



March 12, 2015

Mr. Jacob Evans  
Noble Energy, Inc.  
1600 Broadway, Suite 2211  
Denver, Colorado 80202

**Additional Excavation and Groundwater Assessment Report  
State M36-3, M36-5, 6-36, 7-36, and 8-36  
Production Tank Release  
40.444259 / -104.845056  
SW¼ NW¼ SEC.36 T6N R67W 6PM  
CR 23 & CR 64 3/4, S 1 2/10, NE 5/10 INTO  
Weld County, Colorado  
Remediation # 8495**

Dear Mr. Evans,

Eagle Environmental Consulting, Inc. (EAGLE) is pleased to present this Additional Excavation and Groundwater Assessment Report (Report) for the State M36-3, M36-5, 6-36, 7-36, and 8-36 tank battery (Site).

## **1.0 SITE BACKGROUND**

Based on records on file with the Colorado Oil and Gas Conservation Commission (COGCC), the State M36-3, M36-5, 6-36, 7-36, and 8-36 Tank Battery is located at latitude: 40.444259 and longitude: -104.845056 in Weld County, Colorado. The tank battery included two, 300-barrel (bbl) production tanks, one concrete produced water vault (approximately 47.5 bbl), and one fiberglass produced water vault (approximately 120 bbl). The tank battery was rebuilt in Fall 2014. The Cache la Poudre River is located approximately 400 feet east of the Site. A topographic site location map is presented as Figure 1. An aerial site location map is presented as Figure 2.

On June 20, 2014 and June 21, 2014, Custom Environmental Services, Inc. (Custom) performed emergency response activities related to the unintentional release of approximately 178 bbl of crude oil at the Site as a result of flooding due to heavy precipitation and snow melt. Custom deployed hydrophobic pads and booms that were used to absorb crude oil present on the surface adjacent to, and downgradient of the Site.

From June 20, 2014 through June 30, 2014, assessment and remedial activities were performed at the Site. Site activities included the application of Petro-Green ADP-7 solution within the area of surface staining, the completion of a biological/wetlands identification survey, source excavation, and soil boring assessment activities. All assessment and remedial activities completed in June 2014 were detailed in a report submitted to the COGCC on July 31, 2014.

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

To assess dissolved benzene, toluene, ethylbenzene, and total xylene (BTEX) impacts associated with the unintentional surface release, EAGLE submitted a site map with proposed monitoring well locations to

Noble in September 2014. Eighteen (18) monitoring wells (MW-01 through MW-18) were proposed for installation around the tank battery, as well as around and within the unintentional surface release area east of the tank battery. An initial fourteen (14) monitoring wells (MW-01 through MW-14) were installed around the tank battery and unintentional surface release area east of the tank battery where additional excavation activities were to be completed. The remaining four (4) remaining monitoring wells were to be installed following excavation activities within the unintentional surface release area east of the tank battery.

## **2.1 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 no unmarked utilities were present within the proposed drilling locations. Tier II facility owners were also contacted to confirm the necessary buried utility notifications were completed.

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

On October 8, 2014 and October 9, 2014, a total of fourteen (14) soil borings (MW-01 through MW-14) were advanced around the tank battery and area of previous surface staining northeast of the tank battery. Following advancement activities, 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 volatile organic compound (VOC) concentrations. Monitoring wells, MW-01 through MW-14, were completed with 1-inch, schedule 40, poly vinyl chloride (PVC) pipe to total depths between approximately 9 to 14 feet below ground surface (bgs). Eight to ten feet of 0.010 slot, 1-inch, PVC screen was placed at the bottom of the boring followed by one to four 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. Based on location, monitoring wells MW-01 through MW-06 were completed with 8-inch traffic rated steel flush mounts. All remaining monitoring wells (MW-07 through MW-14) were completed as PVC stick-ups.

Soil boring logs/monitoring well completion diagrams are included in Attachment A. Monitoring well locations are presented in Figure 3. A geological cross section is included as Figure 4.

## **2.3 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 photoionization detector (PID). Another portion of the soil sample was placed in a 4-ounce glass jar and packed in an iced cooler for laboratory analysis.

Based on PID reading and sample location above the saturated zone, one soil sample from each boring (MW-01 through MW-14) were submitted to Origins, following standard chain of custody procedures, for laboratory analysis. Each soil sample was analyzed for BTEX, naphthalene, total petroleum hydrocarbon – gasoline range organics (TPH-GRO), and total petroleum hydrocarbon – diesel range organics (TPH-

DRO), following modified Environmental Protection Agency (EPA) Methods 8260c and 8015. The laboratory received the soil samples within the required holding time for each laboratory analysis.

## 2.4 Groundwater Sampling Procedures

EAGLE developed and collected a groundwater sample from each monitoring well the day after completion.

Prior to groundwater sample collection, depth to groundwater data was collected using a decontaminated interface probe capable of measuring the depth to groundwater or LNAPL to an accuracy of 0.01 feet.

Relative groundwater elevations within each monitoring well ranged from 88.62 feet (MW-09) to 93.11 feet (MW-02). The groundwater flow direction beneath the site during the October 2014 sampling event was predominantly to the west/southwest, with an average hydraulic gradient of 0.006 feet per foot across the site (measured from MW-04 to MW-14). Groundwater elevation data is summarized in Table 2 and presented in Figure 5.

Prior to 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 each monitoring well in 40 milliliter (mL) amber vials. The groundwater samples were submitted for laboratory analysis of 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.

Following groundwater sample collection, EAGLE recorded spatial locations of each monitoring well using a Trimble GeoXT 6000 series instrument and surveyed the top of casing for each monitoring well.

## 2.5 Laboratory Analytical Results

### 2.5.1 Soil Analytical Results – Monitoring Well Installation Activities

Based on laboratory analytical results, the soil sample collected from monitoring well MW-14 at 0 to 2.5' bgs contained a concentration of TPH-DRO (581 milligrams per kilogram (mg/kg)) exceeding the COGCC Table 910-1 regulatory limit of 500 mg/kg. All other soil samples collected did not contain concentrations of BTEX, TPH-GRO, or TPH-DRO exceeding their respective COGCC Table 910-1 regulatory limits or laboratory reporting limits.

Soil analytical results are summarized in Table 1 and are presented in Figure 3. The laboratory analytical reports for the soil samples collected during monitoring well installation activities at the Site are included in Attachment B.

### 2.5.2 Groundwater Analytical Results – Monitoring Well Installation Activities

Based on laboratory analytical results, the groundwater sample collected from monitoring well MW-01 contained a concentration of benzene (17.7 micrograms per liter ( $\mu\text{g/L}$ )) exceeding the COGCC Table 910-1 regulatory limit of 5  $\mu\text{g/L}$ . Groundwater samples collected from remaining monitoring wells (MW-02 through MW-14) did not contain concentrations of BTEX exceeding their respective laboratory reporting limits or COGCC Table 910-1 regulatory limits.

Groundwater analytical results are summarized in Table 3 and are presented in Figure 6. The laboratory analytical reports for groundwater samples collected following monitoring well installation activities at the Site are included in Attachment B.

### **3.0 SOIL EXCAVATION ACTIVITIES**

#### **3.1 Field Activities - Excavation**

From January 16, 2015 through January 20, 2015, EAGLE supervised excavation activities to remove petroleum hydrocarbon impacted soils within the unintentional surface release area, east of the State M36-3, M36-5, 6-36, 7-36, and 8-36 tank battery. BG Services LLC (BG) provided the necessary equipment and personnel to remove and transport petroleum hydrocarbon impacted soil from the Site for disposal at an appropriately permitted facility.

The soil lithology observed within the excavation was a loose, sandy silt from the surface to approximately 1 foot bgs. A silty sand was observed from approximately 1 foot bgs to approximately 2 feet bgs, underlain by a fine grained, loose sand from approximately 2 feet bgs to approximately 3.75 feet bgs. Groundwater was observed within the excavation at an approximate depth of 3 feet bgs. Petroleum hydrocarbon staining was observed from approximately 1 foot bgs to 3.25 feet bgs within the area surrounding previously assessed soil borings SS-08/SS-09 and SS-30.

Waste characterization/confirmation soil samples (EXC-01 through EXC-33) were collected at various locations to determine the lateral and vertical extent of petroleum hydrocarbon impacts in the soil beneath the unintentional surface release area. 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.

Samples were collected based on the location above the saturation zone where the highest PID reading was observed. Selected jarred soil samples were submitted to Origins Laboratory, Inc., under standard chain of custody procedures, for analysis of BTEX, naphthalene, TPH-GRO, and TPH-DRO following modified EPA Methods 8260c and 8015. The soil samples were received by the laboratory within the required holding time and QA/QC parameters.

A total of fourteen (14) confirmation soil samples (EXC-04@1', EXC-05@1.5', EXC-06@1.5', EXC-07@2', EXC-12@2.5', EXC-13@1', EXC-14@2.5', EXC-15@2.5', EXC-19@2.5', EXC-20@2.5', EXC-21@2.75', EXC-24@2', EXC-27@2', and EXC-30@1.5') 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 7.

On January 19, 2015, groundwater was observed within the excavation at a depth of approximately 3 feet bgs. The excavation was extended to a total depth of approximately 3.75 feet bgs, visually confirming adsorbed impacts were removed within the groundwater table. Prior to backfill activities, 100 pounds of granular activated carbon (GAC) and 100 pounds of gypsum were applied to the base of the excavation. The excavation area was then backfilled with pea gravel and structural fill.

The final limits of the State M36-3, M36-5, 6-36, 7-36, and 8-36 excavation extended approximately 240 feet north to south, and approximately 55 feet east to west. The excavation was advanced to a total depth of approximately 3.75 feet bgs. Approximately 1,340 cubic yards of soil was removed during excavation activities.

### **3.2 Laboratory Analytical Results - Excavation**

Based on soil laboratory analytical results, confirmation soil samples EXC-04@1', EXC-05@1.5', EXC-06@1.5', EXC-07@2', EXC-12@2.5', EXC-13@1', EXC-14@2.5', EXC-15@2.5', EXC-19@2.5', EXC-24@2', EXC-27@2', and EXC-30@1.5' did not contain concentrations of BTEX, naphthalene, TPH-GRO, and TPH-DRO exceeding their respective COGCC Table 910-1 Regulatory Limits.

Soil samples EXC-20@2.5' and EXC-21@2.75' contained concentrations of TPH (combined TPH-GRO and TPH-DRO) (781.2 mg/kg and 803 mg/kg, respectively), exceeding the COGCC Table 910-1 regulatory limit of 500 mg/kg. The excavation was extended vertically to approximately 3.75 feet bgs where EXC-20@2.5' and EXC-21@2.75' were collected, until visual staining was no longer observed. Groundwater was observed at approximately 3 feet bgs, and therefore, confirmation soil samples were not collected to vertically define soil sample locations EXC-20@2.5' and EXC-21@2.75'.

Soil analytical results are summarized in Table 1 and are presented in Figure 8. The laboratory analytical reports for the soil samples collected during excavation activities at the Site are included in Attachment B.

## **4.0 CONFIRMATION SOIL SAMPLING ACTIVITIES**

### **4.1 Field Activities**

On January 16, 2015, EAGLE completed confirmation soil sampling activities at the site for soil samples collected during previous field assessment activities. Utilizing a hand auger, soil samples SS-49 through SS-54 were advanced to total depths ranging from 2 inches to 4 inches bgs. For each soil boring, soil samples were collected adjacent to, and at the same depth of previously collected soil samples (SS-12, SS-13, SS-14, SS-17, SS-20, and SS-21) that contained concentrations exceeding COGCC Table 910-1 Regulatory Limits.

EAGLE returned to the Site on February 19, 2015 to collect a confirmation soil sample adjacent to MW-14. Utilizing a hand auger, EAGLE advanced soil boring SS-55 adjacent to monitoring well MW-14, to a total depth of approximately 2.5' bgs. A boring log of soil boring SS-55 is included in Attachment A.

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.

Jarred soil samples were submitted to Origins Laboratory, Inc., under standard chain of custody procedures, for analysis of BTEX, naphthalene, TPH-GRO, and TPH-DRO following modified EPA Methods 8260c and 8015. The soil samples were received by the laboratory within the required holding time and QA/QC parameters.

## 4.2 Laboratory Analytical Results – Confirmation Soil Sampling Activities

Based on laboratory analytical results, soil samples SS-49@1-2", SS-50@3-4", SS-51@1-2", SS-52@3-4", SS-53@1-2", SS-54@3-4", and SS-55@0-2.5' did not contain concentrations of BTEX, naphthalene, TPH-GRO, or TPH-DRO exceeding their respective COGCC Table 910-1 regulatory limits.

Soil analytical results from confirmation soil sampling activities are summarized in Table 1, and presented in Figure 3 (SS-55) and Figure 9 (SS-49 through SS-54). The laboratory analytical reports for the soil samples collected during soil confirmation sampling activities at the Site are included in Attachment B.

## 5.0 CONCLUSIONS

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

- On October 8, 2014 through October 10, 2014, fourteen (14) monitoring wells (MW-01 through MW-14) were installed and sampled at the site.
- The soil sample collected from monitoring well MW-14 from 0 to 2.5 feet bgs contained a concentration of TPH-DRO exceeding the COGCC Table 910-1 regulatory limit of 500 mg/kg.
- The groundwater sample collected from monitoring well MW-01 contained a concentration of benzene exceeding the COGCC Table 910-1 regulatory limit of 5 µg/L.
- From January 16, 2015 through January 20, 2015, approximately 1,340 cubic yards of impacted soil were removed from the Site and disposed of at an appropriately permitted facility.
- Soil samples EXC-20 and EXC-21 contained concentrations of TPH exceeding the COGCC Table 910-1 regulatory limit. The locations where the soil samples were collected were removed during excavation activities.
- Soil samples EXC-04@1', EXC-05@1.5', EXC-06@1.5', EXC-07@2', EXC-12@2.5', EXC-13@1', EXC-14@2.5', EXC-15@2.5', EXC-19@2.5', EXC-24@2', EXC-27@2', and EXC-30@1.5', collected within the excavation, did not contain concentration of BTEX, naphthalene, or TPH exceeding their respective COGCC Table 910-1 regulatory limit.
- A total of 100 pounds of GAC and 100 pounds of gypsum were placed within the base of the excavation prior to backfill activities.
- Confirmation soil samples soil samples SS-49@1-2", SS-50@3-4", SS-51@1-2", SS-52@3-4", SS-53@1-2", SS-54@3-4", and SS-55@0-2.5' did not contain concentrations of BTEX, naphthalene, TPH-GRO, or TPH-DRO exceeding their respective COGCC Table 910-1 regulatory limits.

## 6.0 RECOMMENDATIONS

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

- Install remaining proposed groundwater monitoring wells to define and monitor residual dissolved petroleum hydrocarbon impacts within the Unintentional Release area.
- Monitor natural attenuation of residual petroleum hydrocarbon impacts remaining at the Site with quarterly groundwater sampling. Monitored natural attenuation is the preferred remedial approach based on the vegetative communities present in the area and low benzene concentrations observed.

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  
Principal/Senior Scientist

## **TABLES**

**Table 1: Soil Analytical Results Summary**

**Table 2: Groundwater Elevation Summary**

**Table 3: Groundwater Analytical Results Summary**

TABLE 1  
SOIL ANALYTICAL RESULTS SUMMARY  
STATE M36-3, M36-5, 6-36, 7-36, AND 8-36  
PRODUCTION TANK RELEASE  
40.444259/-104.845056  
SW¼ NW¼ SEC. 36, T6N, R67W, 6 PM  
WELD COUNTY, COLORADO  
REMEDATION # 8495

Sample Location (Latitude / Longitude)	Date	Approximate Depth (inches)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	pH	Specific Conductance (mmhos/cm)	Sodium Adsorption Ratio
<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>		<b>6.0-9.0</b>	<b>4</b>	<b>1200000</b>
SS-01 @ surface (40.445981562 / -104.842166414)	06/20/14	surface	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-02 @ surface (40.445855905 / -104.84258165)	06/20/14	surface	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-03 @ surface (40.445685039 / -104.843011606)	06/20/14	surface	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-04 @ surface (40.445510657 / -104.843363798)	06/20/14	surface	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-05 @ surface (40.445378447 / -104.843494015)	06/20/14	surface	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-06 @ 1-2" (40.444033585 / -104.845026678)	06/21/14	1.0-2.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<b>1500</b>	7.90	0.229	1.35
SS-07 @ 3-4" (40.444033585 / -104.845026678)	06/21/14	3.0-4.0	<0.05	<0.05	<0.05	<0.05	<0.2	33.7	414	7.69	0.230	1.35
SS-08 @ 1-2" (40.444194133 / -104.844911559)	06/21/14	1.0-2.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<b>28300</b>	7.53	0.232	1.42
SS-09 @ 3-4" (40.444194133 / -104.844911559)	06/21/14	3.0-4.0	<0.002	<0.002	<0.002	<0.002	<0.008	4.4	<b>3240</b>	7.46	0.283	0.837
SS-10 @ 1-2" (40.444381772 / -104.844747628)	06/21/14	1.0-2.0	<0.002	<0.002	<0.002	<0.002	<0.008	3.6	<b>20500</b>	8.36	0.0434	0.678
SS-11 @ 3-4" (40.444381772 / -104.844747628)	06/21/14	3.0-4.0	<0.05	<0.05	0.09	1.2	0.7	240	<b>41700</b>	8.18	0.0562	1.07
SS-12 @ 1-2" (40.44458152 / -104.84470946)	06/21/14	1.0-2.0	<0.002	<0.002	<0.002	<0.002	<0.008	13.6	<b>3300</b>	7.73	0.284	1.87
SS-13 @ 3-4" (40.44458152 / -104.84470946)	06/21/14	3.0-4.0	<0.002	<0.002	<0.002	<0.002	<0.008	1.5	<b>829</b>	7.76	0.191	1.44
SS-14 @ 1-2" (40.444679006 / -104.844377002)	06/21/14	1.0-2.0	<0.002	<0.002	<0.002	<0.002	<0.008	0.5	<b>1880</b>	8.48	0.0761	0.787
SS-15 @ 3-4" (40.444679006 / -104.844377002)	06/21/14	3.0-4.0	<0.1	0.2	<0.1	<0.1	<0.4	20.0	179	7.69	0.0643	0.84
SS-16 @ 1-2" (40.444877225 / -104.844225377)	06/21/14	1.0-2.0	<0.1	<0.1	<0.1	<0.1	<0.4	<10.0	392	7.80	0.134	1.24
SS-17 @ 3-4" (40.444877225 / -104.844225377)	06/21/14	3.0-4.0	<0.002	<0.002	0.002	0.01	<0.008	0.3	<b>643</b>	7.54	0.168	1.09
SS-18 @ 1-2" (40.444872764 / -104.843980778)	06/21/14	1.0-2.0	<0.05	<0.05	<0.05	<0.05	<0.2	17.1	293	8.09	0.0806	0.768
SS-19 @ 3-4" (40.444872764 / -104.843980778)	06/21/14	3.0-4.0	<0.05	<0.05	<0.05	<0.05	<0.2	<5.0	89.0	7.90	0.127	0.829
SS-20 @ 1-2" (40.444844744 / -104.843751845)	06/21/14	1.0-2.0	<0.002	0.002	<0.002	<0.002	<0.008	<0.2	<b>518</b>	7.33	0.131	0.588
SS-21 @ 3-4" (40.444844744 / -104.843751845)	06/21/14	3.0-4.0	<0.002	0.003	<0.002	<0.002	<0.008	0.2	<b>685</b>	7.48	0.163	0.491
SS-22 @ 6-12" (40.444194133 / -104.844911559)	06/25/14	6.0-12.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	66.4	NA	NA	NA
SS-23 @ 6-12" (40.444381772 / -104.844747628)	06/25/14	6.0-12.0	<0.05	<0.05	<0.05	0.3	0.3	92.0	<b>982</b>	NA	NA	NA
SS-24 @ 12-18" (40.44458152 / -104.84470946)	06/25/14	12.0-18.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-25 @ 6-12" (40.444877225 / -104.844225377)	06/25/14	6.0-12.0	0.003	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA

TABLE 1  
SOIL ANALYTICAL RESULTS SUMMARY  
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PRODUCTION TANK RELEASE  
40.444259/-104.845056  
SW¼ NW¼ SEC. 36, T6N, R67W, 6 PM  
WELD COUNTY, COLORADO  
REMEDATION # 8495

