



May 14, 2019

Mr. Jacob Evans  
Noble Energy, Inc.  
2115 117<sup>th</sup> Avenue  
Greeley, Colorado 80621

**Field Assessment Report  
Agricultural Products Federal #32-17  
Historical Release  
40.269576 / -104.797120  
SW 1/4 NE 1/4 SEC.32 T4N R66W 6PM  
Weld County, Colorado  
Remediation # 12471**

Dear Mr. Evans,

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

## **1.0 SITE BACKGROUND**

EAGLE was requested by Noble Energy, Inc. (Noble) to perform subsurface assessment activities at the site in response to potential petroleum hydrocarbon impacts associated with the removal of the produced water vault at the Agricultural Products Federal #32-17 tank battery (site). Following removal of the water vault, EAGLE collected soil samples SS-01 through SS-05 from the excavation.

The following narrative details assessment activities completed at the site.

## **2.0 SITE DESCRIPTION**

The Agricultural Products Federal #32-17 site is located within the southwest quarter of the northeast quarter of Section 32, Township 4 north, Range 66 west of the 6<sup>th</sup> Prime Meridian. The historical release was located at latitude: 40.269576 and longitude: -104.797120. A topographic site location map is presented as Figure 1. An aerial site location map is presented as Figure 2.

### **2.1 Site Hydrogeology**

The soil lithology observed beneath the release location consists of medium-dense, clayey sand from the surface to approximately 8 feet below ground surface (bgs), underlain by sandy clay from approximately 8 feet bgs to 12 feet bgs, underlain by clayey sand from approximately 12 to 15 feet bgs. Groundwater during initial assessment activities was approximately 12-12.5 feet bgs. Groundwater was observed at approximately 8 feet bgs during well installation activities. Groundwater was observed at approximately 8 to 9 feet during groundwater sampling activities. A detailed description of the subsurface lithology beneath the site is presented in the boring logs included in Attachment A.

### **3.0 ASSESSMENT ACTIVITIES**

#### **3.1 Initial Assessment Activities**

On February 21, 2019, Noble requested EAGLE to perform subsurface assessment activities at the site in response to potential soil impacts associated with the removal of the produced water vault at the Agricultural Products Federal #32-17 site. EAGLE collected soil samples, SS-01 through SS-05, to determine if adsorbed petroleum hydrocarbon impacts existed above Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 regulatory limits. A portion of each soil sample was placed in a sealable plastic bag for volatile organic compound (VOC) headspace analysis utilizing a field calibrated photoionization detector (PID). Another portion of the soil sample was placed in a 2-ounce glass jar and packed in an iced cooler. EAGLE submitted soil samples SS-01@3', SS-02@3', SS-03@3', SS-04@3', and SS-05@6' to Origins Laboratory, Inc. (Origins), under standard chain of custody procedures.

Each soil sample was submitted for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, and total petroleum hydrocarbons – gasoline range organics (TPH-GRO) following modified Environmental Protection Agency (EPA) Method 8260c, and total petroleum hydrocarbons – diesel range organics (TPH-DRO) following modified EPA Method 8015. In addition, soil sample SS-02@3' was analyzed for Sodium Adsorption Ratio (SAR) following United States Department of Agriculture (USDA) Method 20B, Specific Conductance (EC) following USDA Method 3, and pH following EPA Method 9045D. The soil samples were received within the required holding time for each 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 in Figure 3.

#### **3.2 Initial Assessment Laboratory Analytical Results**

Based on soil laboratory analytical results:

- Soil samples SS-01@3', SS-02@3', SS-03@3', SS-04@3', and SS-05@6' did not contain concentrations of BTEX, naphthalene, or total petroleum hydrocarbons (TPH) exceeding applicable COGCC Table 910-1 regulatory limits.
- Soil sample SS-02@3' had SAR, EC, and pH values within COGCC Table 910-1 regulatory limits.

Initial assessment soil analytical results are summarized in Table 1 and presented in Figure 3. The soil laboratory analytical report is included in Attachment B.

#### **3.3 Additional Assessment Activities**

Based on visual field observations during water vault removal activities, EAGLE and Noble completed additional soil assessment activities to attempt preliminary delineation of potential adsorbed petroleum hydrocarbon impacts at the site. On February 21, 2019, potholing was completed, utilizing a backhoe, within the initial limits of the water vault excavation.

Soil samples from potholes PH-01 and PH-02 were collected within the initial excavation extents to aid in characterizing extents of potential adsorbed petroleum hydrocarbon impacts. A portion of each soil sample was placed in a sealable plastic bag for VOC headspace analysis utilizing a field calibrated PID. Another portion of the soil sample was placed in a 2-ounce glass jar and packed in an iced cooler.

One (1) pothole soil sample (PH-02@12') was submitted to Origins for laboratory analysis of BTEX, naphthalene, TPH-GRO, and TPH-DRO following modified EPA Methods 8260c and 8015. The laboratory received the soil sample within the required holding time for each laboratory analysis.

On February 21, 2019, groundwater was observed within pothole location PH-02 at approximately 12-12.5 feet bgs. EAGLE collected a grab groundwater sample (GW-01), placed the sample in an iced cooler, and delivered to Origins, under standard COC protocol, for analysis of BTEX following modified EPA Method 8260c. The groundwater sample was received within the required holding time for each laboratory analysis.

### **3.4 Additional Assessment Laboratory Analytical Results**

#### **3.4.1 Soil Analytical Results**

Based on laboratory analytical results:

- Soil sample PH-02@12' contained concentrations of benzene (1.30 milligrams per kilogram (mg/kg)) and TPH (584 mg/kg) exceeding applicable COGCC Table 910-1 regulatory limits of 0.17 mg/kg and 500 mg/kg, respectively.

Pothole soil analytical results are summarized in Table 1 and presented in Figure 4. The soil laboratory analytical report is included in Attachment B.

#### **3.4.2 Groundwater Analytical Results**

Based on groundwater laboratory analytical results:

- Grab groundwater sample GW-01 contained concentrations of benzene (8,250 micrograms per liter ( $\mu\text{g/L}$ )), ethylbenzene (898  $\mu\text{g/L}$ ), and total xylenes (8,890  $\mu\text{g/L}$ ) exceeding applicable COGCC Table 910-1 regulatory limits of 5  $\mu\text{g/L}$ , 700  $\mu\text{g/L}$ , and 1,400  $\mu\text{g/L}$ , respectively.

Grab groundwater analytical results are summarized in Table 2 and presented in Figure 5. The laboratory analytical report is included in Attachment B.

## **4.0 MONITORING WELL INSTALLATION ACTIVITIES**

To assess dissolved BTEX impacts associated with the historical release, six (6) initial monitoring wells (MW-01 through MW-06) were proposed for installation. Following approval, EAGLE scheduled soil boring advancement and monitoring well installation activities.

