (40.498973044 / -104.742319436)	12/12/14	9	0.003	<0.002	<0.002	<0.002	<0.008	<0.200	<50.0
SS-43 @ 9.5' (40.498973044 / -104.742319436)	12/12/14	9.5	0.014	<0.002	0.017	0.002	0.008	0.754	<50.0
SS-47 @ 9' (40.499044476 / -104.742285665)	12/12/14	9	<0.002	<0.002	<0.002	<0.002	<0.008	<0.200	<50.0
MW-01 @ 5-7.5' (40.4990508052 / -104.742330492)	02/11/15	5-7.5	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0
MW-02 @ 7.5-10' (40.499127233 / -104.7423879928)	02/11/15	7.5-10	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0
MW-03 @ 5-7.5' (40.4991099592 / -104.742249361)	02/11/15	5-7.5	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0
MW-04 @ 5-7.5' (40.4990493782 / -104.742164695)	02/11/15	5-7.5	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0
MW-05 @ 5-7.5' (40.4989609662 / -104.742261544)	02/11/15	5-7.5	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0
MW-06 @ 5-7.5' (40.4989836842 / -104.742422708)	02/11/15	5-7.5	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0
COGCC = Colorado Oil and Gas Conservation Commission 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 (<) indicate concentrations were not observed at or above the laboratory reporting limit. Values presented in bold typeface exceed their respective COGCC - Regulatory Limits (Table 910-1).									



TABLE 2  
GROUNDWATER ANALYTICAL RESULTS SUMMARY  
JOHNSON #2, #11-16G6  
DUMP LINE RELEASE  
40.499011 / -104.742371  
SW¼ SE¼ SEC.11 T6N R66W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-12389, 05-123-17881

Sample Location (Latitude/Longitude)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
<b>COGCC Table 910-1 Regulatory Limits (µg/L)</b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1400</b>
GW-01 (40.499036 / -104.742369)	12/09/14	<b>9.9</b>	2.9	43.7	7
MW-01 (40.4990508052 / -104.742330492)	02/11/15	<1.0	<1.0	<1.0	<1.0
MW-02 (40.499127233 / -104.7423879928)	02/11/15	<1.0	<1.0	<1.0	<1.0
MW-03 (40.4991099592 / -104.742249361)	02/11/15	<1.0	<1.0	<1.0	<1.0
MW-04 (40.4990493782 / -104.742164695)	02/11/15	<1.0	<1.0	<1.0	<1.0
MW-05 (40.4989609662 / -104.742261544)	02/11/15	<1.0	<1.0	<1.0	<1.0
MW-06 (40.4989836842 / -104.742422708)	02/11/15	<1.0	<1.0	<1.0	<1.0
COGCC = Colorado Oil and Gas Conservation Commission					
µg/L - micrograms per liter					
Note: Values presented with a less than symbol (<) indicate concentrations were not observed at or above the laboratory reporting limit.					
Values presented in bold typeface exceed their respective COGCC - Regulatory Limits (Table 910-1).					

TABLE 3  
GROUNDWATER ELEVATION SUMMARY  
JOHNSON #2, #11-16G6  
DUMP LINE RELEASE  
40.499011 / -104.742371  
SW¼ SE¼ SEC.11 T6N R66W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-12389, 05-123-17881

Sample Location (Latitude/Longitude)	Date	Top of Casing Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)
MW-01 (40.4990508052 / -104.742330492)	03/05/15	99.34	8.03	91.31
MW-02 (40.499127233 / -104.7423879928)	03/05/15	99.69	7.87	91.82
MW-03 (40.4991099592 / -104.742249361)	03/05/15	98.87	7.84	91.03
MW-04 (40.4990493782 / -104.742164695)	03/05/15	98.17	7.63	90.54
MW-05 (40.4989609662 / -104.742261544)	03/05/15	98.82	8.21	90.61
MW-06 (40.4989836842 / -104.742422708)	03/05/15	100.00	8.34	91.66

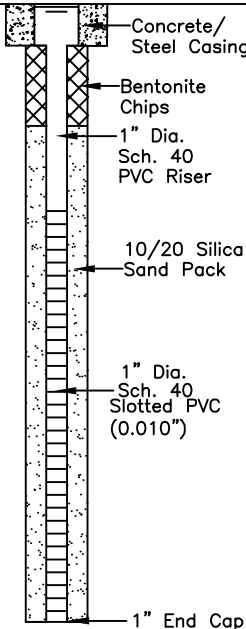
## **ATTACHMENT A**

### **Boring Logs and Monitoring Well Completion Diagrams**



# Boring Log/Well Completion Diagram: MW-01

PAGE 1 OF 1

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	0-5' - POTHOLED									Wet @ 9.5', saturated.
5	(5-15')sandy silty CLAY - dark brown, mod. firm, low-mod. plasticity, well sorted with 10% silt and 10% medium to coarse grained sand, moist, N/O, N/S.	CL	GP	1	100	0.8	N/A	5		
10	-Wet @ ~9.5-10' bgs					0.8		10		
15	BoB @ 15'		GP	2	100	0.7	N/A	15		
20						0.4		20		
25								25	HC - Hydrocarbon BoB - Bottom of Boring N/O - no odor N/S - no staining TOC - top of casing bgs - below ground surface	
30								30		

START/COMPLETION DATE: 02/11/2015

SAND PACK INTERVAL (FEET): 3-15

PROJECT: JOHNSON #2, #11-16G6

BENTONITE/GROUT INTERVAL (FEET): 1-3

LOGGED BY: A. NEWBERRY

WELL SCREEN INTERVAL (FEET): 5-15

DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE

WELL DIAMETER (INCHES): 1

BORING DEPTH (FEET): 15

WELL DEPTH (FEET): 15

PID INSTRUMENT: MiniRAE 3000

TIME STARTED/COMPLETED: 1150/1230

SAMPLE COLLECTION DEPTH (FEET)/TIME: 5-7.5/1220

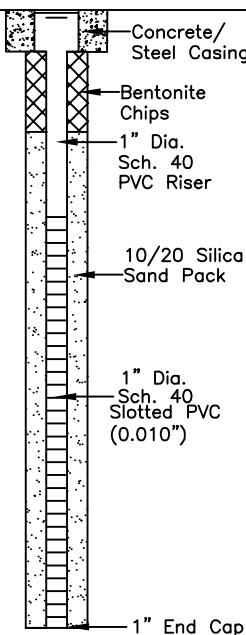
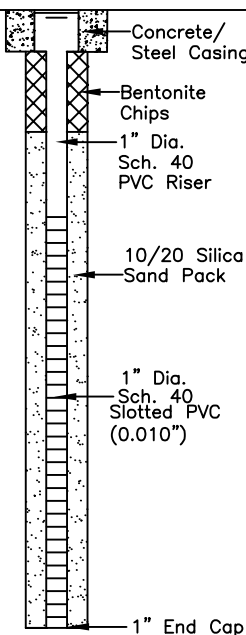


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# Boring Log/Well Completion Diagram: MW-02

PAGE 1 OF 1

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	0-5' - POTHOLED									Wet @ 10.5', saturated.
5	(5-15')sandy silty CLAY - brown, soft, mod.-high plasticity, well-sorted with 10% silt and 10% fine-grained sand, moist, N/O, N/S.	CL	GP	1	85	0.1	N/A	5		
						0.2		10		
10	-Wet @ ~10.5' bgs		GP	2	95	0.2	N/A	10		
						0.0		15		
15	-Firm @ ~14.5' bgs							15		Wet @ 10.5', saturated.
	BoB @ 15'							20		
20								25		
25								30		

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: 02/11/2015

SAND PACK INTERVAL (FEET): 3-15

PROJECT: JOHNSON #2, #11-16G6

BENTONITE/GROUT INTERVAL (FEET): 1-3

LOGGED BY: A. NEWBERRY

WELL SCREEN INTERVAL (FEET): 5-15

DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE

WELL DIAMETER (INCHES): 1

BORING DEPTH (FEET): 15

WELL DEPTH (FEET): 15

PID INSTRUMENT: MiniRAE 3000

TIME STARTED/COMPLETED: 0915/0950

SAMPLE COLLECTION DEPTH (FEET)/TIME: 7.5-10/0930

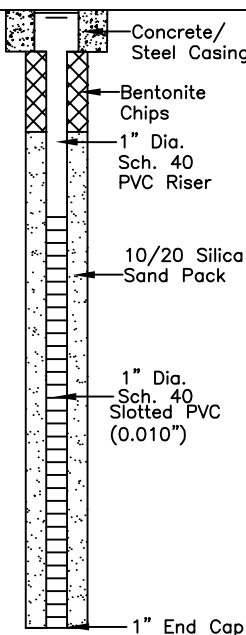


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# Boring Log/Well Completion Diagram: MW-03

PAGE 1 OF 1

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	0-5' - POTHOLED									Wet @ 10', saturated.
5	(5-15')sandy CLAY - brown, very soft, high plasticity, well-sorted with 20% fine-grained sand, moist to very moist, N/O, N/S.		GP	1	100	0.5	N/A	5		
10	-Wet @ ~10' bgs	CL				0.3		10		
15	-Firm with ferrous stains @ ~14' bgs		GP	2	100	0.1	N/A	15		
15	BoB @ 15'					0.0		15		
20								20		
25								25		
30								30		

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: 02/11/2015

SAND PACK INTERVAL (FEET): 3-15

PROJECT: JOHNSON #2, #11-16G6

BENTONITE/GROUT INTERVAL (FEET): 1-3

LOGGED BY: A. NEWBERRY

WELL SCREEN INTERVAL (FEET): 5-15

DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE

WELL DIAMETER (INCHES): 1

BORING DEPTH (FEET): 15

WELL DEPTH (FEET): 15

PID INSTRUMENT: MiniRAE 3000

TIME STARTED/COMPLETED: 1012/1045

SAMPLE COLLECTION DEPTH (FEET)/TIME: 5-7.5/1018

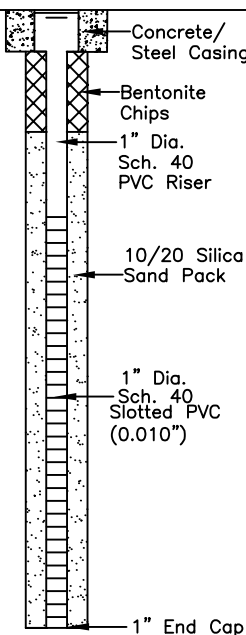


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# Boring Log/Well Completion Diagram: MW-04