Sample Location (Latitude / Longitude)	Date	Approximate Depth (inches)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	pH	Specific Conductance (mmhos/cm)	Sodium Adsorption Ratio
<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>		<b>6.0-9.0</b>	<b>4</b>	<b>1200000</b>
SS-26 @ 30-36" (40.444844744 / -104.843751845)	06/25/14	30.0-36.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-27 @ 4-8" (40.443969064 / -104.845038769)	06/26/14	4.0-8.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-28 @ 22-26" (40.444048624 / -104.845071473)	06/26/14	22.0-26.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-29 @ 16-20" (40.444024316 / -104.844993703)	06/26/14	16.0-20.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-30 @ 22-26" (40.44423293 / -104.844970576)	06/26/14	22.0-26.0	<b>0.8</b>	4.3	1.1	8.0	<0.8	191	78.0	NA	NA	NA
SS-31 @ 4-8" (40.444159548 / -104.844851054)	06/26/14	4.0-8.0	<0.002	<0.002	<0.002	0.005	<0.008	0.2	<50.0	NA	NA	NA
SS-32 @ 4-8" (40.444401989 / -104.844780656)	06/26/14	4.0-8.0	<0.002	0.002	<0.002	0.007	<0.008	<0.2	<50.0	NA	NA	NA
SS-33 @ 4-8" (40.444344011 / -104.844668852)	06/26/14	4.0-8.0	<0.002	<0.002	<0.002	0.005	<0.008	<0.2	<50.0	NA	NA	NA
SS-34 @ 12-16" (40.444609565 / -104.844739569)	06/27/14	12.0-16.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-35 @ 4-8" (40.444527337 / -104.844575814)	06/27/14	4.0-8.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-36 @ 8-12" (40.444761834 / -104.844498553)	06/27/14	8.0-12.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-37 @ 4-8" (40.444662913 / -104.844327325)	06/27/14	4.0-8.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-38 @ 4-8" (40.444873363 / -104.844334236)	06/27/14	4.0-8.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-39 @ 4-8" (40.444815128 / -104.844179929)	06/27/14	4.0-8.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-40 @ 4-8" (40.444992512 / -104.844184169)	06/27/14	4.0-8.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-41 @ 4-8" (40.444958298 / -104.843786868)	06/27/14	4.0-8.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-42 @ 4-8" (40.444778035 / -104.843763308)	06/27/14	4.0-8.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-43 @ 4-8" (40.44488832 / -104.843703757)	06/27/14	4.0-8.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-44 @ 4-8" (40.444624838 / -104.84385268)	06/27/14	4.0-8.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-45 @ 4-8" (40.444495488 / -104.843933899)	06/27/14	4.0-8.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-46 @ 4-8" (40.444300036 / -104.844105806)	06/27/14	4.0-8.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-47 @ 30-36" (40.445050479 / -104.844150918)	06/30/14	30.0-36.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-48 @ 18-24" (40.44501361 / -104.844059742)	06/30/14	18.0-24.0	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
SS-49 @ 1-2" (40.444596039 / -104.844632314)	01/16/15	1.0-2.0	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
SS-50 @ 3-4" (40.444596039 / -104.844632314)	01/16/15	3.0-4.0	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
SS-51 @ 1-2" (40.444655569 / -104.844370437)	01/16/15	1.0-2.0	<0.002	<0.002	<0.002	0.003	<0.007	<0.200	<50.0	NA	NA	NA
SS-52 @ 3-4" (40.444866732 / -104.84419184)	01/16/15	3.0-4.0	<0.002	0.002	<0.002	0.008	<0.007	<0.200	<50.0	NA	NA	NA
SS-53 @ 1-2" (40.444843189 / -104.843750025)	01/16/15	1.0-2.0	<0.002	0.002	0.003	0.024	<0.007	0.386	70.0	NA	NA	NA
SS-54 @ 3-4" (40.444843189 / -104.843750025)	01/16/15	3.0-4.0	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA

TABLE 1  
SOIL ANALYTICAL RESULTS SUMMARY  
STATE M36-3, M36-5, 6-36, 7-36, AND 8-36  
PRODUCTION TANK RELEASE  
40.444259/-104.845056  
SW¼ NW¼ SEC. 36, T6N, R67W, 6 PM  
WELD COUNTY, COLORADO  
REMEDATION # 8495

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)	pH	Specific Conductance (mmhos/cm)	Sodium Adsorption Ratio
<b>COGCC Table 910-1 Regulatory Limits (mg/kg)</b>			0.17	85	100	175	23	500		6.0-9.0	4	1200000
TBSS-01 @ 3.5' (40.444345803 / -104.845189974)	06/24/14	3.5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
TBSS-04 @ 3.5' (40.444380503 / -104.845153519)	06/24/14	3.5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	8.37	0.106	0.448
TBSS-05 @ 3.0' (40.444358534 / -104.845074397)	06/24/14	3	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
TBSS-18 @ 3.0' (40.444302821 / -104.845218221)	06/25/14	3	<0.002	<0.002	<0.002	0.009	<0.008	<0.2	<50.0	NA	NA	NA
TBSS-19 @ 3.0' (40.444258109 / -104.845235796)	06/25/14	3	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
TBSS-21 @ 3.0' (40.444267 / -104.845234)	06/25/14	3	<0.002	<0.002	<0.002	0.04	<0.008	0.6	<50.0	NA	NA	NA
TBSS-29 @ 3.5' (40.444338437 / -104.844969236)	06/27/14	3.5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
TBSS-30 @ 3.5' (40.44430919 / -104.844960128)	06/27/14	3.5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
TBSS-31 @ 3.5' (40.444246927 / -104.844977048)	06/27/14	3.5	0.05	0.06	0.007	0.04	<0.008	0.6	<50.0	NA	NA	NA
TBSS-35 @ 3.5' (40.444392228 / -104.845022434)	06/30/14	3.5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
TBSS-39 @ 3.0' (40.44417126 / -104.845176684)	06/30/14	3	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
TBSS-40 @ 3.5' (40.444149399 / -104.845087619)	06/30/14	3.5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.2	<50.0	NA	NA	NA
TBSS-41 @ 3.0' (40.444174994 / -104.845018487)	06/30/14	3	0.06	0.005	0.02	0.1	<0.008	2.3	<50.0	NA	NA	NA

TABLE 1  
SOIL ANALYTICAL RESULTS SUMMARY  
STATE M36-3, M36-5, 6-36, 7-36, AND 8-36  
PRODUCTION TANK RELEASE  
40.444259/-104.845056  
SW¼ NW¼ SEC. 36, T6N, R67W, 6 PM  
WELD COUNTY, COLORADO  
REMEDATION # 8495

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)	pH	Specific Conductance (mmhos/cm)	Sodium Adsorption Ratio
<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>		<b>6.0-9.0</b>	<b>4</b>	<b>1200000</b>
MW-01 @ 5-7.5' (40.4442984192 / -104.845097276)	10/08/14	5-7.5	<0.05	<0.05	<0.05	<0.05	<0.20	8.70	<50.0	NA	NA	NA
MW-02 @ 2.5-5' (40.4443738812 / -104.845307671)	10/08/14	2.5-5	<0.002	<0.002	<0.002	<0.002	<0.008	0.20	<50.0	NA	NA	NA
MW-03 @ 5-7.5' (40.4445555982 / -104.845110257)	10/08/14	5-7.5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.20	<50.0	NA	NA	NA
MW-04 @ 5-7.5' (40.4442042132 / -104.845320992)	10/08/14	5-7.5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.20	<50.0	NA	NA	NA
MW-05 @ 2.5-5' (40.4440557552 / -104.845269544)	10/08/14	2.5-5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.20	<50.0	NA	NA	NA
MW-06 @ 5-7.5' (40.4446472222 / -104.844883852)	10/08/14	5-7.5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.20	<50.0	NA	NA	NA
MW-07 @ 2.5-5' (40.4448577152 / -104.844490124)	10/08/14	2.5-5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.20	<50.0	NA	NA	NA
MW-08 @ 0-2.5' (40.4446005042 / -104.844397129)	10/08/14	0-2.5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.20	<50.0	NA	NA	NA
MW-09 @ 5-7.5' (40.4450361712 / -104.844249498)	10/09/14	5-7.5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.20	<50.0	NA	NA	NA
MW-10 @ 0-2.5' (40.4449045162 / -104.844167041)	10/09/14	0-2.5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.20	<50.0	NA	NA	NA
MW-11 @ 2.5-5' (40.4449911952 / -104.843986073)	10/09/14	2.5-5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.20	<50.0	NA	NA	NA
MW-12 @ 0-2.5' (40.4448427762 / -104.843944947)	10/09/14	0-2.5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.20	433	NA	NA	NA
MW-13 @ 0-2.5' (40.4449321532 / -104.843770355)	10/09/14	0-2.5	<0.002	<0.002	<0.002	<0.002	<0.008	<0.20	<50.0	NA	NA	NA
MW-14 @ 0-2.5' (40.4447805932 / -104.843778042)	10/09/14	0-2.5	<0.002	<0.002	<0.002	<0.002	<0.008	0.27	<b>581</b>	NA	NA	NA
SS-55 @ 0-2.5' (40.4447805940 / -104.843777968)	02/19/15	0-2.5	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	72.6	NA	NA	NA

TABLE 1  
SOIL ANALYTICAL RESULTS SUMMARY  
STATE M36-3, M36-5, 6-36, 7-36, AND 8-36  
PRODUCTION TANK RELEASE  
40.444259/-104.845056  
SW¼ NW¼ SEC. 36, T6N, R67W, 6 PM  
WELD COUNTY, COLORADO  
REMEDATION # 8495

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)	pH	Specific Conductance (mmhos/cm)	Sodium Adsorption Ratio
<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>		<b>6.0-9.0</b>	<b>4</b>	<b>1200000</b>
EXC-04 @ 1' (40.444570689 / -104.844611586)	01/16/15	1	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
EXC-05 @ 1.5' (40.444560132 / -104.844703534)	01/16/15	1.5	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
EXC-06 @ 1.5' (40.444498122 / -104.844593553)	01/16/15	1.5	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
EXC-07 @ 2' (40.444474845 / -104.844683918)	01/16/15	2	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
EXC-12 @ 2.5' (40.44440038 / -104.844736868)	01/19/15	2.5	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
EXC-13 @ 1' (40.444582971 / -104.84448744)	01/19/15	1	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
EXC-14 @ 2.5' (40.44433311 / -104.844834281)	01/19/15	2.5	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	87.2	NA	NA	NA
EXC-15 @ 2.5' (40.444309277 / -104.844778451)	01/19/15	2.5	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
EXC-19 @ 2.5' (40.444256376 / -104.844861373)	01/19/15	2.5	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	53.5	NA	NA	NA
EXC-20 @ 2.5' (40.444215484 / -104.844920063)	01/19/15	2.5	<0.002	<0.002	0.006	0.002	0.116	13.2	<b>768</b>	NA	NA	NA
EXC-21 @ 2.75' (40.444239754 / -104.844966341)	01/19/15	2.75	<0.050	<0.050	0.270	1.32	<0.175	<b>324</b>	<b>479</b>	NA	NA	NA
EXC-24 @ 2' (40.444270624 / -104.844926888)	01/20/15	2	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
EXC-27 @ 2' (40.444088008 / -104.844983055)	01/20/15	2	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
EXC-30 @ 1.5' (40.444048783 / -104.845023824)	01/20/15	1.5	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA
COGCC = Colorado Oil and Gas Conservation Commission mg/kg = milligrams per kilogram mmhos/cm = millimhos per centimeter  TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics NA = Not Analyzed  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 ELEVATION SUMMARY**  
**STATE M36-3, M36-5, 6-36, 7-36, AND 8-36**  
**PRODUCTION TANK RELEASE**  
**40.444259/-104.845056**  
**SW¼ NW¼ SEC. 36, T6N, R67W, 6 PM**  
**WELD COUNTY, COLORADO**  
**REMEDATION # 8495**

Sample Location (Latitude/Longitude)	Date	Top of Casing Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)
MW-01 (40.4442984192 / -104.845097276)	10/09/14	98.56	7.53	91.03
MW-02 (40.4443738812 / -104.845307671)	10/09/14	102.11	9.00	93.11
MW-03 (40.4445555982 / -104.845110257)	10/09/14	99.43	8.36	91.07
MW-04 (40.4442042132 / -104.845320992)	10/09/14	98.03	7.83	90.20
MW-05 (40.4440557552 / -104.845269544)	10/09/14	97.38	6.33	91.05
MW-06 (40.4446472222 / -104.844883852)	10/09/14	100.00	8.06	91.94
MW-07 (40.4448577152 / -104.844490124)	10/09/14	97.63	7.85	89.78
MW-08 (40.4446005042 / -104.844397129)	10/10/14	100.28	7.56	92.72
MW-09 (40.4450361712 / -104.844249498)	10/09/14	95.94	7.32	88.62
MW-10 (40.4449045162 / -104.844167041)	10/10/14	100.72	8.20	92.52
MW-11 (40.4449911952 / -104.843986073)	10/10/14	101.64	9.37	92.27
MW-12 (40.4448427762 / -104.843944947)	10/10/14	100.31	7.75	92.56
MW-13 (40.4449321532 / -104.843770355)	10/10/14	100.40	8.05	92.35
MW-14 (40.4447805932 / -104.843778042)	10/10/14	99.91	7.01	92.90

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS SUMMARY**  
**STATE M36-3, M36-5, 6-36, 7-36, AND 8-36**  
**PRODUCTION TANK RELEASE**  
**40.444259/-104.845056**  
**SW¼ NW¼ SEC. 36, T6N, R67W, 6 PM**  
**WELD COUNTY, COLORADO**  
**REMEDATION # 8495**

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 (40.444307 / -104.845131)	06/24/14	<b>2470</b>	<b>1380</b>	<b>892</b>	<b>5890</b>
Surface Pond (40.444856 / -104.843792)	06/24/14	<1.0	<1.0	<1.0	<1.0
SS-22-GW (40.444194133 / -104.844911559)	06/25/14	<b>25.2</b>	20.4	<4.0	<4.0
SS-23-GW (40.444381772 / -104.844747628)	06/25/14	<b>11.1</b>	<4.0	<4.0	<4.0
SS-24-GW (40.44458152 / -104.84470946)	06/25/14	<1.0	<1.0	<1.0	<1.0
SS-25-GW (40.444877225 / -104.844225377)	06/25/14	<1.0	<1.0	<1.0	<1.0
SS-26-GW (40.444844744 / -104.843751845)	06/25/14	<1.0	<1.0	<1.0	<1.0
SS-27-GW (40.443969064 / -104.845038769)	06/26/14	<1.0	<1.0	<1.0	<1.0
SS-28-GW (40.444048624 / -104.845071473)	06/26/14	<1.0	<1.0	<1.0	<1.0
SS-29-GW (40.444024316 / -104.844993703)	06/26/14	<1.0	<1.0	<1.0	<1.0
SS-31-GW (40.444159548 / -104.844851054)	06/26/14	<1.0	<1.0	<1.0	<1.0
SS-32-GW (40.444401989 / -104.844780656)	06/26/14	<b>29.1</b>	2.8	<1.0	4.6
SS-33-GW (40.444344011 / -104.844668852)	06/26/14	<1.0	<1.0	<1.0	<1.0
SS-34-GW (40.444609565 / -104.844739569)	06/27/14	1.6	<1.0	<1.0	<1.0
SS-35-GW (40.444527337 / -104.844575814)	06/27/14	<1.0	<1.0	<1.0	<1.0
SS-36-GW (40.444761834 / -104.844498553)	06/27/14	<1.0	<1.0	<1.0	<1.0
SS-37-GW (40.444662913 / -104.844327325)	06/27/14	<1.0	<1.0	<1.0	<1.0
SS-38-GW (40.444873363 / -104.844334236)	06/27/14	<1.0	<1.0	<1.0	<1.0
SS-39-GW (40.444815128 / -104.844179929)	06/27/14	3.5	<1.0	<1.0	<1.0
SS-40-GW (40.444992512 / -104.844184169)	06/27/14	<b>7.8</b>	<1.0	<1.0	<1.0
SS-41-GW (40.444958298 / -104.843786868)	06/27/14	<1.0	<1.0	<1.0	<1.0
SS-42-GW (40.444778035 / -104.843763308)	06/27/14	<4.0	<4.0	<4.0	<4.0
SS-43-GW (40.44488832 / -104.843703757)	06/27/14	<1.0	<1.0	<1.0	<1.0
SS-44-GW (40.444624838 / -104.843855268)	06/27/14	<1.0	<1.0	<1.0	<1.0
SS-45-GW (40.444495488 / -104.843933899)	06/27/14	<1.0	<1.0	<1.0	<1.0
SS-46-GW (40.444300036 / -104.844105806)	06/27/14	<1.0	<1.0	<1.0	<1.0
SS-47-GW (40.445050479 / -104.844150918)	06/30/14	<1.0	<1.0	<1.0	<1.0
SS-48-GW (40.44501361 / -104.844059742)	06/30/14	<1.0	<1.0	<1.0	<1.0
TBSB-01-GW (40.444470809 / -104.845024968)	06/30/14	<b>68.1</b>	<1.0	1.8	15.0
TBSB-02-GW (40.444347698 / -104.845291808)	06/30/14	<1.0	<1.0	<1.0	<1.0
TBSB-03-GW (40.444167498 / -104.845295342)	06/30/14	<1.0	<1.0	<1.0	<1.0

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS SUMMARY**  
**STATE M36-3, M36-5, 6-36, 7-36, AND 8-36**  
**PRODUCTION TANK RELEASE**  
**40.444259/-104.845056**  
**SW¼ NW¼ SEC. 36, T6N, R67W, 6 PM**  
**WELD COUNTY, COLORADO**  
**REMEDATION # 8495**

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>
MW-01 (40.4442984192 / -104.845097276)	10/09/14	<b>17.7</b>	<1.0	<1.0	4.4
MW-02 (40.4443738812 / -104.845307671)	10/09/14	<1.0	<1.0	<1.0	<1.0
MW-03 (40.4445555982 / -104.845110257)	10/09/14	<1.0	<1.0	<1.0	<1.0
MW-04 (40.4442042132 / -104.845320992)	10/09/14	<1.0	<1.0	<1.0	<1.0
MW-05 (40.4440557552 / -104.845269544)	10/09/14	<1.0	<1.0	<1.0	<1.0
MW-06 (40.4446472222 / -104.844883852)	10/09/14	<1.0	<1.0	<1.0	<1.0
MW-07 (40.4448577152 / -104.844490124)	10/09/14	<1.0	<1.0	<1.0	<1.0
MW-08 (40.4446005042 / -104.844397129)	10/10/14	<1.0	<1.0	<1.0	<1.0
MW-09 (40.4450361712 / -104.844249498)	10/09/14	<1.0	<1.0	<1.0	<1.0
MW-10 (40.4449045162 / -104.844167041)	10/10/14	<1.0	<1.0	<1.0	<1.0
MW-11 (40.4449911952 / -104.843986073)	10/10/14	<1.0	<1.0	<1.0	<1.0
MW-12 (40.4448427762 / -104.843944947)	10/10/14	<1.0	<1.0	<1.0	<1.0
MW-13 (40.4449321532 / -104.843770355)	10/10/14	<1.0	<1.0	<1.0	<1.0
MW-14 (40.4447805932 / -104.843778042)	10/10/14	<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).					