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

The Utility Notification Center of Colorado (UNCC) was called at least 48 hours in advance of drilling activities to confirm that no unmarked utilities or other obstacles were present within the proposed drilling locations. Tier II facility owners were also contacted to confirm the necessary buried utility notifications were completed.

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

On April 5, 2019, six (6) soil borings (MW-01 through MW-06) were advanced around the historical produced water release area. 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 VOC concentrations. Monitoring wells, MW-01 through MW-06, were completed with 1-inch, schedule 40, poly vinyl chloride (PVC) pipe, each to a total depth of approximately 15 feet bgs. Approximately 10-feet of 0.010 slot, 1-inch, PVC screen was placed at the bottom of each boring followed by 5-feet of PVC riser. The well annulus of each monitoring well was backfilled with 10/20 silica sand to approximately 2-feet above screen, followed by a hydrated bentonite seal to the surface. All monitoring wells (MW-01 through MW-06) were completed as approximately 2.5-foot PVC stickups.

EAGLE recorded spatial locations of each monitoring well using a Trimble GeoXT 6000 series instrument. Soil boring logs/monitoring well completion diagrams are included in Attachment A. Monitoring well locations are presented in Figure 6. A geological cross section is included as Figure 7.

### **4.3 Soil Sampling Procedures**

During soil boring advancement/monitoring well installation activities, soil samples were collected continuously within 5-foot, plastic sample liners. The samples within the plastic liners were separated in 2.5-foot intervals for soil identification and analysis. A portion from each 2.5-foot interval was placed in a sealable plastic bag, for VOC headspace analysis utilizing a field calibrated PID. Another portion of the soil sample was placed in a 2-ounce glass jar and packed in an iced cooler.

Based on PID reading and sample location within the vadose zone, one soil sample from each boring (MW-01 through MW-06) was submitted to Origins, following standard chain of custody procedures, for laboratory analysis. Each soil sample was analyzed for BTEX, naphthalene, TPH-GRO, and TPH-DRO, following modified EPA Methods 8260c and 8015. The laboratory received the soil samples within the required holding time for each laboratory analysis.

#### **4.3.1 Soil Analytical Results**

Based on laboratory analytical results:

- Soil sample MW-04@5-7.5' contained concentrations of benzene (0.612 mg/kg) and TPH (628 mg/kg) exceeding applicable COGCC Table 910-1 regulatory limits of 0.17 mg/kg and 500 mg/kg, respectively.
- Soil samples MW-01@2.5-5', MW-02@2.5-5', MW-03@5-7.5' MW-05@0-2.5', and MW-06@2.5-5' did not contain concentrations of BTEX, naphthalene, TPH-GRO, or TPH-DRO exceeding applicable COGCC Table 910-1 regulatory limits.

Monitoring well soil analytical results are summarized in Table 1 and presented in Figure 6. The soil sample laboratory analytical report is included in Attachment B.

### **4.4 Groundwater Sampling Procedures**

On April 9, 2019, groundwater samples were collected from monitoring wells MW-01 through MW-06. Prior to groundwater sample collection, depth to groundwater was measured using a decontaminated interface probe capable of measuring the depth to groundwater or light non-aqueous phase liquid (LNAPL) to an accuracy of 0.01 feet.

Relative groundwater elevations within each monitoring well ranged from 88.12 (MW-02) to 88.47 (MW-04). The groundwater flow direction beneath the site during the April 2019 sampling event was predominantly north-northwest, with an average hydraulic gradient of 0.006 feet per foot (ft./ft.) across the site (measured from MW-04 to MW-02). Groundwater elevation data is summarized in Table 3 and presented in Figure 8.

Groundwater samples were collected from each monitoring well in 40 milliliter (mL) amber vials and 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, and were received within the required holding time.

#### **4.4.1 Groundwater Analytical Results**

Based on laboratory analytical results:

- The groundwater samples collected from monitoring wells MW-01, MW-02, MW-03, and MW-04 contained concentrations of benzene (255 µg/L, 475 µg/L, 438 µg/L, and 1,990 µg/L, respectively) exceeding the COGCC Table 910-1 regulatory limit of 5.0 µg/L.
- The groundwater samples collected from monitoring wells MW-03, MW-04, and MW-06 contained concentrations of total xylenes (2,740 µg/L, 2,720 µg/L, and 1,650 µg/L, respectively) exceeding the COGCC Table 910-1 regulatory limit of 1,400 µg/L.

Monitoring well groundwater analytical results are summarized in Table 2 and presented in Figure 9. The groundwater laboratory analytical reports are included in Attachment B.

## **5.0 CONCLUSIONS**

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

- On February 21, 2019, EAGLE assessed potential petroleum hydrocarbon impacts associated with the produced water vault at the Agricultural Products Federal #32-17 tank battery.
- Soil samples SS-01@3', SS-02@3', SS-03@3', SS-04@3', and SS-05@6' did not contain concentrations of BTEX, naphthalene, or TPH exceeding applicable COGCC Table 910-1 regulatory limits.
- Soil sample SS-02@3' had SAR, EC, and pH values within COGCC Table 910-1 regulatory limits.
- Based on visual field observations, pothole locations PH-01 and PH-02, were advanced on February 21, 2019 to aid in determining extents of potential adsorbed petroleum hydrocarbon impacts at the site.
- Soil sample PH-02@12' contained concentrations of benzene and TPH-GRO exceeding applicable COGCC Table 910-1 regulatory limits.
- Grab groundwater sample GW-01, collected from pothole PH-02, contained concentrations of benzene, ethylbenzene, and total xylenes exceeding applicable COGCC Table 910-1 regulatory limits.

- On April 5, 2019, EAGLE installed monitoring wells MW-01 through MW-06 at the site.
- Soil sample MW-04@5-7.5' contained concentrations of benzene and TPH exceeding applicable COGCC Table 910-1 regulatory limits.
- The groundwater samples collected from monitoring wells MW-01, MW-02, MW-03, and MW-04 contained concentrations of benzene exceeding the COGCC Table 910-1 regulatory limit.
- The groundwater samples collected from monitoring wells MW-03, MW-04, and MW-06 contained concentrations of total xylenes exceeding the COGCC Table 910-1 regulatory limit.
- The groundwater flow direction beneath the site during the April 2019 sampling event was predominately to the north-northwest with an average hydraulic gradient of 0.006 ft./ft. across the site (measured from MW-04 to MW-02).
- Adsorbed and dissolved petroleum hydrocarbon impacts are not laterally defined at the site at this time.

## 6.0 RECOMMENDATIONS

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

- Complete additional soil boring advancement/monitoring well installation activities to delineate adsorbed and dissolved petroleum hydrocarbon impacts at the Agricultural Products Federal #32-17 site.
- Investigate remedial options based on groundwater delineation results at the site.