PAGE 1 OF 1

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	0-5' - POTHOLED									Wet @ 10', saturated.
5	(5-15')sandy CLAY - brown, soft, mod.-high plasticity, well-sorted with 15% fine-grained sand, moist, N/O, N/S.	CL	GP	1	100	0.8	N/A	5		
10	-Wet @ ~10' bgs					0.3		10		
15	-Firm with ferrous stains @ ~14' bgs		GP	2	95	0.4	N/A	15		
20	BoB @ 15'					0.3		20		
25								25		HC - Hydrocarbon BoB - Bottom of Boring N/O - no odor N/S - no staining TOC - top of casing bgs - below ground surface
30								30		

START/COMPLETION DATE: 02/11/2015

SAND PACK INTERVAL (FEET): 3-15

PROJECT: JOHNSON #2, #11-16G6

BENTONITE/GROUT INTERVAL (FEET): 1-3

LOGGED BY: A. NEWBERRY

WELL SCREEN INTERVAL (FEET): 5-15

DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE

WELL DIAMETER (INCHES): 1

BORING DEPTH (FEET): 15

WELL DEPTH (FEET): 15

PID INSTRUMENT: MiniRAE 3000

TIME STARTED/COMPLETED: 1100/1130

SAMPLE COLLECTION DEPTH (FEET)/TIME: 5-7.5/1115

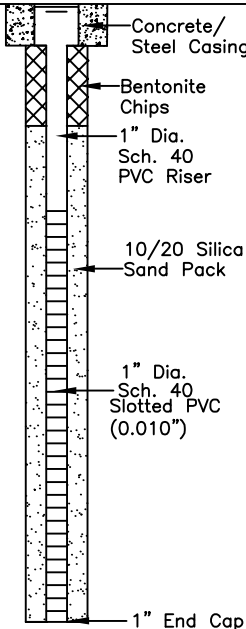


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# Boring Log/Well Completion Diagram: MW-05

PAGE 1 OF 1

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	0-5' - POTHOLED									Wet @ 9.5', saturated.
5	(5-15')sandy CLAY - brown with ferrous stains, soft-mod. firm, mod. plasticity, well-sorted with 15% fine-grained sand, moist, N/O, N/S.	CL	GP	1	90	3.2	N/A	5		
10	-Wet @ ~9.5' bgs -Gray and black HC staining and a strong odor from ~10-13.5' bgs					2.4		10		
15	-Firm @ ~13.5' bgs with N/O, N/S		GP	2	100	119.2	N/A	15		
20	BoB @ 15'					3.7		20		
25								25		HC - Hydrocarbon BoB - Bottom of Boring N/O - no odor N/S - no staining TOC - top of casing bgs - below ground surface
30								30		

START/COMPLETION DATE: 02/11/2015

SAND PACK INTERVAL (FEET): 3-15

PROJECT: JOHNSON #2, #11-16G6

BENTONITE/GROUT INTERVAL (FEET): 1-3

LOGGED BY: A. NEWBERRY

WELL SCREEN INTERVAL (FEET): 5-15

DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE

WELL DIAMETER (INCHES): 1

BORING DEPTH (FEET): 15

WELL DEPTH (FEET): 15

PID INSTRUMENT: MiniRAE 3000

TIME STARTED/COMPLETED: 1240/1315

SAMPLE COLLECTION DEPTH (FEET)/TIME: 5-7.5/1300

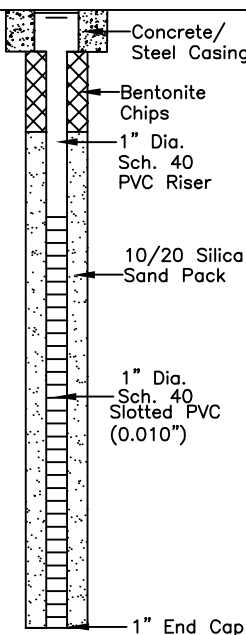
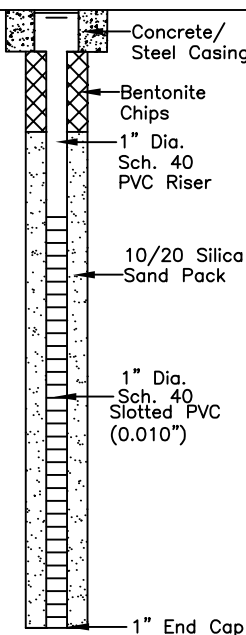


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# Boring Log/Well Completion Diagram: MW-06

PAGE 1 OF 1

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	0-5' - POTHOLED									Wet @ 9', saturated.
5	(5-15')sandy CLAY - brown, soft, mod. plasticity, well-sorted with 20% fine-grained sand, moist to very moist, N/O, N/S.  -Wet @ ~9' bgs	CL	GP	1	100	0.1	N/A	5		
10	-Gray and black HC staining and a slight odor from ~10-12.5' bgs  -Firm with ferrous stains and N/o, N/S @ ~13.5' bgs					0.0		10		
15	BoB @ 15'		GP	2	90	4.6	N/A	15		
20						0.4		20		
25								25		HC - Hydrocarbon BoB - Bottom of Boring N/O - no odor N/S - no staining TOC - top of casing bgs - below ground surface
30								30		

START/COMPLETION DATE: 02/11/2015

SAND PACK INTERVAL (FEET): 3-15

PROJECT: JOHNSON #2, #11-16G6

BENTONITE/GROUT INTERVAL (FEET): 1-3

LOGGED BY: A. NEWBERRY

WELL SCREEN INTERVAL (FEET): 5-15

DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE

WELL DIAMETER (INCHES): 1

BORING DEPTH (FEET): 15

WELL DEPTH (FEET): 15

PID INSTRUMENT: MiniRAE 3000

TIME STARTED/COMPLETED: 0950/1008

COLLECTION DEPTH (FEET)/TIME: 5-7.5/1003



**EAGLE**  
ENVIRONMENTAL  
CONSULTING, INC.

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

## **ATTACHMENT B**

### **Laboratory Analytical Reports**



September 03, 2014

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - Johnson #2, #11-16G6

Project Number - [none]

Attached are your analytical results for Noble - Johnson #2, #11-16G6 received by Origins Laboratory, Inc. August 29, 2014. This project is associated with Origins project number X408257-01.

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 - Johnson #2, #11-16G6

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-01 @ 4'	X408257-01	Soil	August 29, 2014 13:30	08/29/2014 15:30
SS-02 @ 4'	X408257-02	Soil	August 29, 2014 13:32	08/29/2014 15:30
SS-03 @ 4'	X408257-03	Soil	August 29, 2014 13:35	08/29/2014 15:30
SS-04 @ 4'	X408257-04	Soil	August 29, 2014 13:38	08/29/2014 15:30
SS-05 @ 5.5'	X408257-05	Soil	August 29, 2014 13:40	08/29/2014 15:30

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.*

Noelle Doyle Mathis, President

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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

www.originslaboratory.com

X408257

page 1 of 1

**ORIGINS**  
LABORATORY, INC

Client: Eagle Environmental Consulting Project Manager/Send Report To: Martin Eckert III  
Address: 4101 Inca St. Email Address: mc3@eagle-ec.com  
Denver, CO 80211 Project Name/Number: Johnson #2, #11-16G6  
Telephone Number: 303-433-0474 Samples Collected By: A. Newberry

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/Method	Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa #		
SS-01@4'	8/29/14	1330	2	X				X			GBTEX, 8260 Naphthalene DRO BTTS	1
SS-02@4'		1332										2
SS-03@4'		1335										3
SS-04@4'		1338										4
SS-05@5.5'		1340										5
												6
												7
												8
												9
												10

Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:
<u>John Johnson</u>	<u>8-29-14</u>	<u>1530</u>	<u>[Signature]</u>	<u>8-29-14</u>	<u>1530</u>	Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>

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 - Johnson #2, #11-16G6

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: X408257

Client: Eagle

Client Project ID: Johnson #1

Checklist Completed by: Jeff Smith

Shipped Via: HTD

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

Date/time completed: 8/29/14 1607

Airbill #: NA

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: \_\_\_\_\_

Cooler Number/Temperature: 1 / 12.3 °C 1 / \_\_\_\_\_ °C 1 / \_\_\_\_\_ °C (Describe)

Thermometer ID: 12002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) / (pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any): <u>I was notified by Andrew N. via phone conversation to revise the Project Name on the COC to Johnson #1</u>				
<u>8/29/14 Jeff Smith</u>				

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

Reviewed by (Project Manager) [Signature]

Date/Time Reviewed 8-29-14 1758

Origins Laboratory, Inc.

[Signature]

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

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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

SS-01 @ 4'  
8/29/2014 1:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X408257-01 (Soil)

## BTEX + Napthalene by EPA 8260C

Benzene	ND	50.0	ug/kg	25	4H29012	08/29/2014	08/29/2014
Toluene	74.5	50.0	"	"	"	"	"
Ethylbenzene	ND	50.0	"	"	"	"	"
Xylenes, total	191	50.0	"	"	"	"	"
Naphthalene	ND	200	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	97.3 %	70-130			"	"	"
Surrogate: Toluene-d8	98.5 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	99.3 %	70-130			"	"	"

## GRO (TVPH)/DRO (TEPH)by EPA 8015C

Gasoline (C6-C10)	ND	50.0	mg/kg	1	4H29008	08/29/2014	08/30/2014
Diesel (C10-C28)	ND	50.0	"	"	"	"	"

Surrogate: o-Terphenyl	110 %	59-131			"	"	"
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Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

SS-02 @ 4'  
8/29/2014 1:32:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X408257-02 (Soil)

## BTEX + Napthalene by EPA 8260C

Benzene	ND	50.0	ug/kg	25	4H29012	08/29/2014	08/29/2014
Toluene	108	50.0	"	"	"	"	"
Ethylbenzene	ND	50.0	"	"	"	"	"
Xylenes, total	352	50.0	"	"	"	"	"
Napthalene	ND	200	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	98.7 %	70-130			"	"	"
Surrogate: Toluene-d8	98.4 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	98.1 %	70-130			"	"	"

## GRO (TVPH)/DRO (TEPH)by EPA 8015C

Gasoline (C6-C10)	115	50.0	mg/kg	1	4H29008	08/29/2014	08/30/2014
Diesel (C10-C28)	73.3	50.0	"	"	"	"	"

Surrogate: o-Terphenyl	106 %	59-131			"	"	"
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Origins Laboratory, Inc.