## **FIGURES**

**Figure 1: Topographic Site Location Map**

**Figure 2: Aerial Site Location Map**

**Figure 3: Monitoring Well Soil Analytical Map**

**Figure 4: Geologic Cross Section (A-A')**

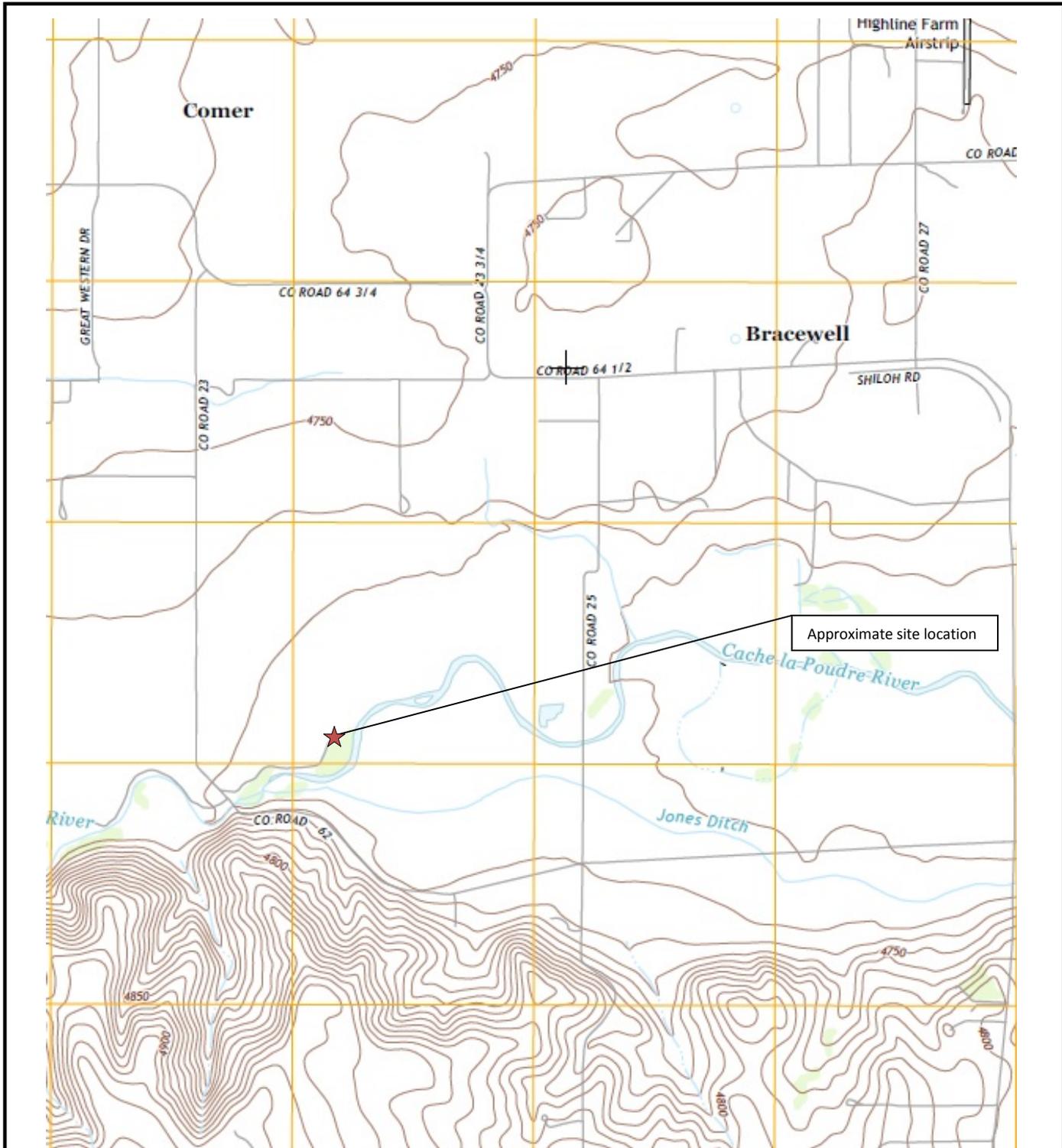
**Figure 5: Groundwater Elevation Map**

**Figure 6: Groundwater Sample Location Map**

**Figure 7: Excavation Soil Sample Location Map**

**Figure 8: Excavation Soil Analytical Map**

**Figure 9: Field Assessment Soil Sample Location Map**



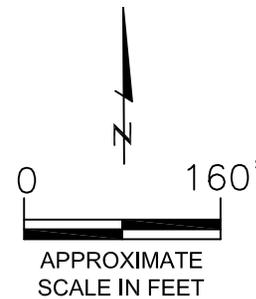
	<p align="center"> <b>Topographic Site Location Map</b>            State M36-3, M36-5, 6-36, 7-36, and 8-36            Production Tank Release            40.444259/-104.845056            SW¼ NW¼ SEC.36 T6N R67W 6PM            Weld County, Colorado            Remediation # 8495         </p>
<p>Source: USGS 7.5 Minute Topographic Map, Bracewell, CO Quadrangle 2013</p>	<p align="center"><b>Figure 1</b></p>





LEGEND

COORDINATES OF INFRASTRUCTURE AND RELEASE LOCATION:  
 RELEASE LOCATION (40.444259/-104.845056)  
 TANK BATTERY (40.444274/-104.845117)



AERIAL SITE LOCATION MAP  
 STATE M36-3, M36-5, 6-36, 7-36, and 8-36  
 PRODUCTION TANK RELEASE  
 40.444259 / -104.845056  
 SW1/4 NW1/4 SEC.36 T6N R67W 6PM  
 WELD COUNTY, COLORADO  
 REMEDIATION # 8495

DATE: 07/08/14

FIG. NO.

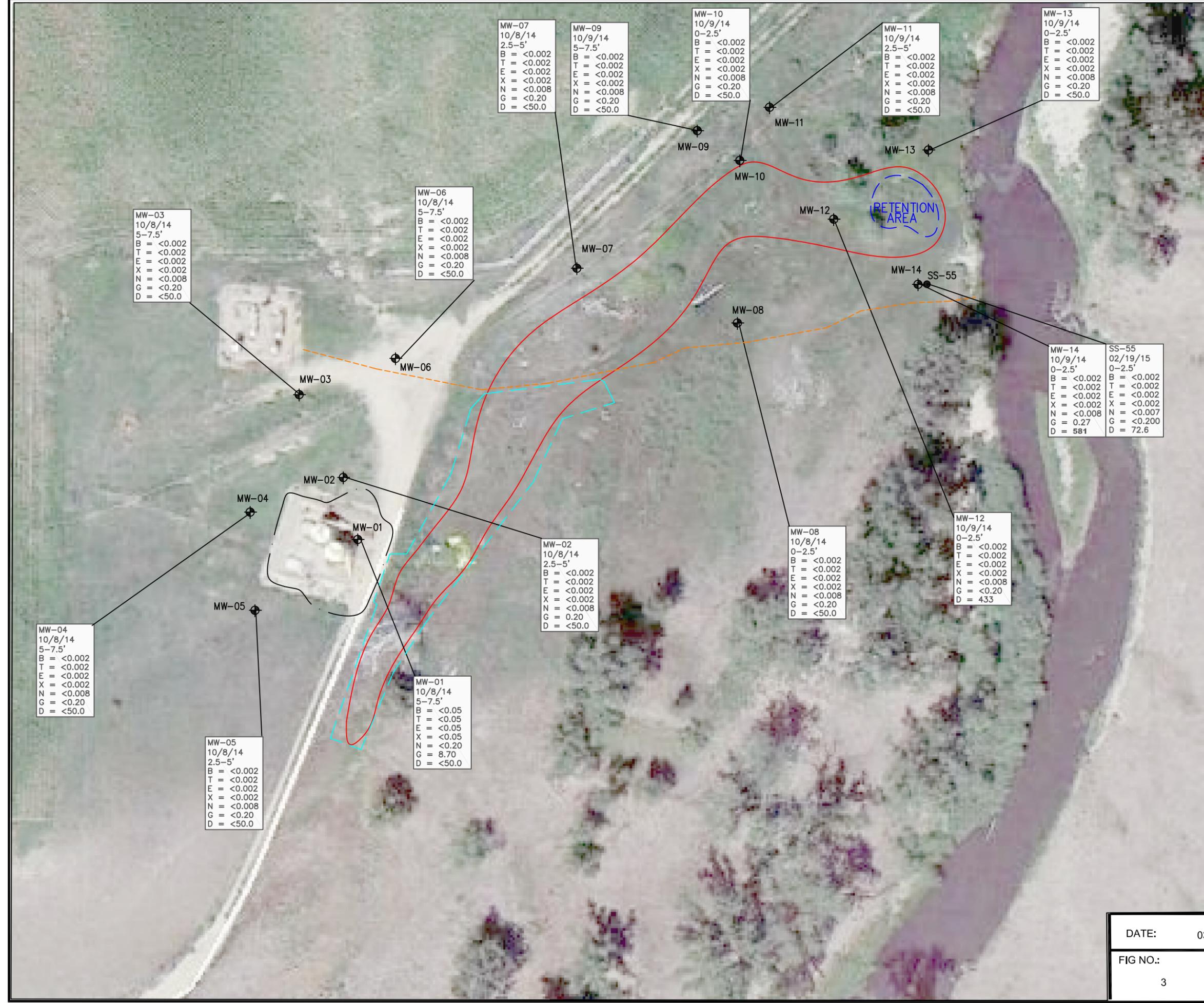
2

DRAWN BY:

mce



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LEGEND

- APPROXIMATE EXTENTS OF STATE M36-3, M36-5, 6-36 7-36, AND 8-36 TANK BATTERY EXCAVATION
- APPROXIMATE EXTENT OF SURFACE STAINING
- APPROXIMATE LOCATION OF ABANDONED DCP MIDSTREAM UNDERGROUND UTILITY
- APPROXIMATE LOWER EXCAVATION EXTENTS
- APPROXIMATE MONITORING WELL LOCATIONS
- APPROXIMATE SOIL BORING LOCATION

PARAMETERS

SAMPLE LOCATION	
DATE	DEPTH (INCHES)
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

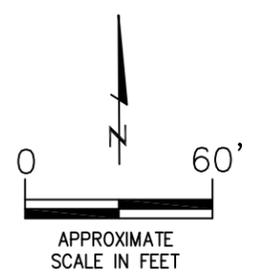
TPH - GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS  
 TPH - DRO = TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE ORGANICS

NOTE: VALUES PRESENTED IN **BOLD** TYPEFACE EXCEED THE COGCC CONCENTRATION LEVELS PRESENTED IN TABLE 910-1.

COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION.

VALUES PRESENTED WITH A LESS THAN SYMBOL (<) INDICATE CONCENTRATIONS WERE NOT OBSERVED AT OR ABOVE THE LABORATORY REPORTING LIMIT.

SOIL SAMPLE SS-55 WAS COLLECTED AS A CONFIRMATION SOIL SAMPLE FOR THE TPH-DRO EXCEEDANCE IN MONITORING WELL MW-14.

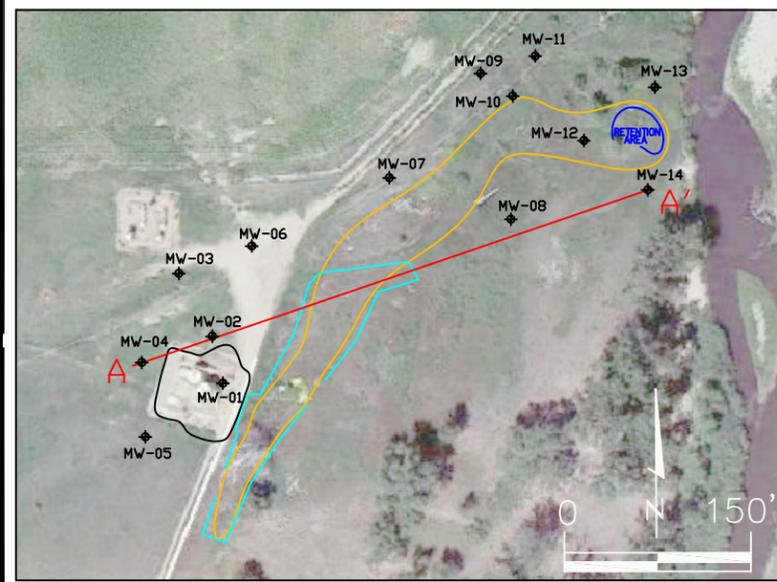
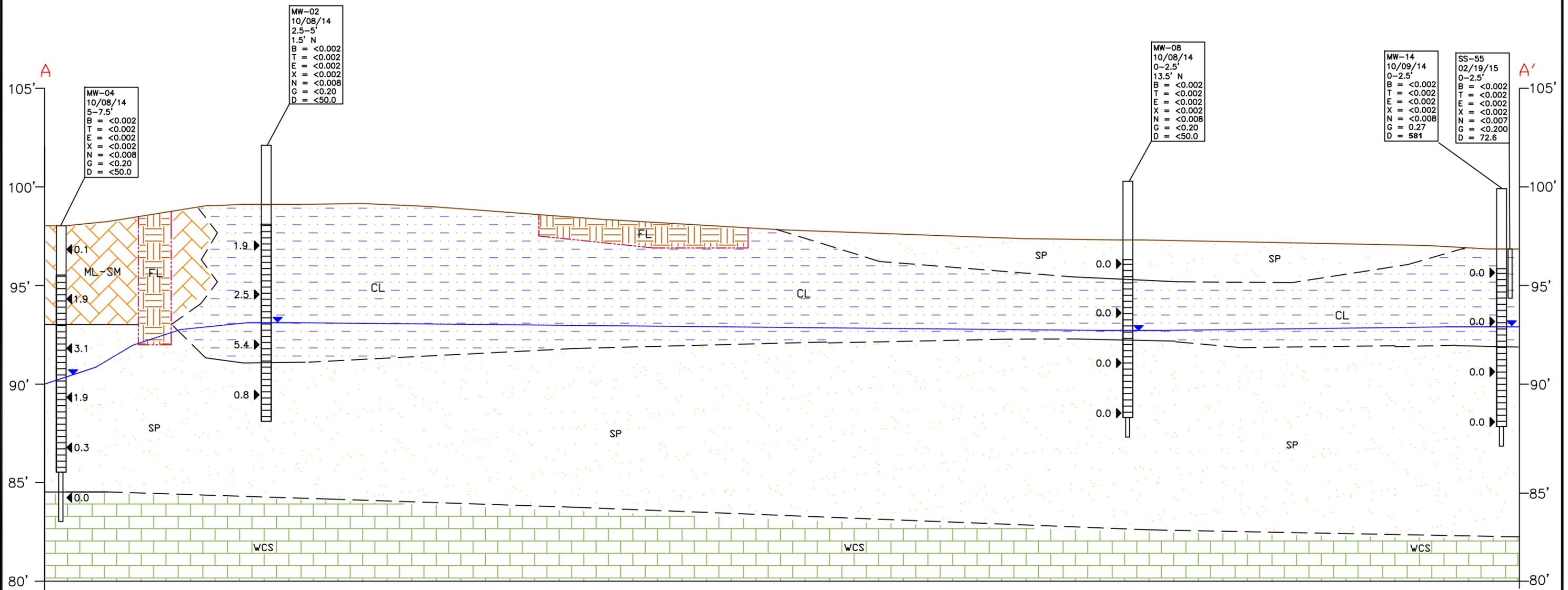


MONITORING WELL SOIL SAMPLE ANALYTICAL MAP  
 STATE M36-3, M36-5, 6-36, 7-36, AND 8-36  
 PRODUCTION TANK RELEASE  
 40.444259/-104.845056  
 SW1/4 NW1/4 SEC.36 T6N R67W 6 PM  
 WELD COUNTY, COLORADO  
 REMEDIATION # 8495

DATE:	03/10/15
FIG NO.:	3
DRAWN BY:	amn

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# GEOLOGIC CROSS-SECTION A-A'



**LEGEND**

- FILL
- SANDY SILT/SILTY SAND
- CLAY (WITH SANDY/SILTY LENSES)
- SAND
- WEATHERED CLAYSTONE
- GROUND SURFACE
- EXCAVATION BOUNDARIES
- OBSERVED CONTACT
- INFERRED CONTACT
- OBSERVED GROUNDWATER (10/09/14 & 10/10/14)
- A-A' LINE OF CROSS SECTION

**PARAMETERS**

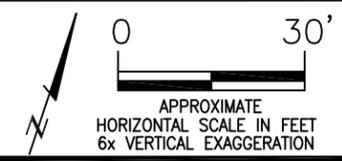
SAMPLE LOCATION  
DATE  
DEPTH (FEET)  
OFFSET FROM A-A'(FEET-DIRECTION)  
B = BENZENE (mg/kg)  
T = TOLUENE (mg/kg)  
E = ETHYLBENZENE (mg/kg)  
X = TOTAL XYLENES (mg/kg)  
G = TPH-GRO (mg/kg)  
D = TPH-DRO (mg/kg)  
N = NAPHTHALENE (mg/kg)

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  
VALUES PRESENTED IN BOLD TYPEFACE EXCEEDED THEIR RESPECTIVE COGCC TABLE 910-1 REGULATORY LIMIT.  
COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION

PVC RISER/STICK UP  
 PID (ppm-v)  
 SLOTTED SCREEN  
 VERTICAL DEFINITION

ppm-v = PARTS PER MILLION BY VOLUME



**GEOLOGIC CROSS SECTION (A-A')**  
STATE M36-3, M36-5, 6-36, 7-36 & 8-36  
PRODUCTION TANK RELEASE  
40.444259 / -104.845056  
SW1/4 NW1/4 SEC.36 T6N R67W 6PM  
WELD COUNTY, COLORADO  
REMEDATION # 8495

**EAGLE ENVIRONMENTAL CONSULTING, INC.**  
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FIG. NO. 4      DATE: 03/09/15      DRAWN BY: AMN



LEGEND

- APPROXIMATE EXTENTS OF STATE M36-3, M36-5, 6-36 7-36, AND 8-36 TANK BATTERY EXCAVATION
- APPROXIMATE EXTENT OF SURFACE STAINING
- APPROXIMATE LOCATION OF ABANDONED DCP MIDSTREAM UNDERGROUND UTILITY
- APPROXIMATE LOWER EXCAVATION EXTENTS
- APPROXIMATE MONITORING WELL LOCATIONS

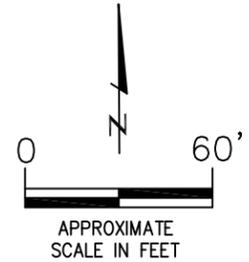
(98.25) GROUNDWATER ELEVATION (FT.)

INFERRED GROUNDWATER ELEVATION CONTOUR (FT.)

APPROXIMATE GROUNDWATER FLOW DIRECTION

FT. = FEET

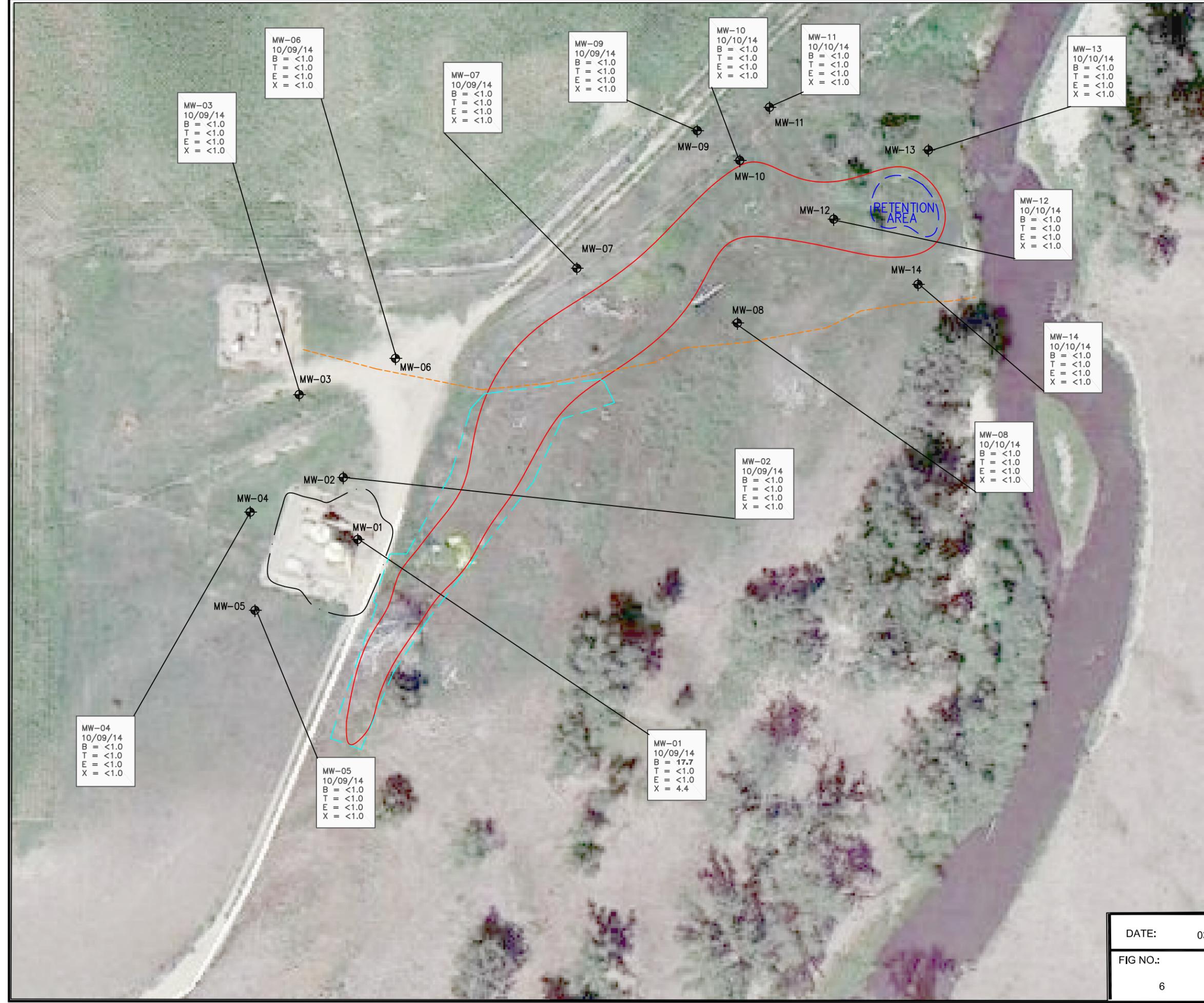
NOTE: GROUNDWATER ELEVATION DATA WAS COLLECTED ON 10/09/14 & 10/10/14. GROUNDWATER ELEVATION DATA COLLECTED FROM MONITORING WELLS MW-02, MW-07 AND MW-09 WERE NOT USED IN THE CONSTRUCTION OF GROUNDWATER CONTOURS.