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.***



Andrew Newberry  
Project Geologist



Robin Lockwood  
Project Scientist

## **FIGURES**

**Figure 1: Topographic Site Location Map**

**Figure 2: Aerial Site Location Map**

**Figure 3: Initial Assessment Soil Analytical Map**

**Figure 4: Pothole Soil Analytical Map**

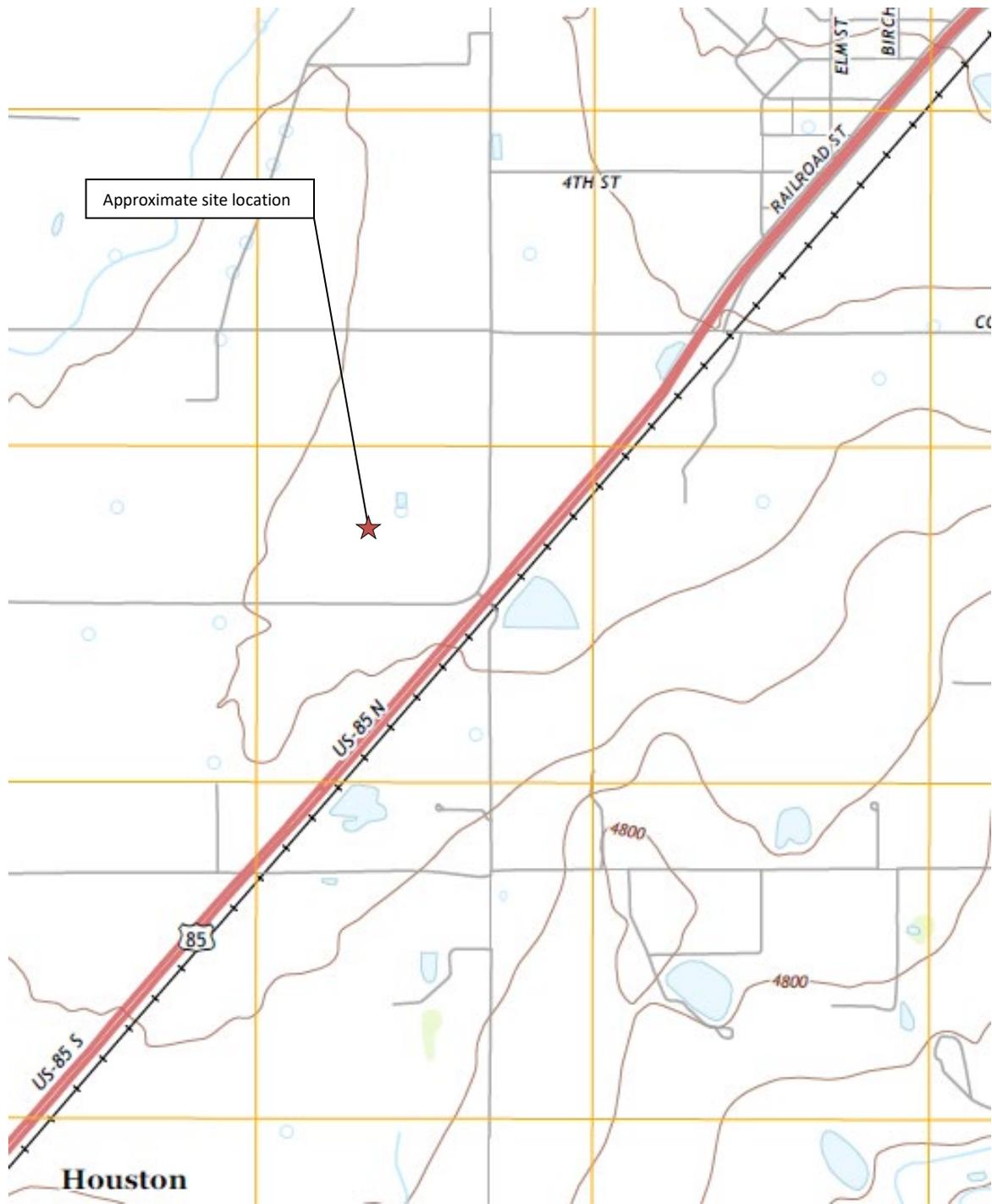
**Figure 5: Grab Groundwater Analytical Map**

**Figure 6: Monitoring Well Soil Analytical Map**

**Figure 7: Geologic Cross Section (A-A')**

**Figure 8: Groundwater Elevation Map**

**Figure 9: Groundwater Analytical Map**



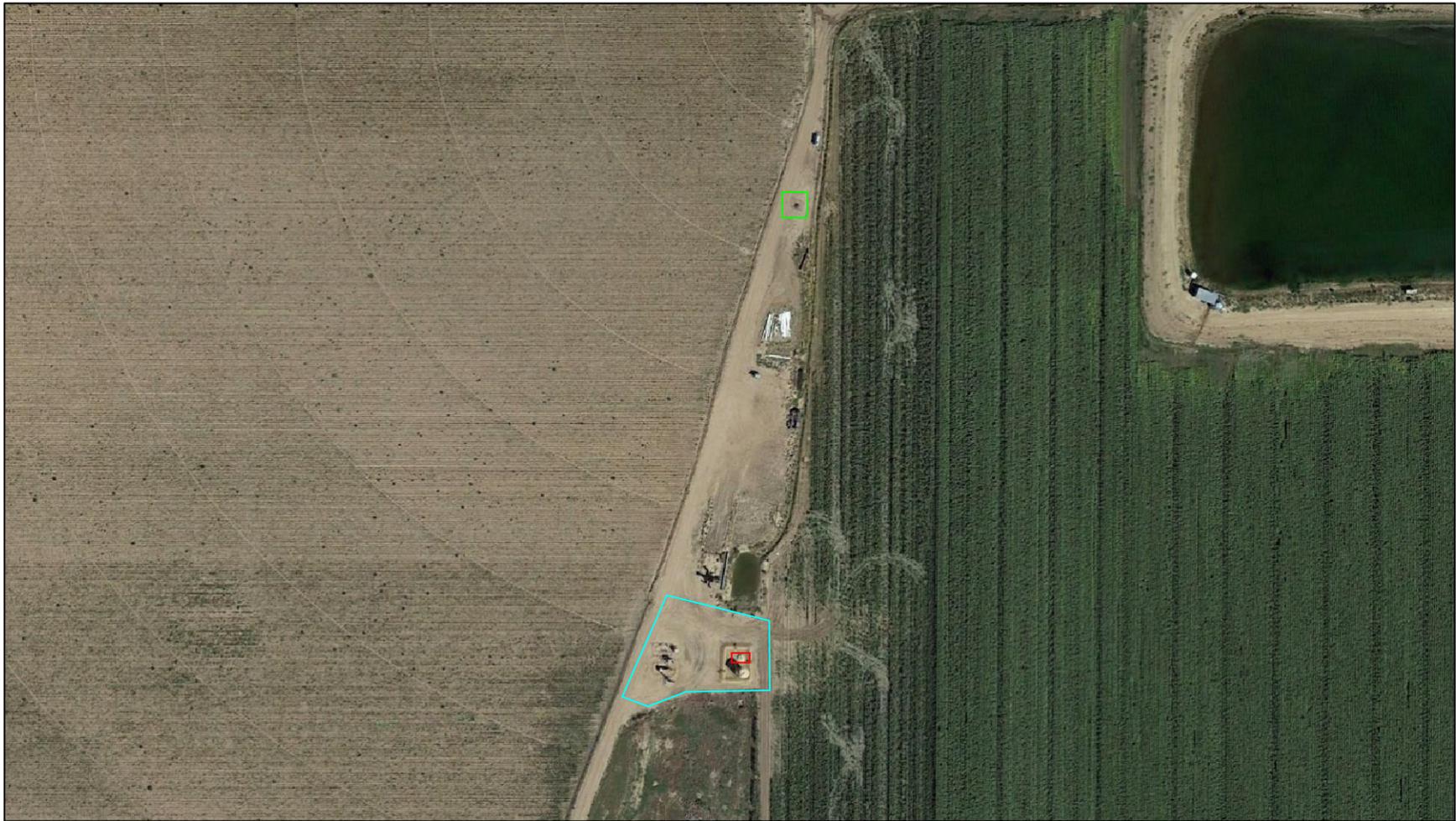
**Topographic Site Location Map**  
 Agricultural Products Federal #32-17  
 Historical Release  
 40.269576 / -104.797120  
 SW¼ NE¼ SEC.32 T4N R66W 6PM  
 Weld County, Colorado  
 Remediation # 12471