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

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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

SS-03 @ 4'  
8/29/2014 1:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X408257-03 (Soil)

## BTEX + Napthalene by EPA 8260C

Benzene	ND	2.00	ug/kg	1	4H29012	08/29/2014	08/29/2014
Toluene	ND	2.00	"	"	"	"	"
Ethylbenzene	ND	2.00	"	"	"	"	"
Xylenes, total	ND	2.00	"	"	"	"	"
Napthalene	ND	8.00	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	107 %	70-130	"	"	"
Surrogate: Toluene-d8	96.6 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	100 %	70-130	"	"	"

## GRO (TVPH)/DRO (TEPH)by EPA 8015C

Gasoline (C6-C10)	ND	50.0	mg/kg	1	4H29008	08/29/2014	08/30/2014
Diesel (C10-C28)	ND	50.0	"	"	"	"	"

Surrogate: o-Terphenyl	101 %	59-131	"	"	"
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Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

SS-04 @ 4'  
8/29/2014 1:38:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X408257-04 (Soil)

## BTEX + Napthalene by EPA 8260C

Benzene	5320	500	ug/kg	250	4H29012	08/29/2014	09/01/2014
Toluene	17400	500	"	"	"	"	"
Ethylbenzene	5600	500	"	"	"	"	"
Xylenes, total	39100	500	"	"	"	"	"
Naphthalene	1200	400	"	50	"	"	08/29/2014

Surrogate: 1,2-Dichloroethane-d4	100 %	70-130			"	"	09/01/2014
Surrogate: Toluene-d8	105 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	96.8 %	70-130			"	"	"

## GRO (TVPH)/DRO (TEPH)by EPA 8015C

Gasoline (C6-C10)	1290	50.0	mg/kg	1	4H29008	08/29/2014	08/30/2014
Diesel (C10-C28)	831	50.0	"	"	"	"	"

Surrogate: o-Terphenyl	101 %	59-131			"	"	"
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Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

SS-05 @ 5.5'  
8/29/2014 1:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X408257-05 (Soil)

## BTEX + Napthalene by EPA 8260C

Benzene	12400	500	ug/kg	250	4H29012	08/29/2014	09/01/2014
Toluene	27200	500	"	"	"	"	"
Ethylbenzene	17900	500	"	"	"	"	"
Xylenes, total	133000	500	"	"	"	"	"
Napthalene	1340	400	"	50	"	"	08/29/2014

Surrogate: 1,2-Dichloroethane-d4	110 %	70-130			"	"	09/01/2014
Surrogate: Toluene-d8	124 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	95.9 %	70-130			"	"	"

## GRO (TVPH)/DRO (TEPH)by EPA 8015C

Gasoline (C6-C10)	4130	50.0	mg/kg	1	4H29008	08/29/2014	08/30/2014
Diesel (C10-C28)	1940	50.0	"	"	"	"	"

Surrogate: o-Terphenyl	108 %	59-131			"	"	"
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Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H29008 - EPA 3580										
Blank (4H29008-BLK1)					Prepared: 08/29/2014 Analyzed: 08/29/2014					
Gasoline (C6-C10)	ND	50.0	mg/kg							
Diesel (C10-C28)	ND	50.0	"							
Surrogate: o-Terphenyl	59		g	50.0		118	59-131			
LCS (4H29008-BS1)					Prepared: 08/29/2014 Analyzed: 08/29/2014					
Gasoline (C6-C10)	1080	50.0	mg/kg	1000		108	59-133			
Diesel (C10-C28)	1070	50.0	"	1000		107	64-121			
Surrogate: o-Terphenyl	52		g	50.0		103	59-131			
Matrix Spike (4H29008-MS1)					Source: X408249-01		Prepared: 08/29/2014 Analyzed: 08/29/2014			
Gasoline (C6-C10)	1090	50.0	mg/kg	1000	47.4	104	57-139			
Diesel (C10-C28)	1110	50.0	"	1000	13.6	110	53-125			
Surrogate: o-Terphenyl	54		g	50.0		108	59-131			
Matrix Spike Dup (4H29008-MSD1)					Source: X408249-01		Prepared: 08/29/2014 Analyzed: 08/29/2014			
Gasoline (C6-C10)	1070	50.0	mg/kg	1000	47.4	103	57-139	1.15	20	
Diesel (C10-C28)	1040	50.0	"	1000	13.6	103	53-125	6.78	20	
Surrogate: o-Terphenyl	53		g	50.0		106	59-131			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H29012 - EPA 5030 (soil)										
Blank (4H29012-BLK1)					Prepared: 08/29/2014 Analyzed: 08/29/2014					
Benzene	ND	2.00	ug/kg							
Toluene	ND	2.00	"							
Ethylbenzene	ND	2.00	"							
m,p-Xylene	ND	4.00	"							
o-Xylene	ND	2.00	"							
Xylenes, total	ND	2.00	"							
Naphthalene	ND	8.00	"							
Surrogate: 1,2-Dichloroethane-d4	69.2		ug/L	62.5		111	70-130			
Surrogate: Toluene-d8	61.1		"	62.5		97.7	70-130			
Surrogate: 4-Bromofluorobenzene	64.8		"	62.5		104	70-130			
LCS (4H29012-BS1)					Prepared: 08/29/2014 Analyzed: 08/29/2014					
Benzene	95.2	2.00	ug/kg	100		95.2	77.1-124			
Toluene	88.9	2.00	"	100		88.9	74.5-128			
Ethylbenzene	95.4	2.00	"	100		95.4	66.4-127			
m,p-Xylene	189	4.00	"	200		94.6	76.6-124			
o-Xylene	96.5	2.00	"	100		96.5	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	65.9		ug/L	62.5		105	70-130			
Surrogate: Toluene-d8	60.3		"	62.5		96.5	70-130			
Surrogate: 4-Bromofluorobenzene	61.3		"	62.5		98.0	70-130			
Matrix Spike (4H29012-MS1)					Source: X408257-03	Prepared: 08/29/2014 Analyzed: 08/29/2014				
Benzene	89.3	2.00	ug/kg	100	0.64	88.7	71.8-126			
Toluene	88.5	2.00	"	100	ND	88.5	65.1-130			
Ethylbenzene	88.3	2.00	"	100	ND	88.3	62.2-130			
m,p-Xylene	178	4.00	"	200	1.02	88.5	46.5-137			
o-Xylene	92.6	2.00	"	100	1.20	91.4	54.2-134			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

## Volatile Organic Compounds by EPA Method 8260B - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H29012 - EPA 5030 (soil)										
<b>Matrix Spike (4H29012-MS1)</b>		<b>Source: X408257-03</b>			<b>Prepared: 08/29/2014 Analyzed: 08/29/2014</b>					
Surrogate: 1,2-Dichloroethane-d4	68.0		ug/L	62.5		109	70-130			
Surrogate: Toluene-d8	61.4		"	62.5		98.3	70-130			
Surrogate: 4-Bromofluorobenzene	61.4		"	62.5		98.3	70-130			
<b>Matrix Spike Dup (4H29012-MSD1)</b>		<b>Source: X408257-03</b>			<b>Prepared: 08/29/2014 Analyzed: 08/29/2014</b>					
Benzene	92.5	2.00	ug/kg	100	0.64	91.8	71.8-126	3.50	11.3	
Toluene	90.3	2.00	"	100	ND	90.3	65.1-130	2.10	15.4	
Ethylbenzene	90.5	2.00	"	100	ND	90.5	62.2-130	2.46	19.6	
m,p-Xylene	183	4.00	"	200	1.02	90.9	46.5-137	2.66	19.2	
o-Xylene	93.8	2.00	"	100	1.20	92.6	54.2-134	1.35	17.9	
Surrogate: 1,2-Dichloroethane-d4	65.1		ug/L	62.5		104	70-130			
Surrogate: Toluene-d8	61.6		"	62.5		98.5	70-130			
Surrogate: 4-Bromofluorobenzene	63.0		"	62.5		101	70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

### 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.*

Noelle Doyle Mathis, President



December 10, 2014

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

**Project Name - Noble - Johnson #2, #11-16G6**

**Project Number - [none]**

Attached are your analytical results for Noble - Johnson #2, #11-16G6 received by Origins Laboratory, Inc. December 08, 2014. This project is associated with Origins project number X412113-01.

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.

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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 - Johnson #2, #11-16G6

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-10 @ 9'	X412113-01	Soil	December 8, 2014 13:15	12/08/2014 17:57
SS-11 @ 9'	X412113-02	Soil	December 8, 2014 13:30	12/08/2014 17:57
SS-13 @ 9'	X412113-03	Soil	December 8, 2014 13:45	12/08/2014 17:57
SS-16 @ 9'	X412113-04	Soil	December 8, 2014 15:40	12/08/2014 17:57

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 - Johnson #2, #11-16G6

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page 1 of 1

ORIGINS  
LABORATORY, INC

Client: Eagle Environmental  
Address: 4101 Inca Street  
Denver, CO 80211  
Telephone Number: 303-433-0479  
Email Address: mce3@eagle-enviro.com

Project Manager: Martin Eckert III  
Project Name: Johnson #2, #11-16G6  
Project Number: NA  
Samples Collected By: EV

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix		Analysis				Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa Canister #	Other	3260c	4260c	
SS-10@9'	12/8/14	1315	2	X				X		X	X	X	X	1
SS-11@9'		1330												2
SS-13@9'		1345												3
SS-16@9'		1540												4
														5
														6
														7
														8
														9
														10
Relinquished By: <i>Roby redwood</i>	Date: 12/8/14	Time: 1800		Received By: <i>Jeff Smith</i>	Date: 12/8/14	Time: 1800		Received By: <i>Jeff Smith</i>	Date: 12/8/14	Time: 1800		Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>		

Date Results Needed: \*NO\* 12

Temp Received:

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 - Johnson #2, #11-16G6

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: X412113

Client: Eagle

Client Project ID: Johnson #1

Checklist Completed by: Jeff Smith

Shipped Via: HTD

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

Date/time completed: 12/8/14

Airbill #: DA

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: \_\_\_\_\_

Cooler Number/Temperature: 1 / 33 °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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/ (pH < 2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH > 10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Reviewed by: (Project Manager)

12-08-14 1543  
Date/Time Reviewed

Origins Laboratory, Inc.