GROUNDWATER ELEVATION MAP  
 STATE M36-3, M36-5, 6-36, 7-36, AND 8-36  
 PRODUCTION TANK RELEASE  
 40.444259/-104.845056  
 SW1/4 NW1/4 SEC.36 T6N R67W 6 PM  
 WELD COUNTY, COLORADO  
 REMEDIATION # 8495

DATE:	03/10/15
FIG NO.:	5
DRAWN BY:	amn

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LEGEND

- APPROXIMATE EXTENTS OF STATE M36-3, M36-5, 6-36 7-36, AND 8-36 TANK BATTERY EXCAVATION
- APPROXIMATE EXTENT OF SURFACE STAINING
- APPROXIMATE LOCATION OF ABANDONED DCP MIDSTREAM UNDERGROUND UTILITY
- APPROXIMATE LOWER EXCAVATION EXTENTS
- APPROXIMATE MONITORING WELL LOCATIONS

PARAMETERS

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

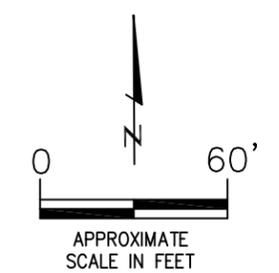
µg/L = MICROGRAMS PER LITER

NOTE: VALUES PRESENTED IN BOLD TYPEFACE EXCEED THE COGCC CONCENTRATION LEVELS PRESENTED IN TABLE 910-1.

COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION.

VALUES PRESENTED WITH A LESS THAN SYMBOL (<) INDICATE CONCENTRATIONS WERE NOT OBSERVED AT OR ABOVE THE LABORATORY REPORTING LIMIT.

NOTE: TANK BATTERY LAYOUT HAS BEEN MODIFIED SINCE AERIAL WAS TAKEN. AERIAL NOT UP TO DATE WITH CURRENT TANK BATTERY LAYOUT.



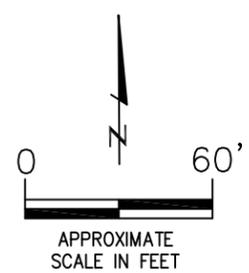
GROUNDWATER SAMPLE LOCATION MAP  
STATE M36-3, M36-5, 6-36, 7-36, AND 8-36  
PRODUCTION TANK RELEASE  
40.444259/-104.845056  
SW1/4 NW1/4 SEC.36 T6N R67W 6 PM  
WELD COUNTY, COLORADO  
REMEDATION # 8495

DATE:	03/10/15
FIG NO.:	6
DRAWN BY:	amn

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- LEGEND
- APPROXIMATE EXTENTS OF STATE M36-3, M36-5, 6-36, 7-36, AND 8-36 TANK BATTERY EXCAVATION
  - APPROXIMATE EXTENT OF SURFACE STAINING
  - APPROXIMATE LOCATION OF ABANDONED DCP MIDSTREAM UNDERGROUND UTILITY
  - APPROXIMATE LOWER EXCAVATION EXTENTS
  - EXC-01 APPROXIMATE SOIL SAMPLE LOCATION ASSESSED WITH PID
  - EXC-01 APPROXIMATE SOIL SAMPLE LOCATION SUBMITTED FOR LABORATORY ANALYSIS
- PID = PHOTOIONIZATION DETECTOR



EXCAVATION SOIL SAMPLE LOCATION MAP  
 STATE M36-3, M36-5, 6-36, 7-36, AND 8-36  
 PRODUCTION TANK RELEASE  
 40.444259/-104.845056  
 SW1/4 NW1/4 SEC.36 T6N R67W 6 PM  
 WELD COUNTY, COLORADO  
 REMEDIATION # 8495

DATE:	03/10/15	 <b>EAGLE</b> ENVIRONMENTAL CONSULTING, INC. <small>4101 INCA STREET, DENVER, CO 80211          Ph: 303-433-0479 • F: 303-325-5449</small>
FIG NO.:	7	
DRAWN BY:	amn	



LEGEND

- APPROXIMATE EXTENTS OF STATE M36-3, M36-5, 6-36 7-36, AND 8-36 TANK BATTERY EXCAVATION
- APPROXIMATE EXTENT OF SURFACE STAINING
- APPROXIMATE LOCATION OF ABANDONED DCP MIDSTREAM UNDERGROUND UTILITY
- APPROXIMATE LOWER EXCAVATION EXTENTS
- APPROXIMATE SOIL SAMPLE LOCATION SUBMITTED FOR LABORATORY ANALYSIS

PARAMETERS

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

mg/kg = MILLIGRAMS PER KILOGRAM

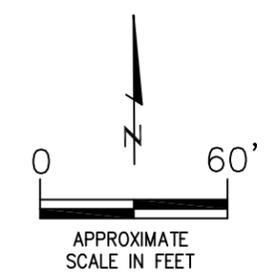
TPH - GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS  
 TPH - DRO = TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE ORGANICS

PID - PHOTOIONIZATION DETECTOR

NOTE: VALUES PRESENTED IN **BOLD** TYPEFACE EXCEED THE COGCC CONCENTRATION LEVELS PRESENTED IN TABLE 910-1.

COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION.

VALUES PRESENTED WITH A LESS THAN SYMBOL (<) INDICATE CONCENTRATIONS WERE NOT OBSERVED AT OR ABOVE THE LABORATORY REPORTING LIMIT.



EXCAVATION SOIL ANALYTICAL MAP  
 STATE M36-3, M36-5, 6-36, 7-36, AND 8-36  
 PRODUCTION TANK RELEASE  
 40.444259/-104.845056  
 SW1/4 NW1/4 SEC.36 T6N R67W 6 PM  
 WELD COUNTY, COLORADO  
 REMEDIATION # 8495

DATE:	03/10/15
FIG NO.:	8
DRAWN BY:	amn

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EXC-14  
01/19/15  
2.5'  
B = <0.002  
T = <0.002  
E = <0.002  
X = <0.002  
N = <0.007  
G = <0.200  
D = 87.2

EXC-07  
01/16/15  
2'  
B = <0.002  
T = <0.002  
E = <0.002  
X = <0.002  
N = <0.007  
G = <0.200  
D = <50.0

EXC-05  
01/16/15  
1.5'  
B = <0.002  
T = <0.002  
E = <0.002  
X = <0.002  
N = <0.007  
G = <0.200  
D = <50.0

EXC-04  
01/16/15  
1'  
B = <0.002  
T = <0.002  
E = <0.002  
X = <0.002  
N = <0.007  
G = <0.200  
D = <50.0

EXC-13  
01/19/15  
1'  
B = <0.002  
T = <0.002  
E = <0.002  
X = <0.002  
N = <0.007  
G = <0.200  
D = <50.0

EXC-06  
01/16/15  
1.5'  
B = <0.002  
T = <0.002  
E = <0.002  
X = <0.002  
N = <0.007  
G = <0.200  
D = <50.0

EXC-12  
01/19/15  
2.5'  
B = <0.002  
T = <0.002  
E = <0.002  
X = <0.002  
N = <0.007  
G = <0.200  
D = <50.0

EXC-15  
01/19/15  
2.5'  
B = <0.002  
T = <0.002  
E = <0.002  
X = <0.002  
N = <0.007  
G = <0.200  
D = <50.0

EXC-19  
01/19/15  
2.5'  
B = <0.002  
T = <0.002  
E = <0.002  
X = <0.002  
N = <0.007  
G = <0.200  
D = 53.5

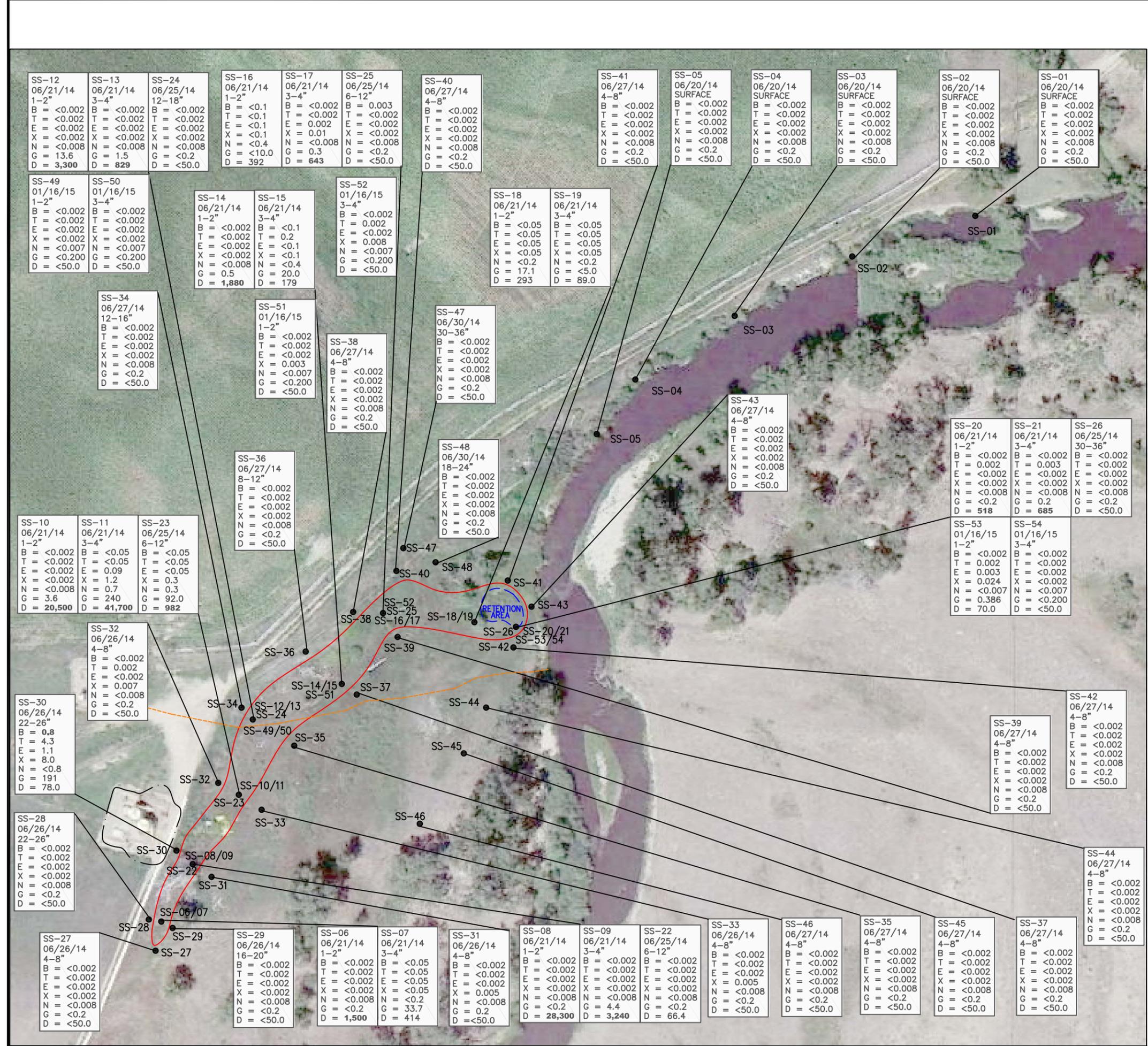
EXC-27  
01/20/15  
2'  
B = <0.002  
T = <0.002  
E = <0.002  
X = <0.002  
N = <0.007  
G = <0.200  
D = <50.0

EXC-20  
01/19/15  
2.5'  
B = <0.002  
T = <0.002  
E = 0.006  
X = 0.002  
N = 0.116  
G = 13.2  
D = 768

EXC-24  
01/20/15  
2'  
B = <0.002  
T = <0.002  
E = <0.002  
X = <0.002  
N = <0.007  
G = <0.200  
D = <50.0

EXC-21  
01/19/15  
2.75'  
B = <0.050  
T = <0.050  
E = 0.270  
X = 1.32  
N = <0.175  
G = 324  
D = 479

EXC-30  
01/20/15  
1.5'  
B = <0.002  
T = <0.002  
E = <0.002  
X = <0.002  
N = <0.007  
G = <0.200  
D = <50.0



- LEGEND**
- APPROXIMATE EXTENTS OF STATE M36-3, M36-5, 6-36, 7-36, AND 8-36 TANK BATTERY EXCAVATION
  - APPROXIMATE EXTENT OF SURFACE STAINING
  - APPROXIMATE LOCATION OF DCP MIDSTREAM UNDERGROUND UTILITY
  - APPROXIMATE SOIL SAMPLE LOCATION

**PARAMETERS**

**SAMPLE LOCATION**

DATE

DEPTH (INCHES)

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

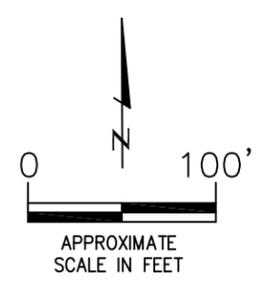
TPH - GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS

TPH - DRO = TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE ORGANICS

NOTE: VALUES PRESENTED IN BOLD TYPEFACE EXCEED THE COGCC CONCENTRATION LEVELS PRESENTED IN TABLE 910-1.

COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION.

VALUES PRESENTED WITH A LESS THAN SYMBOL (<) INDICATE CONCENTRATIONS WERE NOT OBSERVED AT OR ABOVE THE LABORATORY REPORTING LIMIT.



**FIELD ASSESSMENT SOIL SAMPLE LOCATION MAP**  
 STATE M36-3, M36-5, 6-36, 7-36, AND 8-36  
 PRODUCTION TANK RELEASE  
 40.444259/-104.845056  
 SW1/4 NW1/4 SEC.36 T6N R67W 6 PM  
 WELD COUNTY, COLORADO  
 REMEDIATION # 8495

DATE:	03/10/15
FIG NO.:	9
DRAWN BY:	amn

**EAGLE ENVIRONMENTAL CONSULTING, INC.**  
 4101 INCA STREET, DENVER, CO 80211  
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**ATTACHMENT A**

**Boring Logs/Monitoring Well Completion Diagrams**

# Boring Log/Well Completion Diagram: MW-01

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0	(0-5') FILL - sand and gravel, brown, fine to coarse grained, poorly sorted with ~10% fine gravel, dry to moist, N/O, N/S.	FL	GP	1	60	0.0	N/A	0		
5	@5-7.5' some black staining, slight to strong odor.									
5	(7.5-15') clayey SAND - brown and black, loose, fine to coarse grained, well sorted with ~5% clay, moist to wet, strong odor, black HC staining.	SC	GP	2	80	244.8	N/A	5		H2O @~7.5'
10	@ 10' - N/O, N/S									
10		SP	GP	3	90	7.3	N/A	10		
15	BoB @ 15'									
15										
20										
25										
30										

FL - FILL  
 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: 10/08/2014		SAND PACK INTERVAL (FEET): 1.5-12	
PROJECT: STATE M36-3, M36-5, 6-36, 7-36, 8-36		BENTONITE/GROUT INTERVAL (FEET): 0.5-1.5	
LOGGED BY: A. NEWBERRY		WELL SCREEN INTERVAL (FEET): 2-12.5	
DRILLING COMPANY/EQUIPMENT: EECI/GEOPROBE		WELL DIAMETER (INCHES): 1	
BORING DEPTH (FEET): 15	WELL DEPTH (FEET): 12.5	<p><b>EAGLE</b>                  ENVIRONMENTAL                  CONSULTING, INC.                  4101 INCA STREET, DENVER, CO 80211                  Ph: 303-433-0479 • F: 303-325-5449</p>	
PID INSTRUMENT: MiniRAE 3000			
TIME STARTED/COMPLETED: 0935/1015			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 5-7.5/0955			

# Boring Log/Well Completion Diagram: MW-02

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0	(0-5') sandy silty CLAY - dark brown, soft, well sorted with ~10% silt, trace silt, dry to moist, N/O, N/S.	CL	GP	1	100	1.9	N/A		H2O @ ~5.5-6'	
5	(5-9') CLAY - gray, very soft, mod. plasticity, wet, slight odor and staining.					2.5				
10	(9-11') SAND - brown and tan, fine to medium grained, dense, well sorted, wet, N/O, N/S.	SP				0.8				
BoB @ 11'										

FL - FILL  
 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: 10/08/2014		SAND PACK INTERVAL (FEET): 1-11	
PROJECT: STATE M36-3, M36-5, 6-36, 7-36, 8-36		BENTONITE/GROUT INTERVAL (FEET): 0.5-1	
LOGGED BY: A. NEWBERRY		WELL SCREEN INTERVAL (FEET): 1-11	
DRILLING COMPANY/EQUIPMENT: EECI/GEOPROBE		WELL DIAMETER (INCHES): 1	
BORING DEPTH (FEET): 11	WELL DEPTH (FEET): 11	<p><b>EAGLE</b>                  ENVIRONMENTAL                  CONSULTING, INC.                  4101 INCA STREET, DENVER, CO 80211                  Ph: 303-433-0479 • F: 303-325-5449</p>	
PID INSTRUMENT: MiniRAE 3000			
TIME STARTED/COMPLETED: 1200/1240			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 2.5-5/1212			

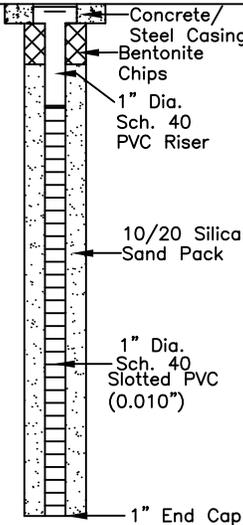
# Boring Log/Well Completion Diagram: MW-03

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0	(0-5') silty CLAY - brown, soft, low plasticity, well-sorted w/~10% silt, moist N/O, N/S.	CL	GP	1	100	0.1	N/A		H2O @~9'	
5	(5-9') CLAY - brown and gray, soft, mod. plasticity, N/O, weathered staining, moist - wet.					0.1				
5	(9-14') SAND - black and brown, fine grained, well-sorted, N/O, weathered staining, wet	SP	GP	2	100	1.8	N/A			
10	(9-14') SAND - black and brown, fine grained, well-sorted, N/O, weathered staining, wet					1.4				
10	(9-14') SAND - black and brown, fine grained, well-sorted, N/O, weathered staining, wet	SP	GP	3	100	1.2	N/A			
15	BoB @ 14'					1.0				
15	BoB @ 14'									
20										
25										
30										

FL - FILL  
 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: 10/08/2014		SAND PACK INTERVAL (FEET): 1-14	
PROJECT: STATE M36-3, M36-5, 6-36, 7-36, 8-36		BENTONITE/GROUT INTERVAL (FEET): 0-1	
LOGGED BY: A. NEWBERRY		WELL SCREEN INTERVAL (FEET): 2-14	
DRILLING COMPANY/EQUIPMENT: EECI/GEOPROBE		WELL DIAMETER (INCHES): 1	
BORING DEPTH (FEET): 15	WELL DEPTH (FEET): 14	<p><b>EAGLE</b>                  ENVIRONMENTAL                  CONSULTING, INC.                  4101 INCA STREET, DENVER, CO 80211                  Ph: 303-433-0479 • F: 303-325-5449</p>	
PID INSTRUMENT: MiniRAE 3000			
TIME STARTED/COMPLETED: 1445/1515			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 5-7.5/1562			