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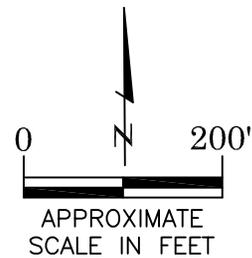
Source: USGS 7.5 Minute Topographic Map, Milliken, CO Quadrangle 2013

**Figure 1**



**LEGEND**

- AGRICULTURAL PRODUCTS FEDERAL #32-17 TANK BATTERY
- AGRICULTURAL PRODUCTS FEDERAL #32-17 WELL HEAD
- APPROXIMATE LOCATION OF WATER VAULT EXCAVATION/RELEASE



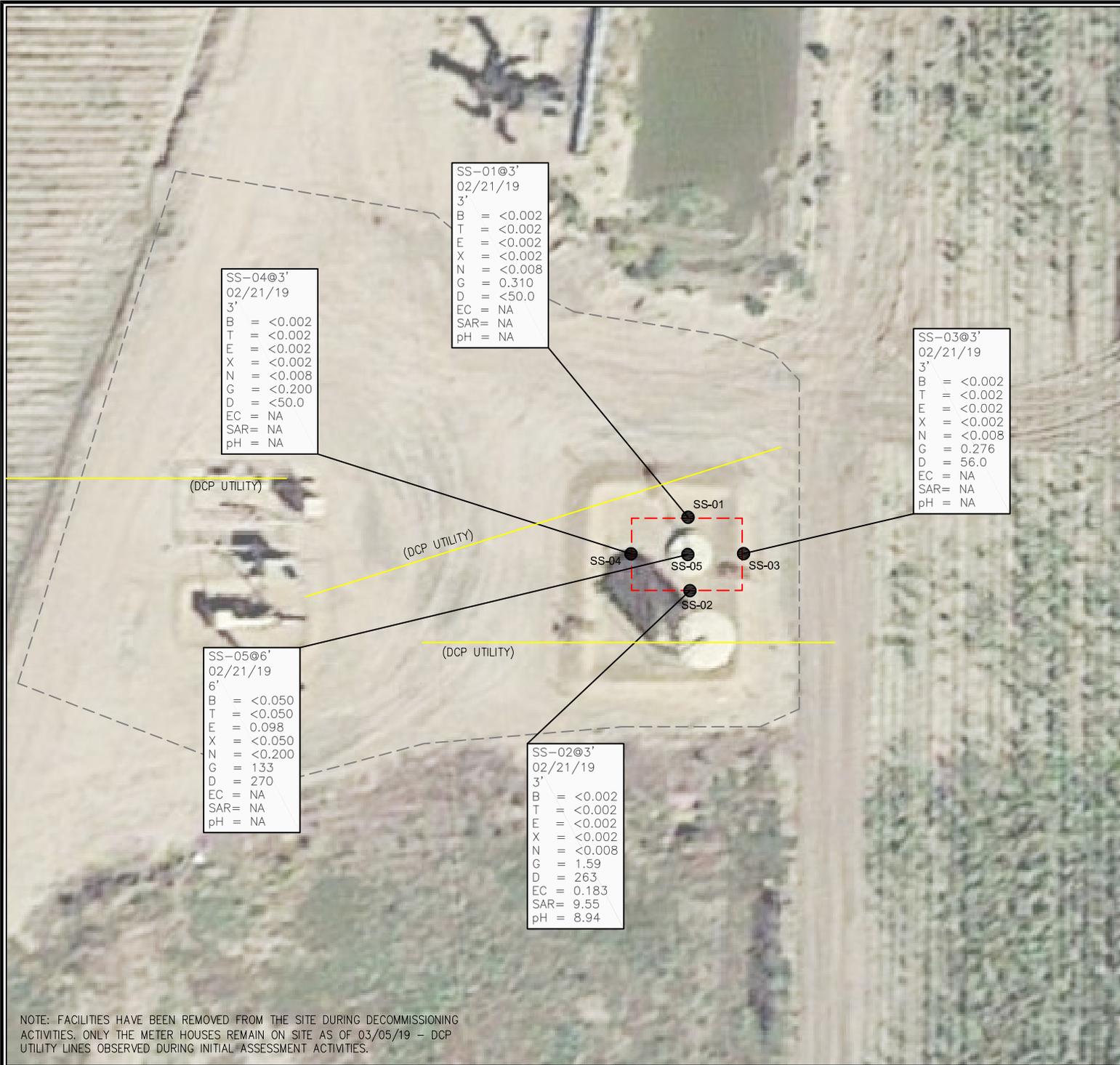
AERIAL SITE LOCATION MAP  
 AGRICULTURAL PRODUCTS FEDERAL #32-17  
 HISTORICAL RELEASE  
 40.269576 / -104.797120  
 SW1/4 NE1/4 SEC.32 T4N R66W 6PM  
 WELD COUNTY, COLORADO  
 REMEDIATION # 12471

DATE: 03/14/19

FIG. NO. 2      DRAWN BY: ar



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**LEGEND**

- APPROXIMATE TANK BATTERY BOUNDARY
- APPROXIMATE UTILITY LOCATIONS
- APPROXIMATE EXCAVATION BOUNDARIES
- APPROXIMATE LOCATION OF SOIL SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