*Jefi 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 - Johnson #2, #11-16G6

**SS-10 @ 9'**  
**12/8/2014 1:15:00PM**

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

**Origins Laboratory, Inc.**  
**X412113-01 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4L08012	12/08/2014	12/09/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	96.2 %	59-131			"	"	"
------------------------	--------	--------	--	--	---	---	---

## GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	15.1	0.200	mg/kg	1	4L08006	12/08/2014	12/09/2014
Benzene	0.114	0.002	"	"	"	"	"
Toluene	0.146	0.002	"	"	"	"	"
Ethylbenzene	0.203	0.002	"	"	"	"	"
Xylenes, total	0.382	0.002	"	"	"	"	"
Napthalene	0.057	0.008	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	98.8 %	70-130			"	"	"
Surrogate: Toluene-d8	124 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	114 %	70-130			"	"	"

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

SS-11 @ 9'  
12/8/2014 1:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X412113-02 (Soil)

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

Diesel (C10-C28)	60.0	50.0	mg/kg	1	4L08012	12/08/2014	12/09/2014
------------------	------	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	77.1 %	59-131			"	"	"
------------------------	--------	--------	--	--	---	---	---

## GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	11.5	0.200	mg/kg	1	4L08006	12/08/2014	12/09/2014
Benzene	0.345	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	0.097	0.002	"	"	"	"	"
Xylenes, total	0.005	0.002	"	"	"	"	"
Naphthalene	0.020	0.008	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	99.5 %	70-130			"	"	"
Surrogate: Toluene-d8	123 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	110 %	70-130			"	"	"

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

SS-13 @ 9'  
12/8/2014 1:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X412113-03 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4L08012	12/08/2014	12/09/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	74.8 %	59-131			"	"	"
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## GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	0.977	0.200	mg/kg	1	4L08006	12/08/2014	12/09/2014
Benzene	0.259	0.002	"	"	"	"	"
Toluene	0.018	0.002	"	"	"	"	"
Ethylbenzene	0.045	0.002	"	"	"	"	"
Xylenes, total	0.200	0.002	"	"	"	"	"
Napthalene	ND	0.008	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	96.3 %	70-130			"	"	"
Surrogate: Toluene-d8	102 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	99.1 %	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 - Johnson #2, #11-16G6

SS-16 @ 9'  
12/8/2014 3:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X412113-04 (Soil)

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

Diesel (C10-C28)	774	50.0	mg/kg	1	4L08012	12/08/2014	12/09/2014
------------------	-----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	76.2 %	59-131			"	"	"
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## GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	2700	100	mg/kg	500	4L08006	12/08/2014	12/09/2014
Benzene	9.38	1.00	"	"	"	"	"
Toluene	18.8	1.00	"	"	"	"	"
Ethylbenzene	10.6	1.00	"	"	"	"	"
Xylenes, total	74.2	1.00	"	"	"	"	"
Naphthalene	ND	4.00	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	95.5 %	70-130			"	"	"
Surrogate: Toluene-d8	109 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

**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 4L08006 - EPA 5030 (soil)**

**Blank (4L08006-BLK1)**

Prepared: 12/08/2014 Analyzed: 12/08/2014

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	0.008	"							
Surrogate: 1,2-Dichloroethane-d4	66		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

**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 4L08006 - EPA 5030 (soil)

**LCS (4L08006-BS1)**

Prepared: 12/08/2014 Analyzed: 12/08/2014

Benzene	0.100	0.002	mg/kg	0.100		99.9	70-130			
Toluene	0.099	0.002	"	0.100		98.5	70-130			
Ethylbenzene	0.105	0.002	"	0.100		105	70-130			
m,p-Xylene	0.211	0.004	"	0.200		106	70-130			
o-Xylene	0.105	0.002	"	0.100		105	70-130			
Naphthalene	0.107	0.008	"	0.100		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory, Inc.



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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 - Johnson #2, #11-16G6

**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
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Batch 4L08006 - EPA 5030 (soil)

**LCS Dup (4L08006-BSD1)**

Prepared: 12/08/2014 Analyzed: 12/08/2014

Benzene	0.095	0.002	mg/kg	0.100		95.2	70-130	4.88	20	
Toluene	0.092	0.002	"	0.100		92.4	70-130	6.43	20	
Ethylbenzene	0.099	0.002	"	0.100		98.7	70-130	6.07	20	
m,p-Xylene	0.196	0.004	"	0.200		98.2	70-130	7.29	20	
o-Xylene	0.098	0.002	"	0.100		98.4	70-130	6.36	20	
Naphthalene	0.106	0.008	"	0.100		106	70-130	0.807	20	
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		100	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory, Inc.



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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 - Johnson #2, #11-16G6

## 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 8015M - Quality Control

### Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 4L08012 - EPA 3580

#### Blank (4L08012-BLK1)

Prepared: 12/08/2014 Analyzed: 12/09/2014

Diesel (C10-C28)	ND	50.0	mg/kg							
Surrogate: o-Terphenyl	35		g	50.0		69.4	59-131			

#### LCS (4L08012-BS1)

Prepared: 12/08/2014 Analyzed: 12/09/2014

Diesel (C10-C28)	1190	50.0	mg/kg	1000		119	64-121			
Surrogate: o-Terphenyl	41		g	50.0		82.3	59-131			

#### Matrix Spike (4L08012-MS1)

Source: X412112-05

Prepared: 12/08/2014 Analyzed: 12/09/2014

Diesel (C10-C28)	1060	50.0	mg/kg	1000	23.1	104	53-125			
Surrogate: o-Terphenyl	36		g	50.0		71.2	59-131			

#### Matrix Spike Dup (4L08012-MSD1)

Source: X412112-05

Prepared: 12/08/2014 Analyzed: 12/09/2014

Diesel (C10-C28)	1090	50.0	mg/kg	1000	23.1	107	53-125	3.21	20	
Surrogate: o-Terphenyl	34		g	50.0		68.5	59-131			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

### 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.*



December 10, 2014

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

**Project Name - Noble - Johnson #2, #11-16G6**

**Project Number - [none]**

Attached are your analytical results for Noble - Johnson #2, #11-16G6 received by Origins Laboratory, Inc. December 09, 2014. This project is associated with Origins project number X412136-01.

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 - Johnson #2, #11-16G6

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW-01	X412136-01	Water	December 9, 2014 12:45	12/09/2014 17:35

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

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page 1 of 1

**ORIGINS**  
LABORATORY, INC

Client: Eagle Environmental  
Address: 4101 Inca Street  
Denver, CO 80211  
Telephone Number: 303-433-0479  
Email Address: mce3@eagle-env.com

Project Manager: Martin Eckert III  
Project Name: Johnson #2, #11-16G6  
Project Number: NA  
Samples Collected By: EV

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

**X41230**

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa Canister #			
GW-01	12/9/14	1245	3		X				X				1
													2
													3
													4
													5
													6
													7
													8
													9
													10

Relinquished By: *[Signature]* Date: 12/9/14 Time: 1730

Relinquished By: *[Signature]* Date: 12/9/14 Time: 1730

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

Date Results Needed: 12/19/14

Temp Received: 1730

Date Results Needed: 12/19/14

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 - Johnson #2, #11-16G6

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: M12136

Client: Eagle

Client Project ID: Johnson 1

Checklist Completed by: Jeff Smith

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

Date/time completed: 12/19/11

Airbill #: NA

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

Cooler Number/Temperature: 1 / 2.8 °C 1 / 1 °C 1 / 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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> / ( pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HCL
Additional Comments (if any):				

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

Reviewed by (Project Manager)

120919-1798  
Date/Time Reviewed

Origins Laboratory, Inc.

*Jeff 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 - Johnson #2, #11-16G6

## GW-01

12/9/2014 12:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc.

X412136-01 (Water)

### BTEX by EPA 8260C

Benzene	0.0099	0.0010	mg/L	1	4L05008	12/09/2014	12/10/2014
Toluene	0.0029	0.0010	"	"	"	"	"
Ethylbenzene	0.0437	0.0010	"	"	"	"	"
Xylenes, total	0.0070	0.0010	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4

104 % 87.3-113

"

"

"

Surrogate: Toluene-d8

103 % 90.9-108

"

"

"

Surrogate: 4-Bromofluorobenzene

101 % 88.6-111

"

"

"

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

**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 4L05008 - EPA 5030B (Water)**

**Blank (4L05008-BLK1)**

Prepared: 12/05/2014 Analyzed: 12/09/2014

Benzene	ND	0.0010	mg/L							
Toluene	ND	0.0010	"							
Ethylbenzene	ND	0.0010	"							
Xylenes, total	ND	0.0010	"							
Surrogate: 1,2-Dichloroethane-d4	63		ug/L	62.5	101	87.3-113				
Surrogate: Toluene-d8	62		"	62.5	99.7	90.9-108				
Surrogate: 4-Bromofluorobenzene	63		"	62.5	101	88.6-111				

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 - Johnson #2, #11-16G6

**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 4L05008 - EPA 5030B (Water)**

**LCS (4L05008-BS1)**

Prepared: 12/05/2014 Analyzed: 12/09/2014

Benzene	0.0629	0.0010	mg/L	0.0500	126	75-126
Toluene	0.0630	0.0010	"	0.0500	126	78.7-126
Ethylbenzene	0.0645	0.0010	"	0.0500	129	81-130
m,p-Xylene	0.131	0.0020	"	0.100	131	77.2-133
o-Xylene	0.0632	0.0010	"	0.0500	126	77.9-126
Surrogate: 1,2-Dichloroethane-d4	68		ug/L	62.5	109	87.3-113
Surrogate: Toluene-d8	62		"	62.5	99.5	90.9-108
Surrogate: 4-Bromofluorobenzene	63		"	62.5	101	88.6-111

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

**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 4L05008 - EPA 5030B (Water)**

Matrix Spike (4L05008-MS1)		Source: X412022-02			Prepared: 12/05/2014 Analyzed: 12/09/2014					
Benzene	0.0785	0.0010	mg/L	0.0500	0.0108	135	74-130			QM-07
Toluene	0.0616	0.0010	"	0.0500	ND	123	73-131			
Ethylbenzene	0.0614	0.0010	"	0.0500	0.0009	121	76-132			
m,p-Xylene	0.111	0.0020	"	0.100	0.0004	111	69-139			
o-Xylene	0.0554	0.0010	"	0.0500	ND	111	74-131			
Surrogate: 1,2-Dichloroethane-d4	58		ug/L	62.5		93.2	87.3-113			
Surrogate: Toluene-d8	62		"	62.5		99.8	90.9-108			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.2	88.6-111			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

**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
<b>Batch 4L05008 - EPA 5030B (Water)</b>										
<b>Matrix Spike Dup (4L05008-MSD1)</b>		<b>Source: X412022-02</b>			Prepared: 12/05/2014 Analyzed: 12/09/2014					
Benzene	0.0745	0.0010	mg/L	0.0500	0.0108	127	74-130	5.20	20	
Toluene	0.0576	0.0010	"	0.0500	ND	115	73-131	6.70	20	
Ethylbenzene	0.0576	0.0010	"	0.0500	0.0009	113	76-132	6.37	20	
m,p-Xylene	0.102	0.0020	"	0.100	0.0004	101	69-139	9.18	20	
o-Xylene	0.0503	0.0010	"	0.0500	ND	101	74-131	9.61	20	
Surrogate: 1,2-Dichloroethane-d4	68		ug/L	62.5		109	87.3-113			
Surrogate: Toluene-d8	62		"	62.5		100	90.9-108			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	88.6-111			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

### 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



December 10, 2014

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

**Project Name - Noble - Johnson #2, #11-16G6**

**Project Number - [none]**

Attached are your analytical results for Noble - Johnson #2, #11-16G6 received by Origins Laboratory, Inc. December 09, 2014. This project is associated with Origins project number X412137-01.