# Boring Log/Well Completion Diagram: MW-04

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG TYPE	NUMBER	RECOVERY %						
0	(0-2') sandy SILT - dark brown, ~10% fine sand.	ML				0.1	N/A	 <p>Concrete/Steel Casing Bentonite Chips 1" Dia. Sch. 40 PVC Riser 10/20 Silica Sand Pack 1" Dia. Sch. 40 Slotted PVC (0.010") 1" End Cap</p>		
2.5	(2-5') silty SAND - dark brown, loose, fine to medium grained, well sorted with ~20% silt, moist, N/O, N/S.	SM	GP 1	100	1.9					
5	(5-13.5') SAND - brown and tan, loose, fine to medium grained, well sorted, moist to wet, N/O, N/S	SP	GP 2	100	3.1	N/A	<p>H2O @ ~7.5'</p>			
10					1.9					
10			0.3	N/A						
15	(13.5-15') weathered CLAYSTONE - brownish gray, N/O, N/S.	WCS	GP 3		100	0.0				
15	BoB @ 15'									

FL - FILL  
 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: 10/08/2014		SAND PACK INTERVAL (FEET): 1.5-12.5	
PROJECT: STATE M36-3, M36-5, 6-36, 7-36, 8-36		BENTONITE/GROUT INTERVAL (FEET): 0.5-1.5	
LOGGED BY: A. NEWBERRY		WELL SCREEN INTERVAL (FEET): 2.5-12.5	
DRILLING COMPANY/EQUIPMENT: EECI/GEOPROBE		WELL DIAMETER (INCHES): 1	
BORING DEPTH (FEET): 15	WELL DEPTH (FEET): 12.5	 <p><b>EAGLE</b>                  ENVIRONMENTAL                  CONSULTING, INC.                  4101 INCA STREET, DENVER, CO 80211                  Ph: 303-433-0479 • F: 303-325-5449</p>	
PID INSTRUMENT: MiniRAE 3000			
TIME STARTED/COMPLETED: 1105/1150			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 5-7.5/1115			

# Boring Log/Well Completion Diagram: MW-05

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0	(0-6') sandy SILT - dark brown, loose, well sorted with ~10% fine to medium grained sand, dry to moist, N/O, N/S.	ML	GP	1	100	0.3	N/A		H2O @ ~8.0'	
5					1.5					
6-8.5'	(6-8.5') SAND - brown and tan, fine to coarse grained, loose, moist, N/O, N/S.	SP	GP	2	100	0.7	N/A			
8.5-14'	(8.5-14') SAND - brown and tan, loose, fine to coarse grained, well sorted, wet, N/O, N/S.					0.9				
10		GP	3	100	0.2	N/A				
15					0.4					
14-15'	(14-15') weathered CLAYSTONE - with sand, brown, N/O, N/S.	WCS								
15	BoB @ 15'									

FL - FILL  
 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: 10/08/2014		SAND PACK INTERVAL (FEET): 2-13	
PROJECT: STATE M36-3, M36-5, 6-36, 7-36, 8-36		BENTONITE/GROUT INTERVAL (FEET): 0.5-2	
LOGGED BY: A. NEWBERRY		WELL SCREEN INTERVAL (FEET): 3-13	
DRILLING COMPANY/EQUIPMENT: EECI/GEOPROBE		WELL DIAMETER (INCHES): 1	
BORING DEPTH (FEET): 15	WELL DEPTH (FEET): 13	<p><b>EAGLE</b>                  ENVIRONMENTAL                  CONSULTING, INC.                  4101 INCA STREET, DENVER, CO 80211                  Ph: 303-433-0479 • F: 303-325-5449</p>	
PID INSTRUMENT: MiniRAE 3000			
TIME STARTED/COMPLETED: 1030/1100			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 2.5-5/1040			

# Boring Log/Well Completion Diagram: MW-06

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') silty sandy CLAY - dark brown to brown, soft, low plasticity, well-sorted w/~25% fine to medium grained sand and ~5% silt, dry to moist, N/O, N/S.	CL	GP	1	75	1.3	N/A	0		
5						1.0				
5	(5-15') SAND - brown and tan, loose, fine-medium grained, well-sorted, moist to wet, N/O, N/S.	SP	GP	2	100	1.7	N/A	5		H2O @ ~9.0'
10						1.9				
10						GP	3	80	1.4	N/A
15	0.8									
15	BoB @ 15'									
20										
25										
30										

FL - FILL  
 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: 10/08/2014		SAND PACK INTERVAL (FEET): 1-14	
PROJECT: STATE M36-3, M36-5, 6-36, 7-36, 8-36		BENTONITE/GROUT INTERVAL (FEET): 0.5-1	
LOGGED BY: A. NEWBERRY		WELL SCREEN INTERVAL (FEET): 2-14	
DRILLING COMPANY/EQUIPMENT: EECI/GEOPROBE		WELL DIAMETER (INCHES): 1	
BORING DEPTH (FEET): 15	WELL DEPTH (FEET): 14	<p><b>EAGLE</b>                  ENVIRONMENTAL                  CONSULTING, INC.                  4101 INCA STREET, DENVER, CO 80211                  Ph: 303-433-0479 • F: 303-325-5449</p>	
PID INSTRUMENT: MiniRAE 3000			
TIME STARTED/COMPLETED: 1410/1440			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 5-7.5/1420			

# Boring Log/Well Completion Diagram: MW-07

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0	(0-7.5') sandy silty CLAY - dark brown to brown, mod. stiff, low plasticity, well-sorted w/~20% fine to medium grained sand and ~10% silt, dry to moist, N/O, N/S.	CL	GP	1	80	1.7	N/A	0		H2O @ ~8.0'
5						1.9				
7.5	(7.5-15') gravelly SAND - brown and tan, fine to coarse grained, loose to mod. dense, well-sorted with trace gravels, moist to wet, N/O, N/S.	GP	2	80	1.6	N/A	7.5			
10					1.2					
10	BoB @ 15'	SP	GP	3	80	0.4	N/A	10		
15						0.0				
15	BoB @ 15'									
20										
25										
30										

FL - FILL  
 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: 10/08/2014		SAND PACK INTERVAL (FEET): 2-13	
PROJECT: STATE M36-3, M36-5, 6-36, 7-36, 8-36		BENTONITE/GROUT INTERVAL (FEET): 0-2	
LOGGED BY: A. NEWBERRY		WELL SCREEN INTERVAL (FEET): 3-13	
DRILLING COMPANY/EQUIPMENT: EECI/GEOPROBE		WELL DIAMETER (INCHES): 1	
BORING DEPTH (FEET): 15	WELL DEPTH (FEET): 13	<p><b>EAGLE</b>                  ENVIRONMENTAL                  CONSULTING, INC.                  4101 INCA STREET, DENVER, CO 80211                  Ph: 303-433-0479 • F: 303-325-5449</p>	
PID INSTRUMENT: MiniRAE 3000			
TIME STARTED/COMPLETED: 1335/1405			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 2.5-5/1350			

# Boring Log/Well Completion Diagram: MW-08

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	(0-2.5') SAND - brown and tan, loose, fine to medium grained, well sorted, moist, N/O, N/S.	SP				0.0	N/A		H2O @ ~3.0'	
2.5	(2.5-5') CLAY - blackish brown, mod plasticity, soft, well sorted, slight odor, organic black staining, wet.	CL	GP	1	85	0.0				
5	(5-10') SAND - brown and tan, fine to coarse grained, well sorted, wet, N/O, N/S.	SP	GP	2	75	0.0	N/A			
10	BoB @ 10'					0.0				
15										
20										
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: 10/09/2014	SAND PACK INTERVAL (FEET): 0.75-9
PROJECT: STATE M36-3, M36-5, 6-36, 7-36, 8-36	BENTONITE/GROUT INTERVAL (FEET): 0-0.75
LOGGED BY: A. NEWBERRY	WELL SCREEN INTERVAL (FEET): 1-9
DRILLING COMPANY/EQUIPMENT: EECI/GEOPROBE	WELL DIAMETER (INCHES): 1
BORING DEPTH (FEET): 10	WELL DEPTH (FEET): 9
PID INSTRUMENT: MiniRAE 3000	
TIME STARTED/COMPLETED: 1220/1247	
SAMPLE COLLECTION DEPTH (FEET)/TIME: 0-2.5/1233	



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# Boring Log/Well Completion Diagram: MW-09

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0	(0-7') sandy silty CLAY - brown, soft, low plasticity, well-sorted w/~ 15% fine to medium grained sand and ~10% silt, dry to moist, N/O, N/S.	CL	GP	1	75	2.1	N/A	<p>Concrete/Steel Casing Bentonite Chips 1" Dia. Sch. 40 PVC Riser 10/20 Silica Sand Pack 1" Dia. Sch. 40 Slotted PVC (0.010") 1" End Cap</p>	H2O @-8.0'	
2.3										
2.6										
5	(7-10') clayey SAND - brown, fine to medium grained, loose, well-sorted w/~25% clay, moist to wet, N/O, N/S.	SC	GP	2	100	1.3	N/A			
10										
10	(10-15') SAND - brown and tan, fine to medium grained, loose to mod. dense, well sorted, wet, N/O, N/S.	SP	GP	3	80	0.7	N/A			
15						0.5				
15	BoB @ 15'									
20										
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: 10/08/2014		SAND PACK INTERVAL (FEET): 2-13	
PROJECT: STATE M36-3, M36-5, 6-36, 7-36, 8-36		BENTONITE/GROUT INTERVAL (FEET): 0-2	
LOGGED BY: A. NEWBERRY		WELL SCREEN INTERVAL (FEET): 3-13	
DRILLING COMPANY/EQUIPMENT: EECI/GEOPROBE		WELL DIAMETER (INCHES): 1	
BORING DEPTH (FEET): 15	WELL DEPTH (FEET): 13	<p><b>EAGLE</b> ENVIRONMENTAL CONSULTING, INC. 4101 INCA STREET, DENVER, CO 80211 Ph: 303-433-0479 • F: 303-325-5449</p>	
PID INSTRUMENT: MiniRAE 3000			
TIME STARTED/COMPLETED: 1305/1331			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 5-7.5/1315			

# Boring Log/Well Completion Diagram: MW-10

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	(0-4.5') sandy silty CLAY - brown, soft, low to mod. plasticity, well-sorted w/~10% fine grained sand and ~5% silt, dry to moist, N/O, N/S.	CL	GP	1	100	0.0	N/A		H2O @ ~4-4.5'	
5	(4.5-10') SAND - brown, loose, fine to coarse grained, well sorted w/ trace gravel, wet, N/O, N/S.	SP	GP	2	90	0.0				
10	BoB @ 10'					0.0	N/A			
15										
20										
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: 10/09/2014	SAND PACK INTERVAL (FEET): 0.75-10
PROJECT: STATE M36-3, M36-5, 6-36, 7-36, 8-36	BENTONITE/GROUT INTERVAL (FEET): 0-0.75
LOGGED BY: A. NEWBERRY	WELL SCREEN INTERVAL (FEET): 1-10
DRILLING COMPANY/EQUIPMENT: EECI/GEOPROBE	WELL DIAMETER (INCHES): 1
BORING DEPTH (FEET): 10	WELL DEPTH (FEET): 10
PID INSTRUMENT: MiniRAE 3000	
TIME STARTED/COMPLETED: 0955/1012	
SAMPLE COLLECTION DEPTH (FEET)/TIME: 0-2.5/1005	



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# Boring Log/Well Completion Diagram: MW-11

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	(0-8') sandy silty CLAY - brown, soft, low to mod plasticity, well sorted with ~10% silt, trace sand, dry to wet, N/O, N/S.	CL	GP	1	90	0.0	N/A		H2O @ -5.0'	
5						0.2				
10	(8-10') SAND - brown, loose, fine to coarse grained, well sorted, wet, N/O, N/S.	SP	GP	2	100	0.0	N/A			
11	BoB @ 11'									
15										
20										
25										
30										

START/COMPLETION DATE: 10/09/2014		SAND PACK INTERVAL (FEET): 0.75-11	
PROJECT: STATE M36-3, M36-5, 6-36, 7-36, 8-36		BENTONITE/GROUT INTERVAL (FEET): 0-0.75	
LOGGED BY: A. NEWBERRY		WELL SCREEN INTERVAL (FEET): 1-11	
DRILLING COMPANY/EQUIPMENT: EECI/GEOPROBE		WELL DIAMETER (INCHES): 1	
BORING DEPTH (FEET): 11	WELL DEPTH (FEET): 11	<p><b>EAGLE</b> ENVIRONMENTAL CONSULTING, INC. 4101 INCA STREET, DENVER, CO 80211 Ph: 303-433-0479 • F: 303-325-5449</p>	
PID INSTRUMENT: MiniRAE 3000			
TIME STARTED/COMPLETED: 0932/0950			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 2.5-5/0944			

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

# Boring Log/Well Completion Diagram: MW-12

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	(0-4.5') sandy silty CLAY - brown, soft, low to mod plasticity, well-sorted w/ ~15% silt and 10% fine grained sand, dry to moist, N/O, N/S.	CL	GP	1	100	0.0	N/A		H2O @ ~4.5'	
5	(4.5-10') SAND - brown, loose, fine to coarse grained, well sorted w/ trace gravel, wet, N/O, N/S.	SP	GP	2	90	0.0				
10	BoB @ 10'					0.0	N/A			
15										
20										
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: 10/09/2014	SAND PACK INTERVAL (FEET): 0.75-10
PROJECT: STATE M36-3, M36-5, 6-36, 7-36, 8-36	BENTONITE/GROUT INTERVAL (FEET): 0-0.75
LOGGED BY: A. NEWBERRY	WELL SCREEN INTERVAL (FEET): 1-10
DRILLING COMPANY/EQUIPMENT: EECI/GEOPROBE	WELL DIAMETER (INCHES): 1
BORING DEPTH (FEET): 10	WELL DEPTH (FEET): 10
PID INSTRUMENT: MiniRAE 3000	
TIME STARTED/COMPLETED: 1020/1040	
SAMPLE COLLECTION DEPTH (FEET)/TIME: 0-2.5/1030	



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# Boring Log/Well Completion Diagram: MW-13

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0	(0-3') sandy silty CLAY - dark brown to brown, soft, low to mod. plasticity, well-sorted w/~20% silt and ~10% fine grained sand, moist to wet, N/O, N/S.	CL	GP	1	100	0.0	N/A		H2O @~3.5'	
3	(3-9') CLAY - brownish gray, high plasticity, soft, strong odor and gray staining @5'.					0.0				
9	(9-10') SAND -brown, fine grained, loose, well-sorted wet, N/O, N/S.	SP				0.5	N/A			
10	BoB @ 10'					0.2				
15										
20										
25										
30										

START/COMPLETION DATE: 10/09/2014	SAND PACK INTERVAL (FEET): 0.75-9
PROJECT: STATE M36-3, M36-5, 6-36, 7-36, 8-36	BENTONITE/GROUT INTERVAL (FEET): 0-0.75
LOGGED BY: A. NEWBERRY	WELL SCREEN INTERVAL (FEET): 1-9
DRILLING COMPANY/EQUIPMENT: EECI/GEOPROBE	WELL DIAMETER (INCHES): 1
BORING DEPTH (FEET): 10	WELL DEPTH (FEET): 9
PID INSTRUMENT: MiniRAE 3000	
TIME STARTED/COMPLETED: 1047/1110	
SAMPLE COLLECTION DEPTH (FEET)/TIME: 0-2.5/1100	



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

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

# Boring Log/Well Completion Diagram: MW-14

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') sandy silty CLAY - brown, loose, low plasticity, well sorted with ~20% silt and 5% sand, dry to moist, N/O, N/S, wet @3.5'.	CL	GP	1	90	0.0	N/A		H2O @~3.5'	
5	(5-10') SAND - brown and tan, loose, fine to coarse grained, wet, N/O, N/S.	SP	GP	2	75	0.0				
10	BoB @ 10'									
15										
20										
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: 10/09/2014		SAND PACK INTERVAL (FEET): 0.75-9	
PROJECT: STATE M36-3, M36-5, 6-36, 7-36, 8-36		BENTONITE/GROUT INTERVAL (FEET): 0-0.75	
LOGGED BY: A. NEWBERRY		WELL SCREEN INTERVAL (FEET): 1-9	
DRILLING COMPANY/EQUIPMENT: EECI/GEOPROBE		WELL DIAMETER (INCHES): 1	
BORING DEPTH (FEET): 10	WELL DEPTH (FEET): 9	<p><b>EAGLE</b> ENVIRONMENTAL CONSULTING, INC.</p> 4101 INCA STREET, DENVER, CO 80211 Ph: 303-433-0479 • F: 303-325-5449	
PID INSTRUMENT: MiniRAE 3000			
TIME STARTED/COMPLETED: 1120/1147			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 0-2.5/1130			

# Boring Log/Well Completion Diagram: SS-55

DEPTH (FEET)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FEET)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0	silty CLAY - soft, high plasticity, medium to dark brown ~10-15% silt, N/O, N/S, very moist	CL	HA	1	100	162.2	N/A	0.5		
0.5		CL	HA	2	100	23.9	N/A			
1.0	silty clayey SAND lense - med to dark brown, coarse grained with ~10% clay, 20% silt, few gravels, poorly sorted, N/O, N/S.	SP	HA	3	100	23.5	N/A	1.5		
1.5	CLAY - 5% silt, very soft, medium to dark brown, high plasticity, moderately moist, N/O, N/S.	CL	HA	4	100	27.3	N/A	2.0	0-2.5' sample, PID = 111.6	
2.0		CL	HA	5	100	64.8	N/A			
2.5	BoB @ 2.5'							2.5	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: 02/19/15		SAND PACK INTERVAL (FEET): NA	
PROJECT: STATE M 36-3, M 36-5, 6-36, 7-36, 8-36		BENTONITE/GROUT INTERVAL (FEET): NA	
LOGGED BY: R. LOCKWOOD		WELL SCREEN INTERVAL (FEET): NA	
DRILLING COMPANY/EQUIPMENT: EAGLE / HAND AUGER		WELL DIAMETER (INCHES): NA	
BORING DEPTH (Feet): 2.5	WELL DEPTH (FEET): NA	 <p><b>EAGLE</b> ENVIRONMENTAL CONSULTING, INC. 4101 INCA STREET, DENVER, CO 80211 Ph: 303-433-0479 • F: 303-325-5449</p>	
PID INSTRUMENT: MiniRAE 3000 (PID #7)			
TIME STARTED/COMPLETED: 1010-1030			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 0-2.5'/1035			

## **ATTACHMENT B**

### **Laboratory Analytical Reports**



March 12, 2015

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

**Project Name - Noble - State M36-3, M36-5,  
6-36,7-36 and 8-36**

**Project Number - [none]**

Attached are your analytical results for Noble - State M36-3, M36-5, 6-36,7-36 and 8-36 received by Origins Laboratory, Inc. October 09, 2014. This project is associated with Origins project number X410091-01.

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 - State M36-3, M36-5, 6-36,7-36  
and 8-36

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-01 @ 5-7.5'	X410091-01	Soil	October 8, 2014 9:55	10/09/2014 18:00
MW-02 @ 2.5-5'	X410091-02	Soil	October 8, 2014 12:12	10/09/2014 18:00
MW-03 @ 5-7.5'	X410091-03	Soil	October 8, 2014 15:02	10/09/2014 18:00
MW-04 @ 5-7.5'	X410091-04	Soil	October 8, 2014 11:15	10/09/2014 18:00
MW-05 @ 2.5-5'	X410091-05	Soil	October 8, 2014 10:40	10/09/2014 18:00
MW-06 @ 5-7.5'	X410091-06	Soil	October 8, 2014 14:20	10/09/2014 18:00
MW-07 @ 2.5-5'	X410091-07	Soil	October 8, 2014 13:50	10/09/2014 18:00
MW-08 @ 0-2.5'	X410091-08	Soil	October 8, 2014 12:33	10/09/2014 18:00
MW-09 @ 5-7.5'	X410091-09	Soil	October 9, 2014 13:15	10/09/2014 18:00
MW-10 @ 0-2.5'	X410091-10	Soil	October 9, 2014 10:05	10/09/2014 18:00

Origins Laboratory, Inc.