**PARAMETERS**

SOIL SAMPLE LOCATION  
DATE  
DEPTH (FEET)  
B = BENZENE (mg/kg)  
T = TOLUENE (mg/kg)  
E = ETHYLBENZENE (mg/kg)  
X = TOTAL XYLENES (mg/kg)  
N = NAPHTHALENE (mg/kg)  
G = TPH-GRO (mg/kg)  
D = TPH-DRO (mg/kg)  
EC = SPECIFIC CONDUCTANCE (mmhos/cm)  
SAR= SODIUM ADSORPTION RATIO  
pH = pH (pH UNITS)

mg/kg = MILLIGRAMS PER KILOGRAM

mmhos/cm = MILLIMHOS PER CENTIMETER

TPH-GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS

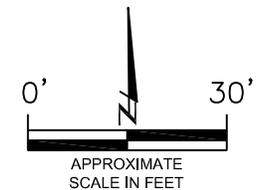
TPH-DRO = TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE ORGANICS

NA = NOT ANALYZED

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

VALUES PRESENTED IN **BOLD** TYPEFACE CONTAIN CONCENTRATIONS EXCEEDING COGCC REGULATORY LIMITS FOR THAT COMPOUND

COGCC - COLORADO OIL AND GAS CONSERVATION COMMISSION



INITIAL ASSESSMENT SOIL ANALYTICAL MAP  
AGRICULTURAL PRODUCTS FEDERAL #32-17  
HISTORICAL RELEASE  
40.269576 / -104.797120  
SW1/4 NE1/4 SEC.32 T4N R66W 6PM  
WELD COUNTY, COLORADO  
REMEDATION # 12471

DATE:  
05/09/19

DRAWN BY:  
or

FIG. NO. 3



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NOTE: FACILITIES HAVE BEEN REMOVED FROM THE SITE DURING DECOMMISSIONING ACTIVITIES. ONLY THE METER HOUSES REMAIN ON SITE AS OF 03/05/19 – DCP UTILITY LINES OBSERVED DURING INITIAL ASSESSMENT ACTIVITIES.

**LEGEND**

- APPROXIMATE TANK BATTERY BOUNDARY
- APPROXIMATE UTILITY LOCATIONS
- APPROXIMATE EXCAVATION BOUNDARIES
- PH-02 APPROXIMATE LOCATION OF SOIL SAMPLES FIELD ANALYZED WITH A PHOTOIONIZATION DETECTOR (PID)
- SS-02 APPROXIMATE LOCATION OF SOIL SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

**PARAMETERS**

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

mg/kg = MILLIGRAMS PER KILOGRAM

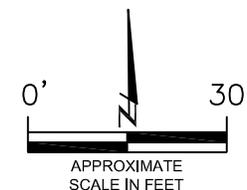
TPH-GRO = TOTAL PETROLEUM HYDROCARBONS – GASOLINE RANGE ORGANICS

TPH-DRO = TOTAL PETROLEUM HYDROCARBONS – DIESEL RANGE ORGANICS

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

VALUES PRESENTED IN **BOLD** TYPEFACE CONTAIN CONCENTRATIONS EXCEEDING COGCC REGULATORY LIMITS FOR THAT COMPOUND

COGCC – COLORADO OIL AND GAS CONSERVATION COMMISSION

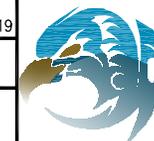


**POTHOLE SOIL ANALYTICAL MAP**  
AGRICULTURAL PRODUCTS FEDERAL #32-17  
HISTORICAL RELEASE  
40.269576 / -104.797120  
SW1/4 NE1/4 SEC.32 T4N R66W 6PM  
WELD COUNTY, COLORADO  
REMEDATION # 12471

DATE:  
05/09/19

DRAWN BY:  
or

FIG. NO. 4



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PH: 303-433-0479 • F: 303-325-5449



GW-01  
 02/21/19  
 B = **8250**  
 T = <4.00  
 E = **898**  
 X = **8890**

**LEGEND**

- APPROXIMATE TANK BATTERY BOUNDARY
- APPROXIMATE UTILITY LOCATIONS
- APPROXIMATE EXCAVATION BOUNDARIES
- APPROXIMATE LOCATION OF GROUNDWATER SAMPLE SUBMITTED FOR LABORATORY ANALYSIS

**PARAMETERS**

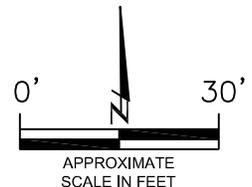
GROUNDWATER SAMPLE LOCATION  
 DATE  
 B = BENZENE (µg/L)  
 T = TOLUENE (µg/L)  
 E = ETHYLBENZENE (µg/L)  
 X = TOTAL XYLENES (µg/L)

µg/L = MICROGRAMS PER LITER

VALUES PRESENTED IN **BOLD** TYPEFACE CONTAIN CONCENTRATIONS EXCEEDING COGCC TABLE 910-1 REGULATORY LIMITS FOR THAT COMPOUND.

COGCC - COLORADO OIL AND GAS CONSERVATION COMMISSION

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



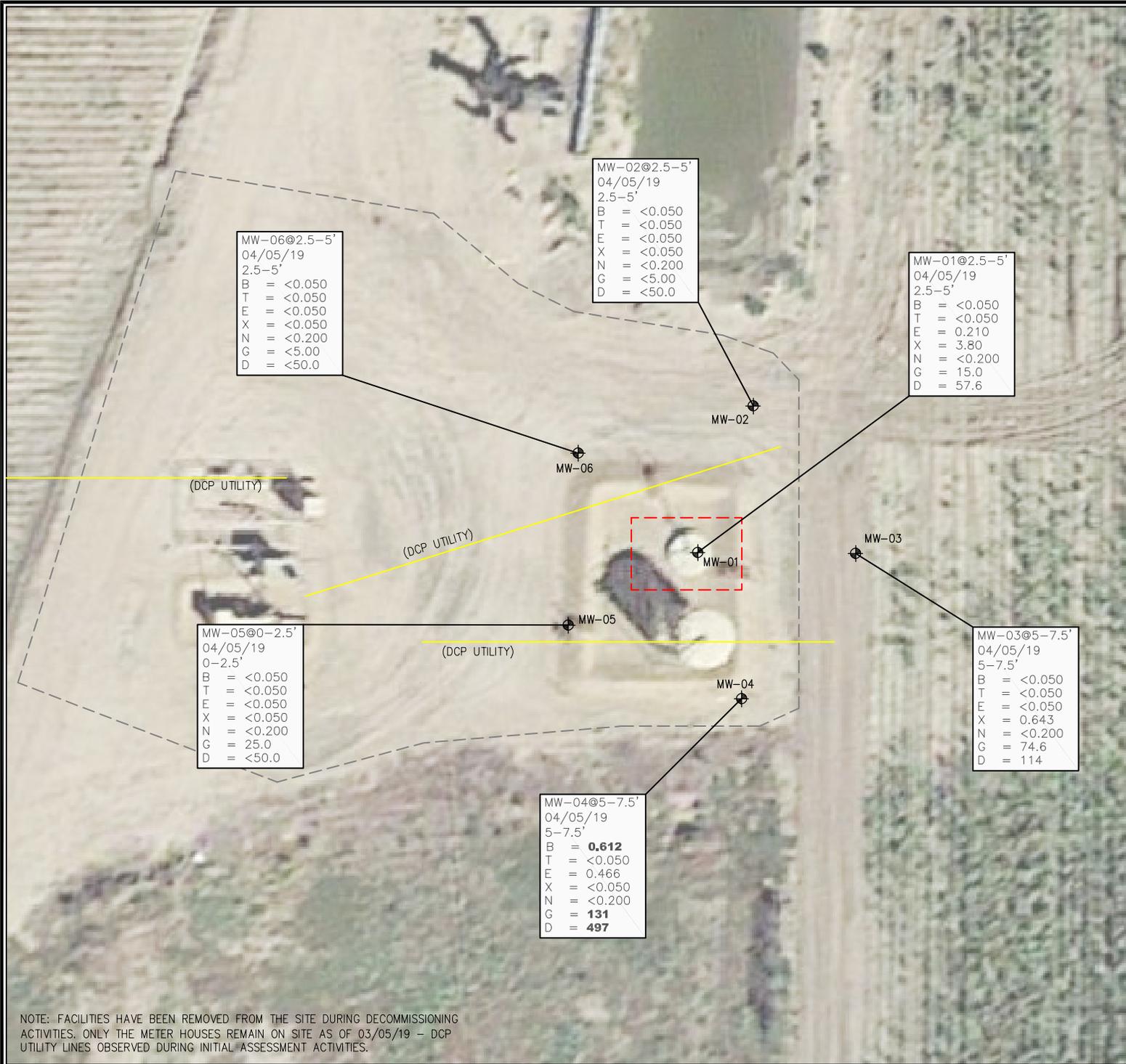
GRAB GROUNDWATER ANALYTICAL MAP  
 AGRICULTURAL PRODUCTS FEDERAL #32-17  
 HISTORICAL RELEASE  
 40.269576 / -104.797120  
 SW1/4 NE1/4 SEC.32 T4N R66W 6PM  
 WELD COUNTY, COLORADO  
 REMEDIATION # 12471