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 - Johnson #2, #11-16G6

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-28 @ 9'	X412137-01	Soil	December 9, 2014 14:05	12/09/2014 17:35
SS-34 @ 9'	X412137-02	Soil	December 9, 2014 15:35	12/09/2014 17:35
SS-35 @ 9'	X412137-03	Soil	December 9, 2014 15:40	12/09/2014 17:35

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 - Johnson #2, #11-16G6

www.originslaboratory.com

X412137

page 1 of 1

**ORIGINS**  
LABORATORY, INC

Client: Eagle Environmental  
Address: 4101 Inca Street  
Denver, CO 80211  
Telephone Number: 303-433-0479  
Email Address: mce3@eagle-enviro.com

Project Manager: Martin Eckert III  
Project Name: Johnson #2, #11-16G6  
Project Number: NA  
Samples Collected By: EV

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 <sub>3</sub>	Other	Groundwater		
SS-28@9'	12/9/14	1405	2	X					X	1
SS-34@9'	↓	1535	↓						↓	2
SS-35@9'	↓	1540	↓						↓	3
										4
										5
										6
										7
										8
										9
										10

Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:
<i>Relinquished By:</i>	12/9/14	1730	<i>Received By:</i>	12/9/14	1730	Standard

Date Results Needed: 12/10/14

Temp Received:

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 - Johnson #2, #11-16G6

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: X412137

Client: Eagle

Client Project ID: Johnson 1

Checklist Completed by: Jeff Smith

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

Date/time completed: 12/19/12

Airbill #: NA

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: \_\_\_\_\_

Cooler Number/Temperature: 1 / 2.8 °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 <sup>(1)</sup> ?	<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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<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 <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Reviewed by (Project Manager)

12-09-14 1798  
Date/Time Reviewed

Origins Laboratory, Inc.

*Jeff 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 - Johnson #2, #11-16G6

SS-28 @ 9'  
12/9/2014 2:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X412137-01 (Soil)

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

Diesel (C10-C28)	51.4	50.0	mg/kg	1	4L09007	12/09/2014	12/09/2014
------------------	------	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	92.1 %	59-131			"	"	"
------------------------	--------	--------	--	--	---	---	---

## GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	1.36	0.200	mg/kg	1	4L09010	12/09/2014	12/09/2014
Benzene	ND	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"
Naphthalene	ND	0.008	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	113 %	70-130			"	"	"
Surrogate: Toluene-d8	101 %	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 - Johnson #2, #11-16G6

SS-34 @ 9'  
12/9/2014 3:35:00PM

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

Origins Laboratory, Inc.  
X412137-02 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4L09007	12/09/2014	12/09/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	97.0 %	59-131			"	"	"
------------------------	--------	--------	--	--	---	---	---

## GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	67.9	5.00	mg/kg	25	4L09010	12/09/2014	12/10/2014
Benzene	ND	0.002	"	1	"	"	12/10/2014
Toluene	0.002	0.002	"	"	"	"	"
Ethylbenzene	0.060	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"
Naphthalene	0.107	0.008	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	110 %	70-130			"	"	"
Surrogate: Toluene-d8	169 %	70-130			"	"	" S-04
Surrogate: 4-Bromofluorobenzene	124 %	70-130			"	"	"

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

SS-35 @ 9'

12/9/2014 3:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.

X412137-03 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4L09007	12/09/2014	12/09/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	91.9 %	59-131			"	"	"
------------------------	--------	--------	--	--	---	---	---

## GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	0.332	0.200	mg/kg	1	4L09010	12/09/2014	12/10/2014
-----------------------------	-------	-------	-------	---	---------	------------	------------

Benzene	ND	0.002	"	"	"	"	"
---------	----	-------	---	---	---	---	---

Toluene	ND	0.002	"	"	"	"	"
---------	----	-------	---	---	---	---	---

Ethylbenzene	ND	0.002	"	"	"	"	"
--------------	----	-------	---	---	---	---	---

Xylenes, total	ND	0.002	"	"	"	"	"
----------------	----	-------	---	---	---	---	---

Napthalene	ND	0.008	"	"	"	"	"
------------	----	-------	---	---	---	---	---

Surrogate: 1,2-Dichloroethane-d4	106 %	70-130			"	"	"
----------------------------------	-------	--------	--	--	---	---	---

Surrogate: Toluene-d8	100 %	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 - Johnson #2, #11-16G6

**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
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**Batch 4L09010 - EPA 5030 (soil)**

Matrix Spike (4L09010-MS1)		Source: X412135-02			Prepared: 12/09/2014 Analyzed: 12/09/2014					
Benzene	0.099	0.002	mg/kg	0.100	0.0005	98.1	70-130			
Toluene	0.094	0.002	"	0.100	ND	94.4	70-130			
Ethylbenzene	0.101	0.002	"	0.100	ND	101	70-130			
m,p-Xylene	0.196	0.004	"	0.200	ND	98.0	70-130			
o-Xylene	0.101	0.002	"	0.100	ND	101	70-130			
Naphthalene	0.095	0.008	"	0.100	ND	95.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.9	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

**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
<b>Batch 4L09010 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (4L09010-MSD1)</b>		<b>Source: X412135-02</b>			Prepared: 12/09/2014 Analyzed: 12/09/2014					
Benzene	0.098	0.002	mg/kg	0.100	0.0005	97.3	70-130	0.754	20	
Toluene	0.097	0.002	"	0.100	ND	97.4	70-130	3.07	20	
Ethylbenzene	0.099	0.002	"	0.100	ND	99.1	70-130	1.46	20	
m,p-Xylene	0.198	0.004	"	0.200	ND	99.0	70-130	1.01	20	
o-Xylene	0.099	0.002	"	0.100	ND	99.0	70-130	2.08	20	
Naphthalene	0.095	0.008	"	0.100	ND	95.0	70-130	0.462	20	
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	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 - Johnson #2, #11-16G6

## 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
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## Extractable Petroleum Hydrocarbons by 8015M - Quality Control

### Origins Laboratory, Inc.

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

#### Batch 4L09007 - EPA 3580

#### Blank (4L09007-BLK1)

Prepared: 12/09/2014 Analyzed: 12/09/2014

Diesel (C10-C28)	ND	50.0	mg/kg							
Surrogate: o-Terphenyl	49		g	50.0		97.8	59-131			

#### LCS (4L09007-BS1)

Prepared: 12/09/2014 Analyzed: 12/09/2014

Diesel (C10-C28)	1160	50.0	mg/kg	1000		116	64-121			
Surrogate: o-Terphenyl	54		g	50.0		109	59-131			

#### Matrix Spike (4L09007-MS1)

Source: X412080-01

Prepared: 12/09/2014 Analyzed: 12/09/2014

Diesel (C10-C28)	1150	50.0	mg/kg	1000	19.0	113	53-125			
Surrogate: o-Terphenyl	50		g	50.0		100	59-131			

#### Matrix Spike Dup (4L09007-MSD1)

Source: X412080-01

Prepared: 12/09/2014 Analyzed: 12/09/2014

Diesel (C10-C28)	1090	50.0	mg/kg	1000	19.0	107	53-125	5.51	20	
Surrogate: o-Terphenyl	48		g	50.0		95.7	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 - Johnson #2, #11-16G6

### Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

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.*



December 11, 2014

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

**Project Name - Noble - Johnson #2, #11-16G6**

**Project Number - [none]**

Attached are your analytical results for Noble - Johnson #2, #11-16G6 received by Origins Laboratory, Inc. December 10, 2014. This project is associated with Origins project number X412147-01.

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 - Johnson #2, #11-16G6

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-37 @ 9.5'	X412147-01	Soil	December 10, 2014 12:10	12/10/2014 17:15
SS-38 @ 9'	X412147-02	Soil	December 10, 2014 12:20	12/10/2014 17:15

Origins Laboratory, Inc.



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



Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

# ORIGINS

LABORATORY, INC

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**XU12147**

page / of /

Client: Eagle Env. Consulting, Inc.

Address: 4101 Jan Street

Denver, CO, 80211

Telephone Number: (303) 433-0479

Email Address: nice3@eagle-entire.com

Project Manager: Martin Eckert III

Project Name: Johnson #2<sup>nd</sup> 11-16-64

Project Number: -

Samples Collected By: A. Newberry

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa Canister #		
SS-37 @ 9.5'	12-10-14	12:10	2	X						X	BTEX - Geo 2200 + DRO 2015 X Nephelometer	1
SS-38 @ 9'	12-10-14	12:20	2	X					X		X	2
												3
												4
												5
												6
												7
												8
												9
												10
Relinquished By: <u>[Signature]</u>	Date: <u>12-10-14</u>	Time: <u>17:15</u>	Received By: <u>[Signature]</u>				Date: <u>12/10/14</u>	Time: <u>17:15</u>	Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/> 9.4			

Hold samples for PAHs - TSD Temp Received: Noble Date Results Needed: Noble

Origins Laboratory, Inc.

*RBm*

*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 - Johnson #2, #11-16G6

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: Xm2147

Client: Eagle

Client Project ID: Johnson #2, #11-16 G6

Checklist Completed by: Jeff Smith

Shipped Via: H/D

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

Date/time completed: 12/10/14

Airbill #: NA

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

Cooler Number/Temperature: 1 / 9.4 °C      /      °C      /      °C (Describe)

Thermometer ID: T063

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?		X		Sampled Same Day
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 <sup>(1)</sup> ?	X			
Was adequate sample volume provided <sup>(1)</sup> ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		X		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	X			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	X			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	X			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	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 <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)			X	
Additional Comments (if any):				

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

Reviewed by (Project Manager)

12-10-14 1743  
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.