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Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: Noble - State M36-3, M36-5, 6-36,7-36  
and 8-36

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-11 @ 2.5-5'	X410091-11	Soil	October 9, 2014 9:44	10/09/2014 18:00
MW-12 @ 0-2.5'	X410091-12	Soil	October 9, 2014 10:30	10/09/2014 18:00
MW-13 @ 0-2.5'	X410091-13	Soil	October 9, 2014 11:00	10/09/2014 18:00
MW-14 @ 0-2.5'	X410091-14	Soil	October 9, 2014 11:30	10/09/2014 18:00

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36, 7-36 and 8-36

Origins Laboratory F-012207-01-R1  
Effective Date 01/09/12

**Sample Receipt Checklist**

Origins Work Order X-110091 Client Eagle Env.  
 Client Project ID State M 36-3  
 Checklist Completed by David Mathis Shipped Via (UPS FedEx Hand Delivered Pick-up, etc.)  
 Date/time completed 10-09-14 1845 Airbill # \_\_\_\_\_  
 Matrix(s) Received (Check all that apply):  Soil/Solid  Water  Other \_\_\_\_\_ (Describe)  
 Cooler Number/Temperature 3.7 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C  
 Thermometer ID: T002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 5°C?	X			
Is there ice present (document if blue ice is used)?	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact?	X			
Was adequate sample volume provided?	X			
Are short holding time analytes or samples with HTs due within 48 hours present?		X		
Is a chain-of-custody (COC) present and filled out completely?	X			
Does the COC agree with the number and type of sample bottles received?	X			
Do the sample IDs on the bottle labels match the COC?	X			
Is the COC properly relinquished by the client with date and time recorded?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? <b>If yes, contact client and note in narrative.</b>			X	Soil
Are samples preserved that require preservation and was it checked? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/pH < 2 for samples preserved with HNO3, HCL, H2SO4 / pH > 10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH			X	Soil
Additional Comments (if any):				

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

[Signature]  
 Reviewed by (Project Manager) 10-09-14 1900  
Date/Time Reviewed

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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-01 @ 5-7.5'**  
**10/8/2014 9:55:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410091-01 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4J09013	10/09/2014	10/09/2014	
Surrogate: <i>o</i> -Terphenyl	65.7 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	<b>8.70</b>	5.00	mg/kg	25	4J09016	10/09/2014	10/09/2014	
Benzene	ND	0.050	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	
Xylenes, total	ND	0.050	"	"	"	"	"	
Napthalene	ND	0.200	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	120 %	70-130			"	"	"	
Surrogate: Toluene-d8	99.5 %	70-130			"	"	"	
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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-02 @ 2.5-5'**

**10/8/2014 12:12:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410091-02 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4J09013	10/09/2014	10/09/2014	
Surrogate: <i>o</i> -Terphenyl	79.3 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	<b>0.200</b>	0.200	mg/kg	1	4J09016	10/09/2014	10/09/2014	
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	129 %	70-130			"	"	"	
Surrogate: Toluene-d8	97.4 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"	"	

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.  
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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-03 @ 5-7.5'**  
**10/8/2014 3:02:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410091-03 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4J09013	10/09/2014	10/09/2014	
Surrogate: <i>o</i> -Terphenyl	67.7 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4J09016	10/09/2014	10/09/2014	
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	127 %	70-130			"	"	"	
Surrogate: Toluene-d8	96.3 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"	

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-04 @ 5-7.5'**  
**10/8/2014 11:15:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410091-04 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4J09013	10/09/2014	10/09/2014	
<i>Surrogate: o-Terphenyl</i>	126 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4J09016	10/09/2014	10/09/2014	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.008	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	117 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	96.4 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	101 %	70-130			"	"	"	

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-05 @ 2.5-5'**  
**10/8/2014 10:40:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410091-05 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4J09013	10/09/2014	10/09/2014	
<i>Surrogate: o-Terphenyl</i>	81.8 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4J09016	10/09/2014	10/09/2014	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.008	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	124 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	96.3 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	101 %	70-130			"	"	"	

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Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-06 @ 5-7.5'**  
**10/8/2014 2:20:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410091-06 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4J09013	10/09/2014	10/09/2014	
Surrogate: <i>o</i> -Terphenyl	64.7 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4J09016	10/09/2014	10/10/2014	
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	101 %	70-130			"	"	"	
Surrogate: Toluene-d8	104 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	70-130			"	"	"	

Origins Laboratory, Inc.



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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-07 @ 2.5-5'**  
**10/8/2014 1:50:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410091-07 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4J09013	10/09/2014	10/09/2014	
<i>Surrogate: o-Terphenyl</i>	79.0 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4J09016	10/09/2014	10/10/2014	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.008	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	113 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	103 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	101 %	70-130			"	"	"	

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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-08 @ 0-2.5'**

**10/8/2014 12:33:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410091-08 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4J09013	10/09/2014	10/10/2014	
<i>Surrogate: o-Terphenyl</i>	82.5 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4J09016	10/09/2014	10/10/2014	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.008	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	112 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	106 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	100 %	70-130			"	"	"	

Origins Laboratory, Inc.



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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-09 @ 5-7.5'**  
**10/9/2014 1:15:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410091-09 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4J09013	10/09/2014	10/10/2014	
<i>Surrogate: o-Terphenyl</i>	65.2 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4J09016	10/09/2014	10/10/2014	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.008	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	114 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	104 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	108 %	70-130			"	"	"	

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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-10 @ 0-2.5'**  
**10/9/2014 10:05:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410091-10 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4J09013	10/09/2014	10/10/2014	
<i>Surrogate: o-Terphenyl</i>	64.6 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4J09016	10/09/2014	10/10/2014	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.008	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	127 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	94.4 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	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 - State M36-3, M36-5, 6-36,7-36 and 8-36

**MW-11 @ 2.5-5'**  
**10/9/2014 9:44:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410091-11 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4J09013	10/09/2014	10/10/2014	
<i>Surrogate: o-Terphenyl</i>	79.7 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4J09016	10/09/2014	10/10/2014	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Naphthalene	ND	0.008	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	134 %	70-130			"	"	"	S-07
<i>Surrogate: Toluene-d8</i>	95.8 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	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 - State M36-3, M36-5, 6-36,7-36 and 8-36

**MW-12 @ 0-2.5'**

**10/9/2014 10:30:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410091-12 (Soil)**

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

Diesel (C10-C28)	433	50.0	mg/kg	1	4J09013	10/09/2014	10/10/2014	
Surrogate: o-Terphenyl	67.4 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4J09016	10/09/2014	10/10/2014	
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	131 %	70-130			"	"	"	S-07
Surrogate: Toluene-d8	96.7 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	70-130			"	"	"	

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-13 @ 0-2.5'**  
**10/9/2014 11:00:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410091-13 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4J09013	10/09/2014	10/10/2014	
<i>Surrogate: o-Terphenyl</i>	63.5 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4J09016	10/09/2014	10/10/2014	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.008	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	125 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	98.7 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	101 %	70-130			"	"	"	

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-14 @ 0-2.5'**  
**10/9/2014 11:30:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410091-14 (Soil)**

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

Diesel (C10-C28)	581	50.0	mg/kg	1	4J09013	10/09/2014	10/10/2014	
Surrogate: <i>o</i> -Terphenyl	64.5 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	0.268	0.200	mg/kg	1	4J09016	10/09/2014	10/10/2014	
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	133 %	70-130			"	"	"	S-07
Surrogate: Toluene-d8	96.5 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"	"	

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 4J09016 - EPA 5030 (soil)**

**Blank (4J09016-BLK1)**

Prepared: 10/09/2014 Analyzed: 10/09/2014

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	73		ug/kg	62.5		117	70-130			
Surrogate: Toluene-d8	60		"	62.5		95.7	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 4J09016 - EPA 5030 (soil)**

**LCS (4J09016-BS1)**

Prepared: 10/09/2014 Analyzed: 10/09/2014

Benzene	0.089	0.002	mg/kg	0.100		89.1	70-130			
Toluene	0.089	0.002	"	0.100		89.0	70-130			
Ethylbenzene	0.093	0.002	"	0.100		92.6	70-130			
m,p-Xylene	0.199	0.004	"	0.200		99.7	70-130			
o-Xylene	0.109	0.002	"	0.100		109	70-130			
Naphthalene	0.082	0.008	"	0.100		82.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	73		ug/kg	62.5		116	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.4	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 4J09016 - EPA 5030 (soil)**

**LCS Dup (4J09016-BSD1)**

Prepared: 10/09/2014 Analyzed: 10/09/2014

Benzene	0.091	0.002	mg/kg	0.100		90.8	70-130	1.89	20	
Toluene	0.094	0.002	"	0.100		93.6	70-130	5.06	20	
Ethylbenzene	0.094	0.002	"	0.100		93.9	70-130	1.39	20	
m,p-Xylene	0.208	0.004	"	0.200		104	70-130	3.98	20	
o-Xylene	0.116	0.002	"	0.100		116	70-130	6.35	20	
Naphthalene	0.100	0.008	"	0.100		100	70-130	19.6	20	
Surrogate: 1,2-Dichloroethane-d4	73		ug/kg	62.5		116	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		107	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 8015C - 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 4J09013 - EPA 3580**

**Blank (4J09013-BLK1)**

Prepared: 10/09/2014 Analyzed: 10/09/2014

Diesel (C10-C28)	ND	50.0	mg/kg							
Surrogate: o-Terphenyl	36		g	50.0		72.9	59-131			

**LCS (4J09013-BS1)**

Prepared: 10/09/2014 Analyzed: 10/09/2014

Diesel (C10-C28)	831	50.0	mg/kg	1000		83.1	64-121			
Surrogate: o-Terphenyl	38		g	50.0		76.7	59-131			

**LCS Dup (4J09013-BSD1)**

Prepared: 10/09/2014 Analyzed: 10/09/2014

Diesel (C10-C28)	938	50.0	mg/kg	1000		93.8	64-121	12.1	20	
Surrogate: o-Terphenyl	43		g	50.0		86.9	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 - State M36-3, M36-5, 6-36,7-36  
and 8-36

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**Notes and Definitions**

S-07 High surrogate in sample, however sample is non-detect. High surrogate indicates result values are biased high.

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



March 12, 2015

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

**Project Name - Noble - State M36-3, M36-5,  
6-36,7-36 and 8-36**

**Project Number - [none]**

Attached are your analytical results for Noble - State M36-3, M36-5, 6-36,7-36 and 8-36 received by Origins Laboratory, Inc. October 09, 2014. This project is associated with Origins project number X410092-01.

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 - State M36-3, M36-5, 6-36,7-36  
and 8-36

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-01	X410092-01	Water	October 9, 2014 14:40	10/09/2014 18:00
MW-02	X410092-02	Water	October 9, 2014 14:25	10/09/2014 18:00
MW-03	X410092-03	Water	October 9, 2014 14:13	10/09/2014 18:00
MW-04	X410092-04	Water	October 9, 2014 14:04	10/09/2014 18:00
MW-05	X410092-05	Water	October 9, 2014 13:52	10/09/2014 18:00
MW-06	X410092-06	Water	October 9, 2014 13:41	10/09/2014 18:00
MW-07	X410092-07	Water	October 9, 2014 13:30	10/09/2014 18:00
MW-09	X410092-08	Water	October 9, 2014 13:11	10/09/2014 18:00

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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

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

Sample Receipt Checklist

Origins Work Order: X410092 Client: Eagle Env.  
 Client Project ID: State M36-3  
 Checklist Completed by: David Mathis Shipped Via: (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Date/time completed: 10-09-14 18:40 Airbill #: \_\_\_\_\_  
 Matrix(s) Received (Check all that apply):  Soil/Solid  Water  Other: \_\_\_\_\_  
 Cooler Number/Temperature: 133 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C (Describe): \_\_\_\_\_  
 Thermometer ID: T1002

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			
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 HNO3 HCL, H2SO4) / (pH > 10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)	X			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 be taken in the additional comments (above) and the case narrative.

Reviewed by: [Signature] Date/Time Reviewed: 10-09-14 19:02

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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-01**  
**10/9/2014 2:40:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410092-01 (Water)**

**BTEX by EPA 8260C**

Benzene	17.7	1.0	ug/L	1	4J09015	10/09/2014	10/09/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	4.4	1.0	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	101 %	87.3-113			"	"	"	
Surrogate: Toluene-d8	99.8 %	90.9-108			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.8 %	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-02**  
**10/9/2014 2:25:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410092-02 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4J09015	10/09/2014	10/09/2014	
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	98.7 %	90.9-108			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.5 %	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-03**  
**10/9/2014 2:13:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410092-03 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4J09015	10/09/2014	10/09/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	101 %	87.3-113			"	"	"	
<i>Surrogate: Toluene-d8</i>	98.6 %	90.9-108			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	99.2 %	88.6-111			"	"	"	

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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-04**  
**10/9/2014 2:04:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410092-04 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4J09015	10/09/2014	10/09/2014	
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	97.4 %	90.9-108			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.0 %	88.6-111			"	"	"	

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4101 Inca Street  
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Martin C Eckert III  
Project Number: [none]  
Project: Noble - State M36-3, M36-5, 6-36,7-36  
and 8-36

**MW-05**  
**10/9/2014 1:52:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410092-05 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4J09015	10/09/2014	10/09/2014	
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	96.1 %	90.9-108			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.4 %	88.6-111			"	"	"	

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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-06**  
**10/9/2014 1:41:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410092-06 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4J09015	10/09/2014	10/09/2014	
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	98.3 %	90.9-108			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.5 %	88.6-111			"	"	"	

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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-07**  
**10/9/2014 1:30:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410092-07 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4J09015	10/09/2014	10/09/2014	
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	98.3 %	90.9-108			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.1 %	88.6-111			"	"	"	

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4101 Inca Street  
Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: Noble - State M36-3, M36-5, 6-36,7-36  
and 8-36

**MW-09**  
**10/9/2014 1:11:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410092-08 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4J09015	10/09/2014	10/09/2014	
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	97.9 %	90.9-108			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.4 %	88.6-111			"	"	"	

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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 4J09015 - EPA 5030B (Water)**

**Blank (4J09015-BLK1)**

Prepared: 10/09/2014 Analyzed: 10/09/2014

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5	103		87.3-113			
Surrogate: Toluene-d8	62		"	62.5	99.0		90.9-108			
Surrogate: 4-Bromofluorobenzene	61		"	62.5	98.2		88.6-111			

Origins Laboratory, Inc.



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Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 4J09015 - EPA 5030B (Water)**

**LCS (4J09015-BS1)**

Prepared: 10/09/2014 Analyzed: 10/09/2014

Benzene	57.6	1.0	ug/L	50.0		115	75-126			
Toluene	59.1	1.0	"	50.0		118	78.7-126			
Ethylbenzene	59.6	1.0	"	50.0		119	81-130			
m,p-Xylene	118	2.0	"	100		118	77.2-133			
o-Xylene	58.2	1.0	"	50.0		116	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.2	87.3-113			
Surrogate: Toluene-d8	63		"	62.5		101	90.9-108			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	88.6-111			

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 4J09015 - EPA 5030B (Water)**

<b>Matrix Spike (4J09015-MS1)</b>	<b>Source: X410078-01</b>			<b>Prepared: 10/09/2014 Analyzed: 10/09/2014</b>						
Benzene	63.4	1.0	ug/L	50.0	0.3	126	74-130			
Toluene	64.6	1.0	"	50.0	ND	129	73-131			
Ethylbenzene	65.3	1.0	"	50.0	ND	131	76-132			
m,p-Xylene	127	2.0	"	100	ND	127	69-139			
o-Xylene	61.8	1.0	"	50.0	ND	124	74-131			
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5		94.8	87.3-113			
Surrogate: Toluene-d8	63		"	62.5		100	90.9-108			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.8	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 4J09015 - EPA 5030B (Water)**

Matrix Spike Dup (4J09015-MSD1)	Source: X410078-01			Prepared: 10/09/2014 Analyzed: 10/09/2014						
Benzene	63.3	1.0	ug/L	50.0	0.3	126	74-130	0.0947	20	
Toluene	63.6	1.0	"	50.0	ND	127	73-131	1.64	20	
Ethylbenzene	64.4	1.0	"	50.0	ND	129	76-132	1.43	20	
m,p-Xylene	127	2.0	"	100	ND	127	69-139	0.0631	20	
o-Xylene	61.3	1.0	"	50.0	ND	123	74-131	0.894	20	
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5		94.7	87.3-113			
Surrogate: Toluene-d8	63		"	62.5		100	90.9-108			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.1	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 - State M36-3, M36-5, 6-36,7-36  
and 8-36

**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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March 12, 2015

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

**Project Name - Noble - State M36-3, M36-5,  
6-36,7-36 and 8-36**

**Project Number - [none]**

Attached are your analytical results for Noble - State M36-3, M36-5, 6-36,7-36 and 8-36 received by Origins Laboratory, Inc. October 10, 2014. This project is associated with Origins project number X410106-01.

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

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

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

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

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

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



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - State M36-3, M36-5, 6-36,7-36  
and 8-36

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-08	X410106-01	Water	October 10, 2014 10:05	10/10/2014 16:00
MW-10	X410106-02	Water	October 10, 2014 10:19	10/10/2014 16:00
MW-11	X410106-03	Water	October 10, 2014 10:30	10/10/2014 16:00
MW-12	X410106-04	Water	October 10, 2014 10:43	10/10/2014 16:00
MW-13	X410106-05	Water	October 10, 2014 10:58	10/10/2014 16:00
MW-14	X410106-06	Water	October 10, 2014 11:11	10/10/2014 16:00

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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36, 7-36 and 8-36

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

**Sample Receipt Checklist**

Origins Work Order: X410106 Client: Eagle Env.  
 Client Project ID: State M36-3, M36-5, 6-36, 7-36 & 8-36

Checklist Completed by: Jen Pellegrini Shipped Via: #1D  
 Date/time completed: 10-10-14 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Airbill #: N/A

Matrix(s) Received (Check all that apply):  Soil/Solid  Water  Other \_\_\_\_\_  
 Cooler Number/Temperature: 1 / 5.8 °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 ≤ 5°C?	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		Y		
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?	X			
Was adequate sample volume provided?	X			
Are short holding time analytes or samples with HTs due within 48 hours present?		X		
Is a chain-of-custody (COC) present and filled out completely?	X			
Does the COC agree with the number and type of sample bottles received?	X			
Do the sample IDs on the bottle labels match the COC?	Y			
Is the COC properly relinquished by the client with date and time recorded?	X			
For volatiles in water – is there headspace (> 1/4 inch bubble) present? If yes, contact client and note in narrative.		Y		
Are samples preserved that require preservation and was it checked? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) / pH < 2 for samples preserved with HNO3 / HCL, H2SO4 / / pH > 10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH	X			HCL
Additional Comments (if any):				

\*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) Jen Pellegrini Date/Time Reviewed 10/10/14

Origins Laboratory, Inc.



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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-08**  
**10/10/2014 10:05:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410106-01 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4J10007	10/10/2014	10/10/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	103 %	87.3-113			"	"	"	
<i>Surrogate: Toluene-d8</i>	99.1 %	90.9-108			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	98.7 %	88.6-111			"	"	"	

Origins Laboratory, Inc.