NOTE: FACILITIES HAVE BEEN REMOVED FROM THE SITE DURING DECOMMISSIONING ACTIVITIES. ONLY THE METER HOUSES REMAIN ON SITE AS OF 03/05/19 - DCP UTILITY LINES OBSERVED DURING INITIAL ASSESSMENT ACTIVITIES.

DATE:  
 05/09/19  
 or  
 DRAWN BY:  
 or  
 FIG. NO. 5



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**LEGEND**

- APPROXIMATE TANK BATTERY BOUNDARY
- APPROXIMATE UTILITY LOCATIONS
- APPROXIMATE EXCAVATION BOUNDARIES

APPROXIMATE MONITORING WELL LOCATIONS

PARAMETERS

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

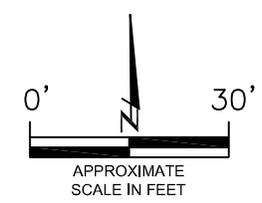
mg/kg = MILLIGRAMS PER KILOGRAM

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

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

VALUES PRESENTED IN **BOLD** TYPEFACE CONTAIN CONCENTRATIONS EXCEEDING COGCC REGULATORY LIMITS FOR THAT COMPOUND

COGCC - COLORADO OIL AND GAS CONSERVATION COMMISSION



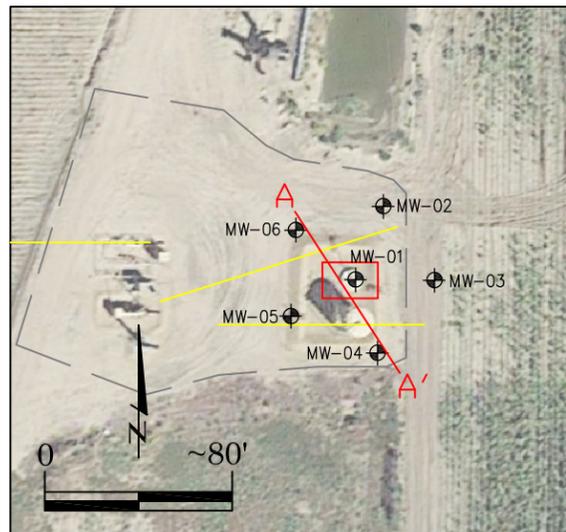
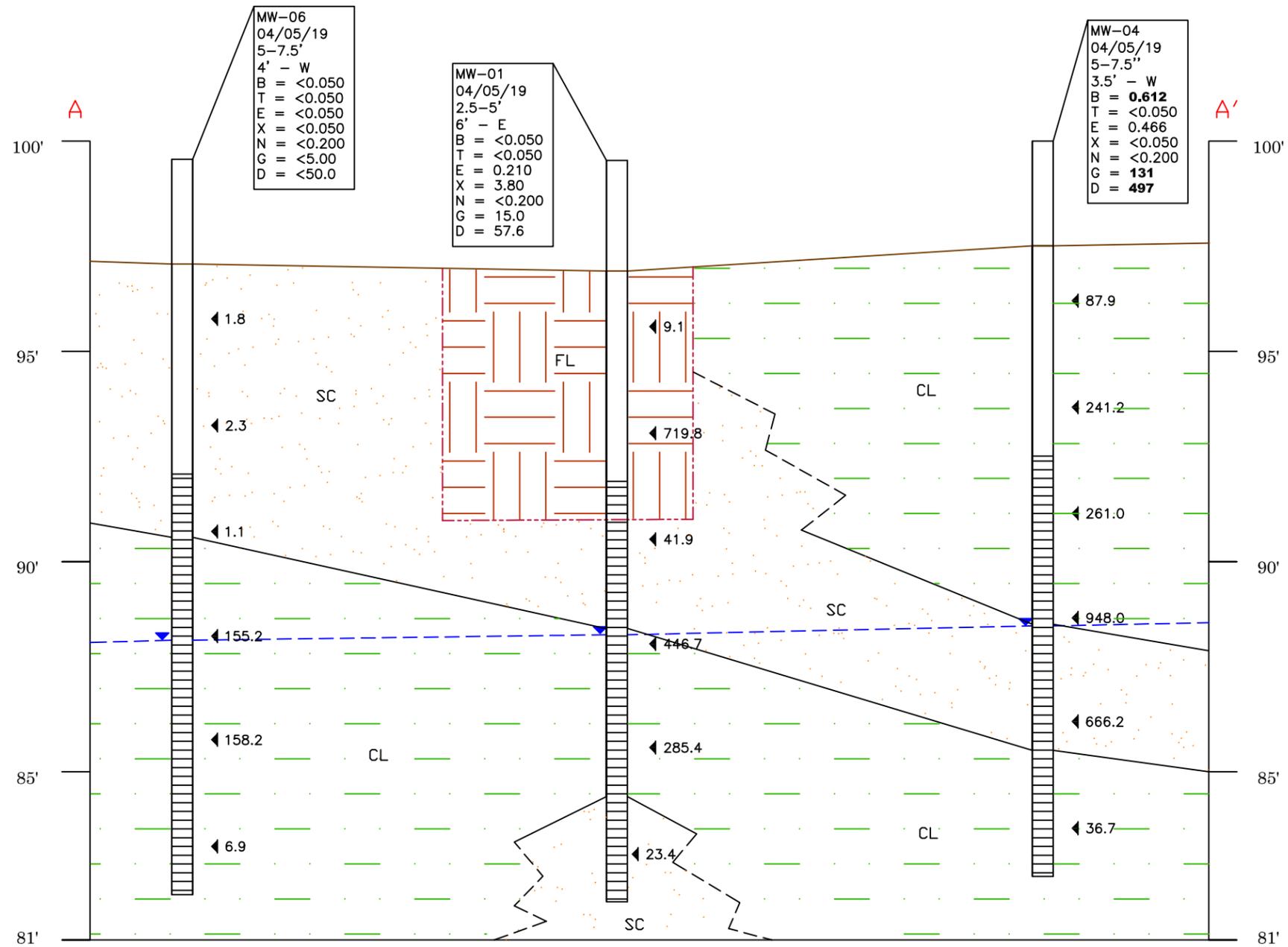
MONITORING WELL SOIL ANALYTICAL MAP  
 AGRICULTURAL PRODUCTS FEDERAL #32-17  
 HISTORICAL RELEASE  
 40.2695761 / -104.797120  
 SW1/4 NE1/4 SEC.32 T4N R66W 6PM  
 WELD COUNTY, COLORADO  
 REMEDIATION # 12471