Noelle Doyle Mathis, President

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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

SS-37 @ 9.5'

12/10/2014 12:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X412147-01 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4L10006	12/10/2014	12/10/2014
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Surrogate: o-Terphenyl	97.1 %	59-131			"	"	"
------------------------	--------	--------	--	--	---	---	---

## GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4L10005	12/10/2014	12/10/2014
Benzene	ND	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"
Naphthalene	ND	0.008	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	95.0 %	70-130			"	"	"
Surrogate: Toluene-d8	76.5 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	86.6 %	70-130			"	"	"

Origins Laboratory, Inc.



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

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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

SS-38 @ 9'  
12/10/2014 12:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X412147-02 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4L10006	12/10/2014	12/10/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	86.7 %	59-131			"	"	"
------------------------	--------	--------	--	--	---	---	---

## GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4L10005	12/10/2014	12/10/2014
Benzene	ND	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"
Naphthalene	ND	0.008	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	94.8 %	70-130			"	"	"
Surrogate: Toluene-d8	77.2 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	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 - Johnson #2, #11-16G6

**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
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**Batch 4L10005 - EPA 5030 (soil)**

**Blank (4L10005-BLK1)**

Prepared: 12/10/2014 Analyzed: 12/10/2014

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	0.008	"							
Surrogate: 1,2-Dichloroethane-d4	68		ug/kg	62.5		108	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	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.*

Noelle Doyle Mathis, President

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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

**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
<b>Batch 4L10005 - EPA 5030 (soil)</b>										
<b>LCS (4L10005-BS1)</b>					Prepared: 12/10/2014 Analyzed: 12/10/2014					
Benzene	0.099	0.002	mg/kg	0.100		98.9	70-130			
Toluene	0.097	0.002	"	0.100		97.1	70-130			
Ethylbenzene	0.101	0.002	"	0.100		101	70-130			
m,p-Xylene	0.197	0.004	"	0.200		98.7	70-130			
o-Xylene	0.102	0.002	"	0.100		102	70-130			
Naphthalene	0.107	0.008	"	0.100		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	66		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	70-130			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

**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
<b>Batch 4L10005 - EPA 5030 (soil)</b>										
<b>Matrix Spike (4L10005-MS1)</b>		<b>Source: X412122-01</b>			Prepared: 12/10/2014 Analyzed: 12/10/2014					
Benzene	0.105	0.002	mg/kg	0.100	0.005	100	70-130			
Toluene	0.116	0.002	"	0.100	0.016	99.9	70-130			
Ethylbenzene	0.111	0.002	"	0.100	0.006	105	70-130			
m,p-Xylene	0.248	0.004	"	0.200	0.034	107	70-130			
o-Xylene	0.124	0.002	"	0.100	0.018	106	70-130			
Naphthalene	0.116	0.008	"	0.100	0.011	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		97.2	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

**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
<b>Batch 4L10005 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (4L10005-MSD1)</b>		<b>Source: X412122-01</b>			Prepared: 12/10/2014 Analyzed: 12/10/2014					
Benzene	0.104	0.002	mg/kg	0.100	0.005	99.2	70-130	0.879	20	
Toluene	0.116	0.002	"	0.100	0.016	99.8	70-130	0.121	20	
Ethylbenzene	0.109	0.002	"	0.100	0.006	103	70-130	1.70	20	
m,p-Xylene	0.236	0.004	"	0.200	0.034	101	70-130	4.90	20	
o-Xylene	0.122	0.002	"	0.100	0.018	104	70-130	1.73	20	
Naphthalene	0.116	0.008	"	0.100	0.011	105	70-130	0.363	20	
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	70-130			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4L10006 - EPA 3580**

**Blank (4L10006-BLK1)**

Prepared: 12/10/2014 Analyzed: 12/10/2014

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 52 g 50.0 105 59-131

**LCS (4L10006-BS1)**

Prepared: 12/10/2014 Analyzed: 12/10/2014

Diesel (C10-C28) 1110 50.0 mg/kg 1000 111 64-121

Surrogate: o-Terphenyl 51 g 50.0 102 59-131

**Matrix Spike (4L10006-MS1)**

**Source: X412122-01**

Prepared: 12/10/2014 Analyzed: 12/10/2014

Diesel (C10-C28) 1100 50.0 mg/kg 1000 22.0 107 53-125

Surrogate: o-Terphenyl 40 g 50.0 79.1 59-131

**Matrix Spike Dup (4L10006-MSD1)**

**Source: X412122-01**

Prepared: 12/10/2014 Analyzed: 12/10/2014

Diesel (C10-C28) 1120 50.0 mg/kg 1000 22.0 110 53-125 2.05 20

Surrogate: o-Terphenyl 39 g 50.0 77.4 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.

Noelle Doyle Mathis, President

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

### 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.*

Noelle Doyle Mathis, President



December 14, 2014

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

**Project Name - Noble - Johnson #2, #11-16G6**

**Project Number - [none]**

Attached are your analytical results for Noble - Johnson #2, #11-16G6 received by Origins Laboratory, Inc. December 12, 2014. This project is associated with Origins project number X412195-01.

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 - Johnson #2, #11-16G6

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-42 @ 9'	X412195-01	Soil	December 12, 2014 9:50	12/12/2014 15:26
SS-43 @ 9.5'	X412195-02	Soil	December 12, 2014 9:55	12/12/2014 15:26
SS-47 @ 9'	X412195-03	Soil	December 12, 2014 12:30	12/12/2014 15:26

Origins Laboratory, Inc.

  
Dav

*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 - Johnson #2, #11-16G6

**ORIGINS**  
LABORATORY, INC

Client: Eagle Env Consulting, Inc.  
Address: 4101 Inca Street  
Denver, CO 80211  
Telephone Number: (303) 433-0479  
Email Address: MCO3@eagle-enviro.com

Project Manager: Martin Eckert III  
Project Name: Johnson #2, #11-16G6  
Project Number: —  
Samples Collected By: A. Newberry

www.originslaboratory.com

page / of /

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa Canister #			
SS - 42 @ 9'	12-12-14	950	2	X					X		X	1	
SS - 43 @ 9.5'	12-12-14	955	2	X					X		X	2	
SS - 47 @ 9'	12-12-14	1230	2	X					X		X	3	
												4	
												5	
												6	
												7	
												8	
												9	
												10	

Relinquished By: [Signature]  
Relinquished By: [Signature]

Date: 12-12-14  
Date: 12-12-14

Time: 1526  
Time: 1526

Received By: [Signature]  
Received By: [Signature]

Date: 12-12-14  
Date: 12-12-14

Time: 1526  
Time: 1526

Turnaround Time:  
Same Day ☒ 24 Hr ☐  
48 Hr ☐ 72 Hr ☐  
Standard ☐ 1.8°

Hold samples for PAHs - TSD

Temp Received -

Date Results Needed (B) Noble

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

Origins Laboratory, Inc.

[Signature]  
Dav

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 - Johnson #2, #11-16G6

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: X412195

Client: Eagle

Client Project ID: Johnson #2 #11-16 G6

Checklist Completed by: Jeff Smith

Shipped Via: HTD

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

Date/time completed: 12/12/14

Airbill #: NA

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: \_\_\_\_\_

Cooler Number/Temperature: 1 / 1.8 °C 1 / \_\_\_\_\_ °C 1 / \_\_\_\_\_ °C (Describe)

Thermometer ID: TW03

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

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

Reviewed by: [Signature] (Project Manager)

12-12-14  
Date/Time Reviewed

Origins Laboratory, Inc.

Dav

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 - Johnson #2, #11-16G6

SS-42 @ 9'

12/12/2014 9:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X412195-01 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4L12008	12/12/2014	12/12/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	72.8 %	59-131			"	"	"
------------------------	--------	--------	--	--	---	---	---

## GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4L12006	12/12/2014	12/13/2014
Benzene	0.003	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"
Napthalene	ND	0.008	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	106 %	70-130			"	"	"
Surrogate: Toluene-d8	96.8 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	111 %	70-130			"	"	"

Origins Laboratory, Inc.

  
Dav

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 - Johnson #2, #11-16G6

SS-43 @ 9.5'

12/12/2014 9:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X412195-02 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4L12008	12/12/2014	12/12/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	95.8 %	59-131			"	"	"
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## GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	0.754	0.200	mg/kg	1	4L12006	12/12/2014	12/13/2014
Benzene	0.014	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	0.017	0.002	"	"	"	"	"
Xylenes, total	0.002	0.002	"	"	"	"	"
Napthalene	0.008	0.008	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	87.0 %	70-130			"	"	"
Surrogate: Toluene-d8	105 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	115 %	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 - Johnson #2, #11-16G6

SS-47 @ 9'  
12/12/2014 12:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X412195-03 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4L12008	12/12/2014	12/12/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	100 %	59-131			"	"	"
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## GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4L12006	12/12/2014	12/13/2014
Benzene	ND	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"
Naphthalene	ND	0.008	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	89.9 %	70-130			"	"	"
Surrogate: Toluene-d8	102 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	116 %	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.

Dav

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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

**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
<b>Batch 4L12006 - EPA 5030 (soil)</b>										
<b>Blank (4L12006-BLK1)</b>					Prepared: 12/12/2014 Analyzed: 12/12/2014					
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	0.008	"							
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	68		"	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 - Johnson #2, #11-16G6

**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
<b>Batch 4L12006 - EPA 5030 (soil)</b>										
<b>LCS (4L12006-BS1)</b>					Prepared: 12/12/2014 Analyzed: 12/12/2014					
Benzene	0.109	0.002	mg/kg	0.100		109	70-130			
Toluene	0.104	0.002	"	0.100		104	70-130			
Ethylbenzene	0.107	0.002	"	0.100		107	70-130			
m,p-Xylene	0.204	0.004	"	0.200		102	70-130			
o-Xylene	0.111	0.002	"	0.100		111	70-130			
Naphthalene	0.116	0.008	"	0.100		116	70-130			
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.4	70-130			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.1	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 - Johnson #2, #11-16G6

**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
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Batch 4L12006 - EPA 5030 (soil)

Matrix Spike (4L12006-MS1)		Source: X412160-01			Prepared: 12/12/2014 Analyzed: 12/12/2014					
Benzene	0.108	0.002	mg/kg	0.100	ND	108	70-130			
Toluene	0.104	0.002	"	0.100	ND	104	70-130			
Ethylbenzene	0.104	0.002	"	0.100	ND	104	70-130			
m,p-Xylene	0.198	0.004	"	0.200	ND	98.8	70-130			
o-Xylene	0.107	0.002	"	0.100	ND	107	70-130			
Naphthalene	0.103	0.008	"	0.100	0.002	102	70-130			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		100	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.3	70-130			

Origins Laboratory, Inc.