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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-10**  
**10/10/2014 10:19:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410106-02 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4J10007	10/10/2014	10/10/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	104 %	87.3-113			"	"	"	
Surrogate: Toluene-d8	98.2 %	90.9-108			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.3 %	88.6-111			"	"	"	

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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**MW-11**  
**10/10/2014 10:30:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410106-03 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4J10007	10/10/2014	10/10/2014	
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	98.3 %	90.9-108			"	"	"	
Surrogate: 4-Bromofluorobenzene	95.6 %	88.6-111			"	"	"	

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4101 Inca Street  
Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: Noble - State M36-3, M36-5, 6-36,7-36  
and 8-36

**MW-12**  
**10/10/2014 10:43:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410106-04 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4J10007	10/10/2014	10/10/2014	
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	98.4 %	90.9-108			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.6 %	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 - State M36-3, M36-5, 6-36,7-36  
and 8-36

**MW-13**  
**10/10/2014 10:58:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410106-05 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4J10007	10/10/2014	10/10/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	104 %	87.3-113			"	"	"	
Surrogate: Toluene-d8	98.5 %	90.9-108			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.1 %	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 - State M36-3, M36-5, 6-36,7-36  
and 8-36

**MW-14**  
**10/10/2014 11:11:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X410106-06 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4J10007	10/10/2014	10/10/2014	
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	97.7 %	90.9-108			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.8 %	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 4J10007 - EPA 5030B (Water)**

**Blank (4J10007-BLK1)**

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

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5	101		87.3-113			
Surrogate: Toluene-d8	61		"	62.5	98.2		90.9-108			
Surrogate: 4-Bromofluorobenzene	62		"	62.5	98.5		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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 4J10007 - EPA 5030B (Water)**

**LCS (4J10007-BS1)**

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

Benzene	47.0	1.0	ug/L	50.0		94.0	75-126			
Toluene	47.2	1.0	"	50.0		94.3	78.7-126			
Ethylbenzene	48.7	1.0	"	50.0		97.3	81-130			
m,p-Xylene	96.2	2.0	"	100		96.2	77.2-133			
o-Xylene	46.8	1.0	"	50.0		93.6	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		95.8	87.3-113			
Surrogate: Toluene-d8	63		"	62.5		101	90.9-108			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.0	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 4J10007 - EPA 5030B (Water)**

<b>Matrix Spike (4J10007-MS1)</b>	<b>Source: X410095-01</b>			<b>Prepared: 10/10/2014 Analyzed: 10/10/2014</b>						
Benzene	59.8	1.0	ug/L	50.0	ND	120	74-130			
Toluene	60.9	1.0	"	50.0	ND	122	73-131			
Ethylbenzene	61.6	1.0	"	50.0	ND	123	76-132			
m,p-Xylene	122	2.0	"	100	ND	122	69-139			
o-Xylene	60.5	1.0	"	50.0	ND	121	74-131			
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5		93.0	87.3-113			
Surrogate: Toluene-d8	62		"	62.5		99.0	90.9-108			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.7	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 4J10007 - EPA 5030B (Water)**

Matrix Spike Dup (4J10007-MSD1)	Source: X410095-01			Prepared: 10/10/2014 Analyzed: 10/10/2014						
Benzene	57.7	1.0	ug/L	50.0	ND	115	74-130	3.51	20	
Toluene	58.0	1.0	"	50.0	ND	116	73-131	4.88	20	
Ethylbenzene	59.7	1.0	"	50.0	ND	119	76-132	3.13	20	
m,p-Xylene	116	2.0	"	100	ND	116	69-139	5.15	20	
o-Xylene	57.7	1.0	"	50.0	ND	115	74-131	4.65	20	
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5		94.8	87.3-113			
Surrogate: Toluene-d8	63		"	62.5		101	90.9-108			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.4	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 - State M36-3, M36-5, 6-36,7-36  
and 8-36

**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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January 18, 2015

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - State M36-3, M36-5,  
6-36,7-36 and 8-36

Project Number - [none]

Attached are your analytical results for Noble - State M36-3, M36-5, 6-36,7-36 and 8-36 received by Origins Laboratory, Inc. January 16, 2015. This project is associated with Origins project number X501150-01.

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 - State M36-3, M36-5, 6-36,7-36  
and 8-36

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Exc-04@1'	X501150-01	Soil	January 16, 2015 10:40	01/16/2015 16:15
Exc-05 @ 1.5'	X501150-02	Soil	January 16, 2015 14:00	01/16/2015 16:15
Exc- 06 @ 1.5'	X501150-03	Soil	January 16, 2015 14:05	01/16/2015 16:15
Exc- 07 @ 2'	X501150-04	Soil	January 16, 2015 14:10	01/16/2015 16:15

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36, 7-36, 8-36 and 8-36

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: X501150

Client: Eagle

Client Project ID: State M36-3, M36-5, 6-36, 7-36, 8-36

Checklist Completed by: K. Rusin

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

Date/time completed: 1.16.15 @ 1617

Airbill #: \_\_\_\_\_

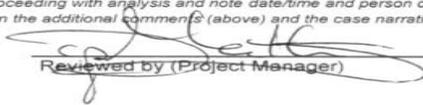
Matrix(s) Received: (Check all that apply):  Soil/Solid \_\_\_\_\_ Water \_\_\_\_\_ Other: \_\_\_\_\_

Cooler Number/Temperature: 0.4 / \_\_\_\_\_ °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> ?	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)			X	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)			X	
Were all samples received intact <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? <b>If yes, contact client and note in narrative.</b>			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)

1-16-15 1808  
 Date/Time Reviewed

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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

Exc-04@1'

1/16/2015 10:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
 X501150-01 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5A16003	01/16/2015	01/16/2015	
<i>Surrogate: o-Terphenyl</i>	101 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A16002	01/16/2015	01/17/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Naphthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	111 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	98.3 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	98.9 %	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

Exc-05 @ 1.5'  
 1/16/2015 2:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
 X501150-02 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5A16003	01/16/2015	01/16/2015	
<i>Surrogate: o-Terphenyl</i>	103 %	59-131			"	"	"	

### GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A16002	01/16/2015	01/17/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	118 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	96.3 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	99.8 %	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

Exc- 06 @ 1.5'  
 1/16/2015 2:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
 X501150-03 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5A16003	01/16/2015	01/16/2015	
<i>Surrogate: o-Terphenyl</i>	103 %	59-131			"	"	"	

### GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A16002	01/16/2015	01/17/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Naphthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	120 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	95.1 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	99.0 %	70-130			"	"	"	

Origins Laboratory, Inc.



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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

Exc- 07 @ 2'  
 1/16/2015 2:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
 X501150-04 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5A16003	01/16/2015	01/16/2015	
<i>Surrogate: o-Terphenyl</i>	102 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A16002	01/16/2015	01/17/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Naphthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	116 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	99.7 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	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 - State M36-3, M36-5, 6-36, 7-36 and 8-36

**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 5A16002 - EPA 5030 (soil)

**Blank (5A16002-BLK1)**

Prepared: 01/16/2015 Analyzed: 01/17/2015

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>68</i>		<i>ug/kg</i>	<i>62.5</i>		<i>109</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>62</i>		<i>"</i>	<i>62.5</i>		<i>98.6</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>58</i>		<i>"</i>	<i>62.5</i>		<i>92.2</i>	<i>70-130</i>			

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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 5A16002 - EPA 5030 (soil)

**LCS (5A16002-BS1)**

Prepared: 01/16/2015 Analyzed: 01/17/2015

Benzene	0.093	0.002	mg/kg	0.100		93.2	70-130			
Toluene	0.093	0.002	"	0.100		92.6	70-130			
Ethylbenzene	0.094	0.002	"	0.100		93.6	70-130			
m,p-Xylene	0.175	0.004	"	0.200		87.7	70-130			
o-Xylene	0.099	0.002	"	0.100		99.0	70-130			
Naphthalene	0.098	0.007	"	0.100		97.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	61		"	62.5		96.8	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.6	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 5A16002 - EPA 5030 (soil)

Matrix Spike (5A16002-MS1)	Source: X501130-01			Prepared: 01/16/2015 Analyzed: 01/17/2015						
Benzene	0.403	0.002	mg/kg	0.100	0.313	89.9	70-130			
Toluene	0.501	0.002	"	0.100	0.511	NR	70-130			QM-02
Ethylbenzene	0.200	0.002	"	0.100	0.164	36.9	70-130			QM-02
m,p-Xylene	0.510	0.004	"	0.200	0.516	NR	70-130			QM-02
o-Xylene	0.302	0.002	"	0.100	0.282	19.2	70-130			QM-02
Naphthalene	0.093	0.007	"	0.100	0.034	58.2	70-130			QM-02
Surrogate: 1,2-Dichloroethane-d4	78		ug/kg	62.5		124	70-130			
Surrogate: Toluene-d8	84		"	62.5		134	70-130			S-02
Surrogate: 4-Bromofluorobenzene	57		"	62.5		91.6	70-130			

Origins Laboratory, Inc.



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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 5A16002 - EPA 5030 (soil)

Matrix Spike Dup (5A16002-MSD1)	Source: X501130-01			Prepared: 01/16/2015 Analyzed: 01/17/2015						
Benzene	0.343	0.002	mg/kg	0.100	0.313	29.7	70-130	16.2	20	QM-02
Toluene	0.472	0.002	"	0.100	0.511	NR	70-130	5.96	20	QM-02
Ethylbenzene	0.206	0.002	"	0.100	0.164	42.3	70-130	2.66	20	QM-02
m,p-Xylene	0.506	0.004	"	0.200	0.516	NR	70-130	0.760	20	QM-02
o-Xylene	0.298	0.002	"	0.100	0.282	15.2	70-130	1.32	20	QM-02
Naphthalene	0.095	0.007	"	0.100	0.034	60.1	70-130	2.01	20	QM-02
Surrogate: 1,2-Dichloroethane-d4	79		ug/kg	62.5		127	70-130			
Surrogate: Toluene-d8	93		"	62.5		148	70-130			S-02
Surrogate: 4-Bromofluorobenzene	58		"	62.5		92.8	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 5A16003 - EPA 3580

**Blank (5A16003-BLK1)**

Prepared: 01/16/2015 Analyzed: 01/16/2015

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 53 " 50.0 107 59-131

**LCS (5A16003-BS1)**

Prepared: 01/16/2015 Analyzed: 01/16/2015

Diesel (C10-C28) 986 50.0 mg/kg 1000 98.6 64-121

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

**Matrix Spike (5A16003-MS1)**

Source: X501130-01

Prepared: 01/16/2015 Analyzed: 01/16/2015

Diesel (C10-C28) 1330 50.0 mg/kg 1000 188 114 53-125

Surrogate: o-Terphenyl 47 " 50.0 94.1 59-131

**Matrix Spike Dup (5A16003-MSD1)**

Source: X501130-01

Prepared: 01/16/2015 Analyzed: 01/16/2015

Diesel (C10-C28) 1130 50.0 mg/kg 1000 188 94.2 53-125 16.0 20

Surrogate: o-Terphenyl 39 " 50.0 77.6 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 - State M36-3, M36-5, 6-36,7-36  
and 8-36

### Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- QM-02 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
- 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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Noelle Doyle Mathis, President



January 18, 2015

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - State M36-3, M36-5,  
6-36,7-36 and 8-36

Project Number - [none]

Attached are your analytical results for Noble - State M36-3, M36-5, 6-36,7-36 and 8-36 received by Origins Laboratory, Inc. January 16, 2015. This project is associated with Origins project number X501151-01.

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 - State M36-3, M36-5, 6-36,7-36  
and 8-36

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-49@1-2"	X501151-01	Soil	January 16, 2015 11:15	01/16/2015 16:15
SS-50@3-4"	X501151-02	Soil	January 16, 2015 11:20	01/16/2015 16:15
SS-51@1-2"	X501151-03	Soil	January 16, 2015 11:25	01/16/2015 16:15
SS-52@3-4"	X501151-04	Soil	January 16, 2015 13:40	01/16/2015 16:15
SS-53@1-2"	X501151-05	Soil	January 16, 2015 13:45	01/16/2015 16:15
SS-54@3-4"	X501151-06	Soil	January 16, 2015 13:50	01/16/2015 16:15

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 - State M36-3, M36-5, 6-36, 7-36 and 8-36

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: XSO1151

Client: Eagle  
 Client Project ID: STATE M36-3, M36-5, 6-36, 7-36, + 8-36

Checklist Completed by: K. Rusin

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

Date/time completed: 1.16.15 @ 1617

Airbill #: \_\_\_\_\_

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

Cooler Number/Temperature: 0.4°C / \_\_\_\_\_ °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> ?	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)			X	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)			X	
Were all samples received intact <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 be taken in the additional comments (above) and the case narrative.

[Signature]  
 Reviewed by (Project Manager)

1-16-15 1803  
 Date/Time Reviewed

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.

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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36, 7-36  
 and 8-36

SS-49@1-2"

1/16/2015 11:15:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
 X501151-01 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5A16003	01/16/2015	01/16/2015	
<i>Surrogate: o-Terphenyl</i>	102 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A16002	01/16/2015	01/17/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Naphthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	116 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	95.6 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

SS-50@3-4"

1/16/2015 11:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
 X501151-02 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5A16003	01/16/2015	01/16/2015	
<i>Surrogate: o-Terphenyl</i>	102 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A16002	01/16/2015	01/17/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Naphthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	117 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	95.5 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	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 - State M36-3, M36-5, 6-36, 7-36  
 and 8-36

SS-51@1-2"

1/16/2015 11:25:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
 X501151-03 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5A16003	01/16/2015	01/16/2015	
<i>Surrogate: o-Terphenyl</i>	103 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A16002	01/16/2015	01/17/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	0.003	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	116 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	96.3 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	106 %	70-130			"	"	"	

Origins Laboratory, Inc.



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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36 and 8-36

SS-52@3-4"  
 1/16/2015 1:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
 X501151-04 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5A16003	01/16/2015	01/16/2015	
<i>Surrogate: o-Terphenyl</i>	97.4 %	59-131			"	"	"	

### GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A16002	01/16/2015	01/17/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	0.002	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	0.008	0.002	"	"	"	"	"	
Naphthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	121 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	97.0 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	101 %	70-130			"	"	"	

Origins Laboratory, Inc.



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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36, 7-36 and 8-36

SS-53@1-2"  
 1/16/2015 1:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
 X501151-05 (Soil)

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

Diesel (C10-C28)	70.0	50.0	mg/kg	1	5A16003	01/16/2015	01/16/2015
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<i>Surrogate: o-Terphenyl</i>	85.8 %	59-131			"	"	"
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### GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	0.386	0.200	mg/kg	1	5A16002	01/16/2015	01/17/2015
Benzene	ND	0.002	"	"	"	"	"
Toluene	0.002	0.002	"	"	"	"	"
Ethylbenzene	0.003	0.002	"	"	"	"	"
Xylenes, total	0.024	0.002	"	"	"	"	"
Napthalene	ND	0.007	"	"	"	"	"

<i>Surrogate: 1,2-Dichloroethane-d4</i>	117 %	70-130			"	"	"
<i>Surrogate: Toluene-d8</i>	98.2 %	70-130			"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>	97.6 %	70-130			"	"	"

Origins Laboratory, Inc.



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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36 and 8-36

SS-54@3-4"  
 1/16/2015 1:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
 X501151-06 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5A16003	01/16/2015	01/16/2015	
<i>Surrogate: o-Terphenyl</i>	102 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A16002	01/16/2015	01/17/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Naphthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	116 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	97.3 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	100 %	70-130			"	"	"	

Origins Laboratory, Inc.



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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 5A16002 - EPA 5030 (soil)

**Blank (5A16002-BLK1)**

Prepared: 01/16/2015 Analyzed: 01/17/2015

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>68</i>		<i>ug/kg</i>	<i>62.5</i>		<i>109</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>62</i>		<i>"</i>	<i>62.5</i>		<i>98.6</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>58</i>		<i>"</i>	<i>62.5</i>		<i>92.2</i>	<i>70-130</i>			

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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 5A16002 - EPA 5030 (soil)

**LCS (5A16002-BS1)**

Prepared: 01/16/2015 Analyzed: 01/17/2015

Benzene	0.093	0.002	mg/kg	0.100		93.2	70-130			
Toluene	0.093	0.002	"	0.100		92.6	70-130			
Ethylbenzene	0.094	0.002	"	0.100		93.6	70-130			
m,p-Xylene	0.175	0.004	"	0.200		87.7	70-130			
o-Xylene	0.099	0.002	"	0.100		99.0	70-130			
Naphthalene	0.098	0.007	"	0.100		97.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	61		"	62.5		96.8	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.6	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 - State M36-3, M36-5, 6-36, 7-36 and 8-36

**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 5A16002 - EPA 5030 (soil)

Matrix Spike (5A16002-MS1)	Source: X501130-01			Prepared: 01/16/2015 Analyzed: 01/17/2015						
Benzene	0.403	0.002	mg/kg	0.100	0.313	89.9	70-130			
Toluene	0.501	0.002	"	0.100	0.511	NR	70-130			QM-02
Ethylbenzene	0.200	0.002	"	0.100	0.164	36.9	70-130			QM-02
m,p-Xylene	0.510	0.004	"	0.200	0.516	NR	70-130			QM-02
o-Xylene	0.302	0.002	"	0.100	0.282	19.2	70-130			QM-02
Naphthalene	0.093	0.007	"	0.100	0.034	58.2	70-130			QM-02
Surrogate: 1,2-Dichloroethane-d4	78		ug/kg	62.5		124	70-130			
Surrogate: Toluene-d8	84		"	62.5		134	70-130			S-02
Surrogate: 4-Bromofluorobenzene	57		"	62.5		91.6	70-130			

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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36, 7-36 and 8-36

**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 5A16002 - EPA 5030 (soil)

Matrix Spike Dup (5A16002-MSD1)	Source: X501130-01			Prepared: 01/16/2015 Analyzed: 01/17/2015						
Benzene	0.343	0.002	mg/kg	0.100	0.313	29.7	70-130	16.2	20	QM-02
Toluene	0.472	0.002	"	0.100	0.511	NR	70-130	5.96	20	QM-02
Ethylbenzene	0.206	0.002	"	0.100	0.164	42.3	70-130	2.66	20	QM-02
m,p-Xylene	0.506	0.004	"	0.200	0.516	NR	70-130	0.760	20	QM-02
o-Xylene	0.298	0.002	"	0.100	0.282	15.2	70-130	1.32	20	QM-02
Naphthalene	0.095	0.007	"	0.100	0.034	60.1	70-130	2.01	20	QM-02
Surrogate: 1,2-Dichloroethane-d4	79		ug/kg	62.5		127	70-130			
Surrogate: Toluene-d8	93		"	62.5		148	70-130			S-02
Surrogate: 4-Bromofluorobenzene	58		"	62.5		92.8	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 - State M36-3, M36-5, 6-36, 7-36 and 8-36

**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 5A16003 - EPA 3580

**Blank (5A16003-BLK1)**

Prepared: 01/16/2015 Analyzed: 01/16/2015

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 53 " 50.0 107 59-131

**LCS (5A16003-BS1)**

Prepared: 01/16/2015 Analyzed: 01/16/2015

Diesel (C10-C28) 986 50.0 mg/kg 1000 98.6 64-121

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

**Matrix Spike (5A16003-MS1)**

Source: X501130-01

Prepared: 01/16/2015 Analyzed: 01/16/2015

Diesel (C10-C28) 1330 50.0 mg/kg 1000 188 114 53-125

Surrogate: o-Terphenyl 47 " 50.0 94.1 59-131

**Matrix Spike Dup (5A16003-MSD1)**

Source: X501130-01

Prepared: 01/16/2015 Analyzed: 01/16/2015

Diesel (C10-C28) 1130 50.0 mg/kg 1000 188 94.2 53-125 16.0 20

Surrogate: o-Terphenyl 39 " 50.0 77.6 59-131

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4101 Inca Street  
Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: Noble - State M36-3, M36-5, 6-36,7-36  
and 8-36

### Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- QM-02 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
- 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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Noelle Doyle Mathis, President

January 20, 2015

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

**Project Name - Noble - State M36-3, M36-5,  
6-36,7-36 and 8-36**

**Project Number - [none]**

Attached are your analytical results for Noble - State M36-3, M36-5, 6-36,7-36 and 8-36 received by Origins Laboratory, Inc. January 19, 2015. This project is associated with Origins project number X501182-01.

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

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

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

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

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

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



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - State M36-3, M36-5, 6-36,7-36  
and 8-36

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Exc-12 @ 2.5'	X501182-01	Soil	January 19, 2015 11:15	01/19/2015 16:38
Exc-13 @ 1'	X501182-02	Soil	January 19, 2015 11:30	01/19/2015 16:38
Exc-14 @ 2.5'	X501182-03	Soil	January 19, 2015 12:35	01/19/2015 16:38
Exc-15 @ 2.5'	X501182-04	Soil	January 19, 2015 12:48	01/19/2015 16:38
Exc-19 @ 2.5'	X501182-05	Soil	January 19, 2015 14:05	01/19/2015 16:38
Exc-20 @ 2.5'	X501182-06	Soil	January 19, 2015 14:30	01/19/2015 16:38
Exc-21 @ 2.75'	X501182-07	Soil	January 19, 2015 15:10	01/19/2015 16:38

Origins Laboratory, Inc.