DATE:  
05/09/19  
DRAWN BY:  
or  
FIG.  
NO. 6

**EAGLE**  
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NOTE: FACILITIES HAVE BEEN REMOVED FROM THE SITE DURING DECOMMISSIONING ACTIVITIES. ONLY THE METER HOUSES REMAIN ON SITE AS OF 03/05/19 - DCP UTILITY LINES OBSERVED DURING INITIAL ASSESSMENT ACTIVITIES.

# GEOLOGIC CROSS SECTION A-A'



**LEGEND**

	FILL (CLAY AND GRAVELS)
	CLAYEY SAND
	SANDY CLAY
	GROUND SURFACE
	EXCAVATION BOUNDARIES
	OBSERVED CONTACT
	INFERRED CONTACT
	OBSERVED GROUNDWATER (04/09/19)
	A — A' LINE OF CROSS SECTION

**PARAMETERS**

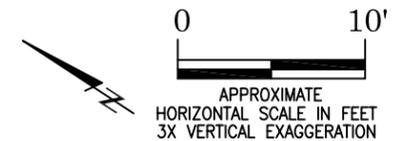
SAMPLE LOCATION  
DATE  
DEPTH (FEET)  
OFFSET FROM A-A' (FEET-DIRECTION)  
B = BENZENE (mg/kg)  
T = TOLUENE (mg/kg)  
E = ETHYLBENZENE (mg/kg)  
X = TOTAL XYLENES (mg/kg)  
N = NAPHTHALENE (mg/kg)  
G = TPH-GRO (mg/kg)  
D = TPH-DRO (mg/kg)

STICK UP COMPLETION  
 PVC RISER  
 PID (ppm-v)  
 SLOTTED SCREEN  
ppm-v = PARTS PER MILLION BY VOLUME

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 CONTAIN CONCENTRATIONS EXCEEDING COGCC TABLE 910-1 REGULATORY LIMITS FOR THAT COMPOUND  
COGCC - COLORADO OIL AND GAS CONSERVATION COMMISSION



GEOLOGIC CROSS SECTION (A-A')  
AGRICULTURAL PRODUCTS FEDERAL #32-17  
HISTORICAL RELEASE  
40.269576 / -104.797120  
SW1/4 NE1/4 SEC.32 T4N R66W 6PM  
WELD COUNTY, COLORADO  
REMEDIAION # 12471





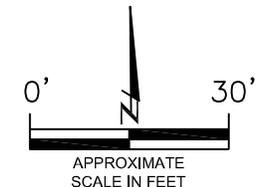
NOTE: FACILITIES HAVE BEEN REMOVED FROM THE SITE DURING DECOMMISSIONING ACTIVITIES. ONLY THE METER HOUSES REMAIN ON SITE AS OF 03/05/19 – DCP UTILITY LINES OBSERVED DURING INITIAL ASSESSMENT ACTIVITIES.

**LEGEND**

- APPROXIMATE TANK BATTERY BOUNDARY
- APPROXIMATE UTILITY LOCATIONS
- APPROXIMATE EXCAVATION BOUNDARIES
- ⊕ APPROXIMATE MONITORING WELL LOCATIONS
- (87.31) RELATIVE GROUNDWATER ELEVATION (FT.)
- INFERRED GROUNDWATER ELEVATION CONTOUR (FT.)
- APPROXIMATE GROUNDWATER FLOW DIRECTION

FT. = FEET

NOTE:  
GROUNDWATER ELEVATION DATA WAS COLLECTED 04/09/19.