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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 - Johnson #2, #11-16G6

**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
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Batch 4L12006 - EPA 5030 (soil)

Matrix Spike Dup (4L12006-MSD1)		Source: X412160-01			Prepared: 12/12/2014 Analyzed: 12/12/2014					
Benzene	0.106	0.002	mg/kg	0.100	ND	106	70-130	1.03	20	
Toluene	0.101	0.002	"	0.100	ND	101	70-130	2.38	20	
Ethylbenzene	0.103	0.002	"	0.100	ND	103	70-130	0.659	20	
m,p-Xylene	0.193	0.004	"	0.200	ND	96.3	70-130	2.57	20	
o-Xylene	0.105	0.002	"	0.100	ND	105	70-130	1.57	20	
Naphthalene	0.101	0.008	"	0.100	0.002	99.9	70-130	1.66	20	
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		100	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.2	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.5	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 - Johnson #2, #11-16G6

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4L12008 - EPA 3580**

**Blank (4L12008-BLK1)**

Prepared: 12/12/2014 Analyzed: 12/12/2014

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 47 g 50.0 94.5 59-131

**LCS (4L12008-BS1)**

Prepared: 12/12/2014 Analyzed: 12/12/2014

Diesel (C10-C28) 922 50.0 mg/kg 1000 92.2 64-121

Surrogate: o-Terphenyl 43 g 50.0 86.7 59-131

**Matrix Spike (4L12008-MS1)**

**Source: X412160-01**

Prepared: 12/12/2014 Analyzed: 12/12/2014

Diesel (C10-C28) 914 50.0 mg/kg 1000 23.5 89.1 53-125

Surrogate: o-Terphenyl 40 g 50.0 80.8 59-131

**Matrix Spike Dup (4L12008-MSD1)**

**Source: X412160-01**

Prepared: 12/12/2014 Analyzed: 12/12/2014

Diesel (C10-C28) 984 50.0 mg/kg 1000 23.5 96.0 53-125 7.35 20

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

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

### 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.

  
Dav

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



February 16, 2015

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

**Project Name - Noble - Johnson #2, #11-16G6**

**Project Number - [none]**

Attached are your analytical results for Noble - Johnson #2, #11-16G6 received by Origins Laboratory, Inc. February 11, 2015. This project is associated with Origins project number X502148-01.

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 - Johnson #2, #11-16G6

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-01	X502148-01	Water	February 11, 2015 13:35	02/11/2015 15:47
MW-02	X502148-02	Water	February 11, 2015 13:00	02/11/2015 15:47
MW-03	X502148-03	Water	February 11, 2015 13:10	02/11/2015 15:47
MW-04	X502148-04	Water	February 11, 2015 13:28	02/11/2015 15:47
MW-05	X502148-05	Water	February 11, 2015 13:55	02/11/2015 15:47
MW-06	X502148-06	Water	February 11, 2015 13:18	02/11/2015 15:47

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 - Johnson #2, #11-16G6

www.originslaboratory.com

X502148

**ORIGINS**  
LABORATORY, INC

Client: Eagle Env Consulting, Inc.  
Address: 4101 Inca Street  
Denver, CO, 80211  
Telephone Number: (303) 433-0479  
Email Address: MCE3@eagle-enviro.com

Project Manager: Martin Eckert III  
Project Name: Johnson #2, #11-16G6  
Project Number:                       
Samples Collected By: A Newberry

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

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa #		
MW-01	2/11/15	1335	3	X				X			BTEX	1
MW-02	2/11/15	1346	1									2
MW-03	2/11/15	1316	1									3
MW-04	2/11/15	1328	1									4
MW-05	2/11/15	1355	1									5
MW-06	2/11/15	1318	1									6
												7
												8
												9
												10

Requisitioned By: Andrey Date: 2/11/15 Time: 1547  
Relinquished By:                      Date:                      Time:                     

Received By:                      Date: 2/11/15 Time: 1547  
Received By:                      Date:                      Time:                     

Turnaround Time: ☒ Same Day ☐ 24 Hr ☐ 48 Hr ☒ 72 Hr

Temp Received: 1.6 Date Results Needed: Noble

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 - Johnson #2, #11-16G6

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: XSO2148

Client: Eagle

Client Project ID: Johnson #2 #11-16G6

Checklist Completed by: Jeff Smith

Shipped Via: H/D

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

Date/time completed: 2/11/15

Airbill #: NA

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

Cooler Number/Temperature: 1 / 1.6 °C 1 / 1 °C 1 / 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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
Additional Comments (if any):				

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

Reviewed by (Project Manager) [Signature]

Date/Time Reviewed 02-13-15

Origins Laboratory, Inc.

[Signature]

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

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

**MW-01**

**2/11/2015 1:35:00PM**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

**Origins Laboratory, Inc.**

**X502148-01 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5B12005	02/12/2015	02/12/2015
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	103 %	87.3-113			"	"	"
Surrogate: Toluene-d8	101 %	90.9-108			"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	88.6-111			"	"	"

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 - Johnson #2, #11-16G6

**MW-02**

**2/11/2015 1:00:00PM**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

**Origins Laboratory, Inc.**

**X502148-02 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5B12005	02/12/2015	02/12/2015
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	101 %	87.3-113			"	"	"
Surrogate: Toluene-d8	99.8 %	90.9-108			"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	88.6-111			"	"	"

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

**MW-03**

**2/11/2015 1:10:00PM**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

**Origins Laboratory, Inc.**

**X502148-03 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5B12005	02/12/2015	02/12/2015
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	102 %	87.3-113			"	"	"
Surrogate: Toluene-d8	102 %	90.9-108			"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	88.6-111			"	"	"

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

**MW-04**

**2/11/2015 1:28:00PM**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

**Origins Laboratory, Inc.**

**X502148-04 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5B12005	02/12/2015	02/12/2015
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	102 %	87.3-113		"	"	"
Surrogate: Toluene-d8	101 %	90.9-108		"	"	"
Surrogate: 4-Bromofluorobenzene	101 %	88.6-111		"	"	"

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

## MW-05

2/11/2015 1:55:00PM

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

## Origins Laboratory, Inc.

X502148-05 (Water)

### BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	5B12005	02/12/2015	02/12/2015
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4

103 % 87.3-113

"

"

"

Surrogate: Toluene-d8

101 % 90.9-108

"

"

"

Surrogate: 4-Bromofluorobenzene

103 % 88.6-111

"

"

"

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

**MW-06**

**2/11/2015 1:18:00PM**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

**Origins Laboratory, Inc.**

**X502148-06 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5B12005	02/12/2015	02/12/2015
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	102 %	87.3-113			"	"	"
Surrogate: Toluene-d8	99.8 %	90.9-108			"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	88.6-111			"	"	"

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

**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
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**Batch 5B12005 - EPA 5030B (Water)**

**Blank (5B12005-BLK1)**

Prepared: 02/12/2015 Analyzed: 02/12/2015

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5	104		87.3-113			
Surrogate: Toluene-d8	63		"	62.5	101		90.9-108			
Surrogate: 4-Bromofluorobenzene	65		"	62.5	104		88.6-111			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

**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
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**Batch 5B12005 - EPA 5030B (Water)**

**LCS (5B12005-BS1)**

Prepared: 02/12/2015 Analyzed: 02/12/2015

Benzene	46.4	1.0	ug/L	50.0		92.8	75-126			
Toluene	44.8	1.0	"	50.0		89.5	78.7-126			
Ethylbenzene	44.4	1.0	"	50.0		88.7	80-130			
m,p-Xylene	89.2	2.0	"	100		89.2	77.2-133			
o-Xylene	46.8	1.0	"	50.0		93.7	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.7	87.3-113			
Surrogate: Toluene-d8	62		"	62.5		98.8	90.9-108			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	88.6-111			

Origins Laboratory, Inc.



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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 - Johnson #2, #11-16G6

**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
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**Batch 5B12005 - EPA 5030B (Water)**

Matrix Spike (5B12005-MS1)		Source: X502120-02			Prepared: 02/12/2015 Analyzed: 02/12/2015					
Benzene	44.8	1.0	ug/L	50.0	ND	89.5	74-130			
Toluene	44.0	1.0	"	50.0	ND	87.9	73-131			
Ethylbenzene	43.9	1.0	"	50.0	ND	87.8	76-132			
m,p-Xylene	88.9	2.0	"	100	ND	88.9	69-139			
o-Xylene	46.1	1.0	"	50.0	ND	92.2	74-131			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.3	87.3-113			
Surrogate: Toluene-d8	63		"	62.5		100	90.9-108			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	88.6-111			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

**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
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**Batch 5B12005 - EPA 5030B (Water)**

Matrix Spike Dup (5B12005-MSD1)		Source: X502120-02			Prepared: 02/12/2015 Analyzed: 02/12/2015					
Benzene	45.7	1.0	ug/L	50.0	ND	91.3	74-130	1.97	20	
Toluene	45.1	1.0	"	50.0	ND	90.2	73-131	2.58	20	
Ethylbenzene	45.8	1.0	"	50.0	ND	91.6	76-132	4.24	20	
m,p-Xylene	92.3	2.0	"	100	ND	92.3	69-139	3.82	20	
o-Xylene	48.0	1.0	"	50.0	ND	96.0	74-131	4.10	20	
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.4	87.3-113			
Surrogate: Toluene-d8	63		"	62.5		100	90.9-108			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	88.6-111			

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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

### 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.*



February 16, 2015

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

**Project Name - Noble - Johnson #2, #11-16G6**

**Project Number - [none]**

Attached are your analytical results for Noble - Johnson #2, #11-16G6 received by Origins Laboratory, Inc. February 11, 2015. This project is associated with Origins project number X502149-01.