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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36, 7-36 and 8-36

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

**Sample Receipt Checklist**

Origins Work Order: X501182 Client: Eagle  
 Client Project No: State-M36-3

Checklist Completed by: David Mathis Shipped Via: \_\_\_\_\_  
 Date/time completed: 01-15-16-15 (UPS, FedEx, Home Delivery, etc.)  
 Airbill #: \_\_\_\_\_

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

Cooler Number/Temperature: 1 12.2 °C \_\_\_\_\_ °C \_\_\_\_\_ °C (Describe) \_\_\_\_\_ °C

Thermometer ID: 5003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 8°C <sup>1,2</sup> ?	X			
Is there ice present (document if blue ice is used)?	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact <sup>1,2</sup> ?	X			
Was adequate sample volume provided <sup>1,2</sup> ?	X			
Are short holding time analyses or samples with HTs due within 48 hours present <sup>1,2</sup> ?		X		
Is a chain-of-custody (COC) present and filled out completely <sup>1,2</sup> ?	X			
Does the COC agree with the number and type of sample bottles received <sup>1,2</sup> ?	X			
Do the sample IDs on the bottle labels match the COC <sup>1,2</sup> ?	X			
Is the COC properly relinquished by the client with date and time records <sup>1,2</sup> ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	Soil
Are samples preserved that require preservation and was it checked <sup>1,2</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 HNO3 HCL -2SSOs) / (pH > 10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			X	Soil
Additional Comments (if any):				

<sup>1,2</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 be taken in the additional comments above and the case narrative.

Reviewed by: [Signature] (Project Manager) Date/Time Reviewed: 1/14/17

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.

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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**Exc-12 @ 2.5'**  
**1/19/2015 11:15:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X501182-01 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5A19012	01/19/2015	01/19/2015	
<i>Surrogate: o-Terphenyl</i>	88.3 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A19013	01/19/2015	01/19/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	111 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	95.8 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	98.6 %	70-130			"	"	"	

Origins Laboratory, Inc.



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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**Exc-13 @ 1'**  
**1/19/2015 11:30:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X501182-02 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5A19012	01/19/2015	01/19/2015	
Surrogate: <i>o</i> -Terphenyl	49.0 %	59-131			"	"	"	S-DUP

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A19013	01/19/2015	01/19/2015	
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	112 %	70-130			"	"	"	
Surrogate: Toluene-d8	95.6 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"	

Origins Laboratory, Inc.



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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**Exc-14 @ 2.5'**

**1/19/2015 12:35:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X501182-03 (Soil)**

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

Diesel (C10-C28)	87.2	50.0	mg/kg	1	5A19012	01/19/2015	01/19/2015	
Surrogate: o-Terphenyl	99.4 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A19013	01/19/2015	01/19/2015	
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	103 %	70-130			"	"	"	

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36 and 8-36

**Exc-15 @ 2.5'**

**1/19/2015 12:48:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X501182-04 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5A19012	01/19/2015	01/19/2015	
Surrogate: <i>o</i> -Terphenyl	93.7 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A19013	01/19/2015	01/19/2015	
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	110 %	70-130			"	"	"	
Surrogate: Toluene-d8	97.3 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"	

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**Exc-19 @ 2.5'**  
**1/19/2015 2:05:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X501182-05 (Soil)**

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

Diesel (C10-C28)	53.5	50.0	mg/kg	1	5A19012	01/19/2015	01/19/2015	
Surrogate: <i>o</i> -Terphenyl	100 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A19013	01/19/2015	01/19/2015	
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	112 %	70-130			"	"	"	
Surrogate: Toluene-d8	96.9 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"	

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**Exc-20 @ 2.5'**  
**1/19/2015 2:30:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X501182-06 (Soil)**

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

Diesel (C10-C28)	768	50.0	mg/kg	1	5A19012	01/19/2015	01/19/2015	
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Surrogate: o-Terphenyl	94.1 %	59-131			"	"	"	
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**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	13.2	0.200	mg/kg	1	5A19013	01/19/2015	01/20/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	0.006	0.002	"	"	"	"	"	
Xylenes, total	0.002	0.002	"	"	"	"	"	
Naphthalene	0.116	0.007	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	121 %	70-130			"	"	"	
Surrogate: Toluene-d8	115 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	168 %	70-130			"	"	"	S-06

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**Exc-21 @ 2.75'**  
**1/19/2015 3:10:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X501182-07 (Soil)**

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

Diesel (C10-C28)	479	50.0	mg/kg	1	5A19012	01/19/2015	01/20/2015	
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Surrogate: o-Terphenyl	98.4 %	59-131			"	"	"	
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**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	324	5.00	mg/kg	25	5A19013	01/19/2015	01/20/2015	
Benzene	ND	0.050	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	
Ethylbenzene	0.270	0.050	"	"	"	"	"	
Xylenes, total	1.32	0.050	"	"	"	"	"	
Naphthalene	ND	0.175	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	107 %	70-130			"	"	01/20/2015	
Surrogate: Toluene-d8	102 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.2 %	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 5A19013 - EPA 5030 (soil)**

**Blank (5A19013-BLK1)**

Prepared: 01/19/2015 Analyzed: 01/19/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Naphthalene	ND	0.007	"							
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.1	70-130			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		95.2	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 5A19013 - EPA 5030 (soil)**

**LCS (5A19013-BS1)**

Prepared: 01/19/2015 Analyzed: 01/19/2015

Benzene	0.093	0.002	mg/kg	0.100		92.8	70-130			
Toluene	0.087	0.002	"	0.100		86.7	70-130			
Ethylbenzene	0.089	0.002	"	0.100		89.3	70-130			
m,p-Xylene	0.168	0.004	"	0.200		84.1	70-130			
o-Xylene	0.092	0.002	"	0.100		92.4	70-130			
Naphthalene	0.082	0.007	"	0.100		82.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	70		ug/kg	62.5		112	70-130			
Surrogate: Toluene-d8	60		"	62.5		95.2	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.7	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 5A19013 - EPA 5030 (soil)

Matrix Spike (5A19013-MS1)	Source: X501182-01			Prepared: 01/19/2015 Analyzed: 01/19/2015						
Benzene	0.082	0.002	mg/kg	0.100	ND	81.7	70-130			
Toluene	0.075	0.002	"	0.100	ND	74.7	70-130			
Ethylbenzene	0.074	0.002	"	0.100	ND	74.2	70-130			
m,p-Xylene	0.143	0.004	"	0.200	ND	71.7	70-130			
o-Xylene	0.076	0.002	"	0.100	ND	76.4	70-130			
Naphthalene	0.072	0.007	"	0.100	0.001	71.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	71		ug/kg	62.5		114	70-130			
Surrogate: Toluene-d8	60		"	62.5		95.6	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 5A19013 - EPA 5030 (soil)

Matrix Spike Dup (5A19013-MSD1)	Source: X501182-01		Prepared: 01/19/2015 Analyzed: 01/19/2015				QM-07		
Benzene	0.064	0.002	mg/kg	0.100	ND	63.6	70-130	25.0	20
Toluene	0.061	0.002	"	0.100	ND	61.4	70-130	19.6	20
Ethylbenzene	0.061	0.002	"	0.100	ND	61.2	70-130	19.2	20
m,p-Xylene	0.118	0.004	"	0.200	ND	58.9	70-130	19.7	20
o-Xylene	0.065	0.002	"	0.100	ND	64.7	70-130	16.6	20
Naphthalene	0.056	0.007	"	0.100	0.001	55.0	70-130	25.1	20
Surrogate: 1,2-Dichloroethane-d4	69		ug/kg	62.5		110	70-130		
Surrogate: Toluene-d8	62		"	62.5		98.7	70-130		
Surrogate: 4-Bromofluorobenzene	63		"	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 5A19012 - EPA 3580**

**Blank (5A19012-BLK1)**

Prepared: 01/19/2015 Analyzed: 01/19/2015

Diesel (C10-C28)	ND	50.0	mg/kg							
Surrogate: o-Terphenyl	52		"	50.0		104	59-131			

**LCS (5A19012-BS1)**

Prepared: 01/19/2015 Analyzed: 01/19/2015

Diesel (C10-C28)	990	50.0	mg/kg	1000		99.0	64-121			
Surrogate: o-Terphenyl	52		"	50.0		105	59-131			

**Matrix Spike (5A19012-MS1)**

**Source: X501182-01**

Prepared: 01/19/2015 Analyzed: 01/19/2015

Diesel (C10-C28)	981	50.0	mg/kg	1000	16.6	96.4	53-125			
Surrogate: o-Terphenyl	50		"	50.0		101	59-131			

**Matrix Spike Dup (5A19012-MSD1)**

**Source: X501182-01**

Prepared: 01/19/2015 Analyzed: 01/19/2015

Diesel (C10-C28)	968	50.0	mg/kg	1000	16.6	95.2	53-125	1.30	20	
Surrogate: o-Terphenyl	49		"	50.0		98.4	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 - State M36-3, M36-5, 6-36,7-36  
and 8-36

### Notes and Definitions

- S-DUP Duplicate analysis confirmed surrogate failure due to matrix effects.
- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- J-02 Reported value failed to meet established quality control criteria for the precision accuracy.
- 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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January 20, 2015

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - State M36-3, M36-5,  
6-36,7-36 and 8-36

Project Number - [none]

Attached are your analytical results for Noble - State M36-3, M36-5, 6-36,7-36 and 8-36 received by Origins Laboratory, Inc. January 20, 2015. This project is associated with Origins project number X501201-01.

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 - State M36-3, M36-5, 6-36,7-36  
and 8-36

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Exc-24 @ 2'	X501201-01	Soil	January 20, 2015 9:50	01/20/2015 16:01
Exc-27 @ 2'	X501201-02	Soil	January 20, 2015 12:50	01/20/2015 16:01
Exc-30 @ 1.5'	X501201-03	Soil	January 20, 2015 13:15	01/20/2015 16:01

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36, 7-36 and 8-36

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: XS01201

Client: Eagle

Client Project ID: State M36-3, M36-5, 6-36, 7-36 + 8-36

Checklist Completed by: Jeff Smith

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

Date/time completed: 1/20/15

Airbill #: 15h

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

Cooler Number/Temperature: 1 / 0.8 °c \_\_\_\_\_ / \_\_\_\_\_ °c \_\_\_\_\_ / \_\_\_\_\_ °c (Describe)

Thermometer ID: TO03

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			
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? <b>If yes, contact client and note in narrative.</b>			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.

Jeff Smith  
 Reviewed by (Project Manager)

1/20/15  
 Date/Time Reviewed

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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

Exc-24 @ 2'  
 1/20/2015 9:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
 X501201-01 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5A19015	01/20/2015	01/20/2015	
<i>Surrogate: o-Terphenyl</i>	107 %	59-131			"	"	"	

### GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A19014	01/20/2015	01/20/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Naphthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	119 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	101 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	96.3 %	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

Exc-27 @ 2'

1/20/2015 12:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
 X501201-02 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5A19015	01/20/2015	01/20/2015	
<i>Surrogate: o-Terphenyl</i>	100 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A19014	01/20/2015	01/20/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Naphthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	120 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	99.6 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	97.9 %	70-130			"	"	"	

Origins Laboratory, Inc.



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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

Exc-30 @ 1.5'  
 1/20/2015 1:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
 X501201-03 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	5A19015	01/20/2015	01/20/2015	
<i>Surrogate: o-Terphenyl</i>	104 %	59-131			"	"	"	

### GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5A19014	01/20/2015	01/20/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	121 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	103 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	100 %	70-130			"	"	"	

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36, 7-36 and 8-36

**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 5A19014 - EPA 5030 (soil)

**Blank (5A19014-BLK1)**

Prepared: 01/19/2015 Analyzed: 01/20/2015

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>67</i>		<i>ug/kg</i>	<i>62.5</i>		<i>108</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>63</i>		<i>"</i>	<i>62.5</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>63</i>		<i>"</i>	<i>62.5</i>		<i>100</i>	<i>70-130</i>			

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 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 5A19014 - EPA 5030 (soil)

LCS (5A19014-BS1)

Prepared: 01/19/2015 Analyzed: 01/20/2015

Benzene	0.092	0.002	mg/kg	0.100		91.6	70-130			
Toluene	0.087	0.002	"	0.100		87.1	70-130			
Ethylbenzene	0.089	0.002	"	0.100		88.7	70-130			
m,p-Xylene	0.177	0.004	"	0.200		88.6	70-130			
o-Xylene	0.088	0.002	"	0.100		88.2	70-130			
Naphthalene	0.095	0.007	"	0.100		95.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	67		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory, Inc.



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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 5A19014 - EPA 5030 (soil)

Matrix Spike (5A19014-MS1)	Source: X501183-01			Prepared: 01/19/2015 Analyzed: 01/20/2015						
Benzene	0.106	0.002	mg/kg	0.100	ND	106	70-130			
Toluene	0.095	0.002	"	0.100	ND	95.2	70-130			
Ethylbenzene	0.110	0.002	"	0.100	ND	110	70-130			
m,p-Xylene	0.217	0.004	"	0.200	ND	108	70-130			
o-Xylene	0.108	0.002	"	0.100	ND	108	70-130			
Naphthalene	0.057	0.007	"	0.100	ND	56.9	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	68		ug/kg	62.5		109	70-130			
Surrogate: Toluene-d8	60		"	62.5		95.6	70-130			
Surrogate: 4-Bromofluorobenzene	52		"	62.5		83.0	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 5A19014 - EPA 5030 (soil)

Matrix Spike Dup (5A19014-MSD1)	Source: X501183-01			Prepared: 01/19/2015 Analyzed: 01/20/2015						
Benzene	0.095	0.002	mg/kg	0.100	ND	95.2	70-130	10.5	20	
Toluene	0.085	0.002	"	0.100	ND	84.5	70-130	11.9	20	
Ethylbenzene	0.091	0.002	"	0.100	ND	91.4	70-130	18.6	20	
m,p-Xylene	0.175	0.004	"	0.200	ND	87.6	70-130	21.3	20	QM-07
o-Xylene	0.086	0.002	"	0.100	ND	86.1	70-130	22.4	20	QM-07
Naphthalene	0.035	0.007	"	0.100	ND	35.4	70-130	46.6	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	59		"	62.5		95.1	70-130			
Surrogate: 4-Bromofluorobenzene	52		"	62.5		83.8	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 - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 5A19015 - EPA 3580

**Blank (5A19015-BLK1)**

Prepared: 01/19/2015 Analyzed: 01/20/2015

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 58 " 50.0 115 59-131

**LCS (5A19015-BS1)**

Prepared: 01/19/2015 Analyzed: 01/20/2015

Diesel (C10-C28) 996 50.0 mg/kg 64-121

Surrogate: o-Terphenyl 53 " 50.0 105 59-131

**Matrix Spike (5A19015-MS1)**

Source: X501183-01

Prepared: 01/19/2015 Analyzed: 01/20/2015

Diesel (C10-C28) 980 50.0 mg/kg 11.1 53-125

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

**Matrix Spike Dup (5A19015-MSD1)**

Source: X501183-01

Prepared: 01/19/2015 Analyzed: 01/20/2015

Diesel (C10-C28) 1230 50.0 mg/kg 11.1 53-125 22.4 20 QR-03

Surrogate: o-Terphenyl 49 " 50.0 98.6 59-131

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4101 Inca Street  
Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: Noble - State M36-3, M36-5, 6-36, 7-36  
and 8-36

### Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President



February 26, 2015

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - State M36-3, M36-5,  
6-36,7-36 and 8-36

Project Number - [none]

Attached are your analytical results for Noble - State M36-3, M36-5, 6-36,7-36 and 8-36 received by Origins Laboratory, Inc. February 19, 2015. This project is associated with Origins project number X502251-01.

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 - State M36-3, M36-5, 6-36,7-36  
and 8-36

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-55 @ 0-2.5'	X502251-01	Soil	February 19, 2015 10:35	02/19/2015 12:25

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President



Eagle Environmental Consulting, Inc.  
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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36, 7-36 and 8-36

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X502251 Client: Eagle  
 Client Project ID: Noble - State  
 Checklist Completed by: Jen Pellegrini Shipped Via: #1D  
 Date/time completed: 2-20-15 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Airbill #: N/A  
 Matrix(s) Received: (Check all that apply):  Soil/Solid  Water  Other: \_\_\_\_\_  
 Cooler Number/Temperature: 1 / 3.4 °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 HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+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.

[Signature]  
 Reviewed by (Project Manager)

2/23/15  
 Date/Time Reviewed

Origins Laboratory, Inc.



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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36, 7-36 and 8-36

SS-55 @ 0-2.5'

2/19/2015 10:35:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
 X502251-01 (Soil)

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

Diesel (C10-C28)	72.6	50.0	mg/kg	1	5B23007	02/23/2015	02/24/2015	
<i>Surrogate: o-Terphenyl</i>	88.1 %	59-131			"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5B23008	02/23/2015	02/24/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Napthalene	ND	0.007	"	"	"	"	"	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	114 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	101 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	94.2 %	70-130			"	"	"	

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36, 7-36 and 8-36

**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 5B23008 - EPA 5030 (soil)

**Blank (5B23008-BLK1)**

Prepared: 02/23/2015 Analyzed: 02/24/2015

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>65</i>		<i>ug/kg</i>	<i>62.5</i>		<i>105</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>61</i>		<i>"</i>	<i>62.5</i>		<i>97.6</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>59</i>		<i>"</i>	<i>62.5</i>		<i>94.2</i>	<i>70-130</i>			

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 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36 and 8-36

**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 5B23008 - EPA 5030 (soil)

LCS (5B23008-BS1)

Prepared: 02/23/2015 Analyzed: 02/24/2015

Benzene	0.106	0.002	mg/kg	0.100		106	70-130			
Toluene	0.105	0.002	"	0.100		105	70-130			
Ethylbenzene	0.103	0.002	"	0.100		103	70-130			
m,p-Xylene	0.205	0.004	"	0.200		103	70-130			
o-Xylene	0.100	0.002	"	0.100		99.8	70-130			
Naphthalene	0.103	0.007	"	0.100		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		97.1	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		105	70-130			

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 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36, 7-36 and 8-36

**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 5B23008 - EPA 5030 (soil)

Matrix Spike (5B23008-MS1)	Source: X502244-08			Prepared: 02/23/2015 Analyzed: 02/24/2015						
Benzene	0.092	0.002	mg/kg	0.100	ND	91.9	70-130			
Toluene	0.090	0.002	"	0.100	ND	89.6	70-130			
Ethylbenzene	0.093	0.002	"	0.100	ND	92.7	70-130			
m,p-Xylene	0.182	0.004	"	0.200	ND	91.1	70-130			
o-Xylene	0.092	0.002	"	0.100	ND	91.7	70-130			
Naphthalene	0.100	0.007	"	0.100	0.003	97.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	66		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.4	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36, 7-36 and 8-36

**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 5B23008 - EPA 5030 (soil)

Matrix Spike Dup (5B23008-MSD1)	Source: X502244-08			Prepared: 02/23/2015 Analyzed: 02/24/2015						
Benzene	0.096	0.002	mg/kg	0.100	ND	96.5	70-130	4.90	20	
Toluene	0.095	0.002	"	0.100	ND	94.9	70-130	5.72	20	
Ethylbenzene	0.087	0.002	"	0.100	ND	87.5	70-130	5.75	20	
m,p-Xylene	0.178	0.004	"	0.200	ND	89.1	70-130	2.16	20	
o-Xylene	0.091	0.002	"	0.100	ND	90.5	70-130	1.34	20	
Naphthalene	0.097	0.007	"	0.100	0.003	94.5	70-130	2.75	20	
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.6	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.9	70-130			

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - State M36-3, M36-5, 6-36,7-36  
 and 8-36

**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 5B23007 - EPA 3580

**Blank (5B23007-BLK1)**

Prepared: 02/23/2015 Analyzed: 02/23/2015

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 52 " 50.0 103 59-131

**LCS (5B23007-BS1)**

Prepared: 02/23/2015 Analyzed: 02/23/2015

Diesel (C10-C28) 766 50.0 mg/kg 1000 76.6 64-121

Surrogate: o-Terphenyl 41 " 50.0 81.6 59-131

**Matrix Spike (5B23007-MS1)**

Source: X502239-01

Prepared: 02/23/2015 Analyzed: 02/23/2015

Diesel (C10-C28) 866 50.0 mg/kg 1000 19.3 84.7 53-125

Surrogate: o-Terphenyl 42 " 50.0 84.8 59-131

**Matrix Spike Dup (5B23007-MSD1)**

Source: X502239-01

Prepared: 02/23/2015 Analyzed: 02/23/2015

Diesel (C10-C28) 775 50.0 mg/kg 1000 19.3 75.6 53-125 11.0 20

Surrogate: o-Terphenyl 37 " 50.0 74.0 59-131

Origins Laboratory, Inc.



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Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: Noble - State M36-3, M36-5, 6-36,7-36  
and 8-36

### 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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Noelle Doyle Mathis, President