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 - Johnson #2, #11-16G6

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-01 @ 5-7.5'	X502149-01	Soil	February 11, 2015 12:20	02/11/2015 15:47
MW-02 @ 7.5-10'	X502149-02	Soil	February 11, 2015 9:30	02/11/2015 15:47
MW-03 @ 5-7.5'	X502149-03	Soil	February 11, 2015 10:18	02/11/2015 15:47
MW-04 @ 5-7.5'	X502149-04	Soil	February 11, 2015 11:15	02/11/2015 15:47
MW-05 @ 5-7.5'	X502149-05	Soil	February 11, 2015 13:00	02/11/2015 15:47
MW-06 @ 5-7.5'	X502149-06	Soil	February 11, 2015 10:03	02/11/2015 15:47

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.*

Page 3 of 16

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver

CO

80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

Origins Laboratory

F-012207-01-R1

Effective Date: 01/09/12

## Sample Receipt Checklist

Origins Work Order: X502149

Client: Eagle

Client Project ID: Johnson #2 #11-16G6

Checklist Completed by: Jeff Smith

Shipped Via: H/D

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

Date/time completed: 2/11/15

Airbill #: NA

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: \_\_\_\_\_

Cooler Number/Temperature: 1 / 1.6 °C 1 / \_\_\_\_\_ °C 1 / \_\_\_\_\_ °C (Describe) \_\_\_\_\_ °C

Thermometer ID: 1003

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

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

Reviewed by (Project Manager)

Date/Time Reviewed

Origins Laboratory, Inc.

*Jen 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 - Johnson #2, #11-16G6

**MW-01 @ 5-7.5'****2/11/2015 12:20:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.****X502149-01 (Soil)****Diesel Range Organics (DRO/TEPH) by EPA 8015C**

Diesel (C10-C28)	ND	50.0	mg/kg	1	5B13006	02/13/2015	02/13/2015
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Surrogate: o-Terphenyl	90.5 %	59-131			"	"	"
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**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5B13007	02/13/2015	02/13/2015
-----------------------------	----	-------	-------	---	---------	------------	------------

Benzene	ND	0.002	"	"	"	"	"
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Toluene	ND	0.002	"	"	"	"	"
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Ethylbenzene	ND	0.002	"	"	"	"	"
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Xylenes, total	ND	0.002	"	"	"	"	"
----------------	----	-------	---	---	---	---	---

Naphthalene	ND	0.007	"	"	"	"	"
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Surrogate: 1,2-Dichloroethane-d4	111 %	70-130			"	"	"
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Surrogate: Toluene-d8	101 %	70-130			"	"	"
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Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"
---------------------------------	-------	--------	--	--	---	---	---

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

**MW-02 @ 7.5-10'****2/11/2015 9:30:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.****X502149-02 (Soil)****Diesel Range Organics (DRO/TEPH) by EPA 8015C**

Diesel (C10-C28)	ND	50.0	mg/kg	1	5B13006	02/13/2015	02/13/2015
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	98.2 %	59-131			"	"	"
------------------------	--------	--------	--	--	---	---	---

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5B13007	02/13/2015	02/13/2015
-----------------------------	----	-------	-------	---	---------	------------	------------

Benzene	ND	0.002	"	"	"	"	"
---------	----	-------	---	---	---	---	---

Toluene	ND	0.002	"	"	"	"	"
---------	----	-------	---	---	---	---	---

Ethylbenzene	ND	0.002	"	"	"	"	"
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Xylenes, total	ND	0.002	"	"	"	"	"
----------------	----	-------	---	---	---	---	---

Napthalene	ND	0.007	"	"	"	"	"
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Surrogate: 1,2-Dichloroethane-d4	109 %	70-130			"	"	"
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Surrogate: Toluene-d8	103 %	70-130			"	"	"
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Surrogate: 4-Bromofluorobenzene	100 %	70-130			"	"	"
---------------------------------	-------	--------	--	--	---	---	---

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

**MW-03 @ 5-7.5'****2/11/2015 10:18:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.****X502149-03 (Soil)****Diesel Range Organics (DRO/TEPH) by EPA 8015C**

Diesel (C10-C28)	ND	50.0	mg/kg	1	5B13006	02/13/2015	02/13/2015
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	108 %	59-131			"	"	"
------------------------	-------	--------	--	--	---	---	---

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5B13007	02/13/2015	02/13/2015
-----------------------------	----	-------	-------	---	---------	------------	------------

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	108 %	70-130			"	"	"
----------------------------------	-------	--------	--	--	---	---	---

Surrogate: Toluene-d8	98.6 %	70-130			"	"	"
-----------------------	--------	--------	--	--	---	---	---

Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"
---------------------------------	-------	--------	--	--	---	---	---

Origins Laboratory, Inc.



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4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

**MW-04 @ 5-7.5'****2/11/2015 11:15:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.****X502149-04 (Soil)****Diesel Range Organics (DRO/TEPH) by EPA 8015C**

Diesel (C10-C28)	ND	50.0	mg/kg	1	5B13006	02/13/2015	02/13/2015
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Surrogate: o-Terphenyl	103 %	59-131			"	"	"
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**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5B13007	02/13/2015	02/13/2015
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Benzene	ND	0.002	"	"	"	"	"
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Toluene	ND	0.002	"	"	"	"	"
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Ethylbenzene	ND	0.002	"	"	"	"	"
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Xylenes, total	ND	0.002	"	"	"	"	"
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Naphthalene	ND	0.007	"	"	"	"	"
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Surrogate: 1,2-Dichloroethane-d4	111 %	70-130			"	"	"
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Surrogate: Toluene-d8	98.7 %	70-130			"	"	"
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Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"
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Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

MW-05 @ 5-7.5'  
2/11/2015 1:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X502149-05 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5B13006	02/13/2015	02/13/2015
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Surrogate: o-Terphenyl	99.8 %	59-131			"	"	"
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## GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5B13007	02/13/2015	02/13/2015
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	99.8 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	70-130			"	"	"

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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

**MW-06 @ 5-7.5'**

**2/11/2015 10:03:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X502149-06 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5B13006	02/13/2015	02/13/2015
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Surrogate: o-Terphenyl	98.8 %	59-131			"	"	"
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**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5B13007	02/13/2015	02/13/2015
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Benzene	ND	0.002	"	"	"	"	"
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Toluene	ND	0.002	"	"	"	"	"
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Ethylbenzene	ND	0.002	"	"	"	"	"
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Xylenes, total	ND	0.002	"	"	"	"	"
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Napthalene	ND	0.007	"	"	"	"	"
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Surrogate: 1,2-Dichloroethane-d4	107 %	70-130			"	"	"
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Surrogate: Toluene-d8	102 %	70-130			"	"	"
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Surrogate: 4-Bromofluorobenzene	96.0 %	70-130			"	"	"
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4101 Inca Street  
Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

**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
<b>Batch 5B13007 - EPA 5030 (soil)</b>										
<b>Blank (5B13007-BLK1)</b>					Prepared: 02/13/2015 Analyzed: 02/13/2015					
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	66		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.6	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	70-130			

Origins Laboratory, Inc.



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Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

**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
<b>Batch 5B13007 - EPA 5030 (soil)</b>										
<b>LCS (5B13007-BS1)</b>					Prepared: 02/13/2015 Analyzed: 02/13/2015					
Benzene	0.108	0.002	mg/kg	0.100		108	70-130			
Toluene	0.107	0.002	"	0.100		107	70-130			
Ethylbenzene	0.108	0.002	"	0.100		108	70-130			
m,p-Xylene	0.210	0.004	"	0.200		105	70-130			
o-Xylene	0.107	0.002	"	0.100		107	70-130			
Naphthalene	0.110	0.007	"	0.100		110	70-130			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		100	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

**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
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**Batch 5B13007 - EPA 5030 (soil)**

Matrix Spike (5B13007-MS1)		Source: X502149-01			Prepared: 02/13/2015 Analyzed: 02/13/2015					
Benzene	0.098	0.002	mg/kg	0.100	ND	98.2	70-130			
Toluene	0.099	0.002	"	0.100	ND	98.9	70-130			
Ethylbenzene	0.095	0.002	"	0.100	ND	95.2	70-130			
m,p-Xylene	0.185	0.004	"	0.200	ND	92.7	70-130			
o-Xylene	0.093	0.002	"	0.100	ND	93.2	70-130			
Naphthalene	0.116	0.007	"	0.100	0.001	115	70-130			
Surrogate: 1,2-Dichloroethane-d4	70		ug/kg	62.5		112	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



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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 - Johnson #2, #11-16G6

**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
<b>Batch 5B13007 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (5B13007-MSD1)</b>		<b>Source: X502149-01</b>			Prepared: 02/13/2015 Analyzed: 02/13/2015					
Benzene	0.100	0.002	mg/kg	0.100	ND	99.8	70-130	1.62	20	
Toluene	0.102	0.002	"	0.100	ND	102	70-130	3.57	20	
Ethylbenzene	0.099	0.002	"	0.100	ND	99.3	70-130	4.19	20	
m,p-Xylene	0.192	0.004	"	0.200	ND	96.1	70-130	3.68	20	
o-Xylene	0.097	0.002	"	0.100	ND	97.1	70-130	4.12	20	
Naphthalene	0.108	0.007	"	0.100	0.001	107	70-130	7.11	20	
Surrogate: 1,2-Dichloroethane-d4	68		ug/kg	62.5		109	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.3	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Johnson #2, #11-16G6

## 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
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## Extractable Petroleum Hydrocarbons by 8015M - Quality Control

### Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 5B13006 - EPA 3580

#### Blank (5B13006-BLK1)

Prepared: 02/13/2015 Analyzed: 02/13/2015

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 60 " 50.0 119 59-131

#### LCS (5B13006-BS1)

Prepared: 02/13/2015 Analyzed: 02/13/2015

Diesel (C10-C28) 1010 50.0 mg/kg 1000 101 64-121

Surrogate: o-Terphenyl 56 " 50.0 112 59-131

#### Matrix Spike (5B13006-MS1)

Source: X502149-01

Prepared: 02/13/2015 Analyzed: 02/13/2015

Diesel (C10-C28) 974 50.0 mg/kg 1000 18.4 95.5 53-125

Surrogate: o-Terphenyl 48 " 50.0 96.0 59-131

#### Matrix Spike Dup (5B13006-MSD1)

Source: X502149-01

Prepared: 02/13/2015 Analyzed: 02/13/2015

Diesel (C10-C28) 960 50.0 mg/kg 1000 18.4 94.2 53-125 1.44 20

Surrogate: o-Terphenyl 48 " 50.0 95.9 59-131

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Johnson #2, #11-16G6

### Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President