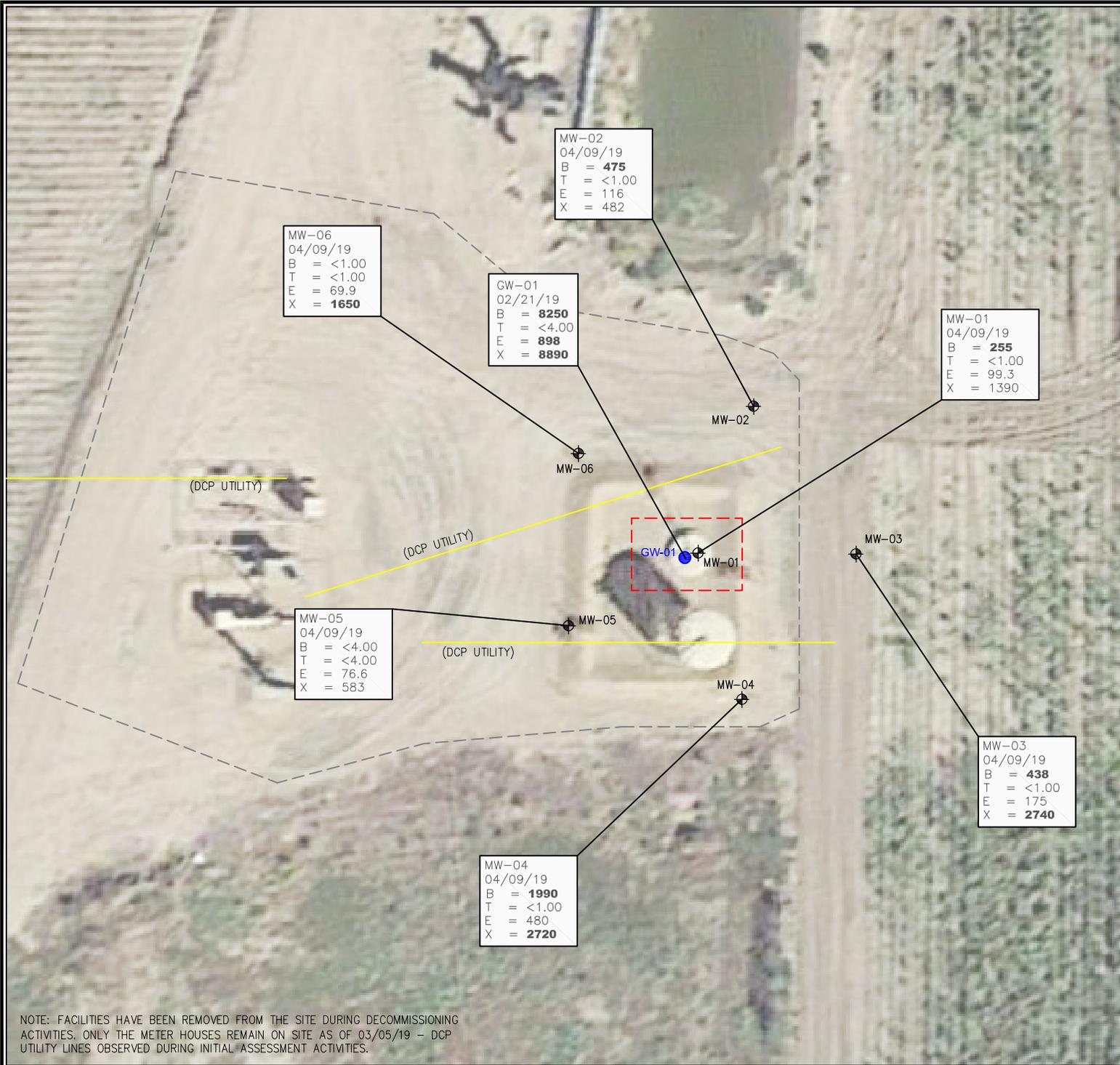


GROUNDWATER ELEVATION MAP  
 AGRICULTURAL PRODUCTS FEDERAL #32-17  
 HISTORICAL RELEASE  
 40.269576 / -104.797120  
 SW1/4 NE1/4 SEC.32 T4N R66W 6PM  
 WELD COUNTY, COLORADO  
 REMEDIATION # 12471

DATE:  
05/09/19  
 DRAWN BY:  
or  
 FIG.  
NO. 8



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



**LEGEND**

- APPROXIMATE TANK BATTERY BOUNDARY
- APPROXIMATE UTILITY LOCATIONS
- APPROXIMATE EXCAVATION BOUNDARIES
- APPROXIMATE LOCATION OF GROUNDWATER SAMPLE SUBMITTED FOR LABORATORY ANALYSIS
- ⊕ APPROXIMATE MONITORING WELL LOCATIONS

**PARAMETERS**

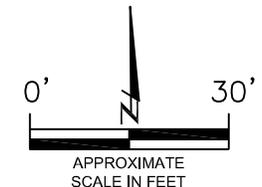
SAMPLE LOCATION	DATE
B	= BENZENE (µg/L)
T	= TOLUENE (µg/L)
E	= ETHYLBENZENE (µg/L)
X	= TOTAL XYLENES (µg/L)

µg/L = MICROGRAMS PER LITER

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

VALUES PRESENTED IN **BOLD** TYPEFACE CONTAIN CONCENTRATIONS EXCEEDING COGCC TABLE 910-1 REGULATORY LIMITS FOR THAT COMPOUND

COGCC - COLORADO OIL AND GAS CONSERVATION COMMISSION



GROUNDWATER ANALYTICAL MAP  
AGRICULTURAL PRODUCTS FEDERAL #32-17  
HISTORICAL RELEASE  
40.2695761 / -104.797120  
SW1/4 NE1/4 SEC.32 T4N R66W 6PM  
WELD COUNTY, COLORADO  
REMEDATION # 12471

DATE:  
05/09/19  
DRAWN BY:  
or  
FIG.  
NO. 9



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

NOTE: FACILITIES HAVE BEEN REMOVED FROM THE SITE DURING DECOMMISSIONING ACTIVITIES. ONLY THE METER HOUSES REMAIN ON SITE AS OF 03/05/19 - DCP UTILITY LINES OBSERVED DURING INITIAL ASSESSMENT ACTIVITIES.

## **TABLES**

**Table 1: Soil Analytical Results Summary**

**Table 2: Groundwater Analytical Results Summary**

**Table 3: Groundwater Elevation Summary**

**TABLE 1**  
**SOIL ANALYTICAL RESULTS SUMMARY**  
**AGRICULTURAL PRODUCTS FEDERAL #32-17**  
**HISTORICAL RELEASE**  
**40.269576 / -104.797120**  
**SW¼ NE¼ SEC.32 T4N R66W 6PM**  
**WELD COUNTY, COLORADO**  
**REMEDIATION # 12471**

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	Specific Conductance (mmhos/cm)	pH (pH units)	SAR
<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>&lt;4</b>	<b>6 to 9</b>	<b>&lt;12</b>
SS-01 @ 3' (40.269606 / -104.797120)	02/21/19	3	<0.002	<0.002	<0.002	<0.002	<0.008	0.310	<50.0	NA	NA	NA
SS-02 @ 3' (40.269562 / -104.797120)	02/21/19	3	<0.002	<0.002	<0.002	<0.002	<0.008	1.59	263	0.183	8.94	9.55
SS-03 @ 3' (40.269583 / -104.797091)	02/21/19	3	<0.002	<0.002	<0.002	<0.002	<0.008	0.276	56.0	NA	NA	NA
SS-04 @ 3' (40.269583 / -104.797147)	02/21/19	3	<0.002	<0.002	<0.002	<0.002	<0.008	<0.200	<50.0	NA	NA	NA
SS-05 @ 6' (40.269576 / -104.797125)	02/21/19	6	<0.050	<0.050	0.098	<0.050	<0.200	133	270	NA	NA	NA
PH-02 @ 12' (40.269576 / -104.797125)	02/21/19	12	<b>1.30</b>	<0.050	1.20	16.0	<0.200	<b>584</b>	<50.0	NA	NA	NA
MW-01 @ 2.5-5' (40.269582 / -104.797111)	04/05/19	2.5-5	<0.050	<0.050	0.210	3.80	<0.200	15.0	57.6	NA	NA	NA
MW-02 @ 2.5-5' (40.269667 / -104.797065)	04/05/19	2.5-5	<0.050	<0.050	<0.050	<0.050	<0.200	<5.00	<50.0	NA	NA	NA
MW-03 @ 5-7.5' (40.269580 / -104.796995)	04/05/19	5-7.5	<0.050	<0.050	<0.050	0.643	<0.200	74.6	114	NA	NA	NA
MW-04 @ 5-7.5' (40.269496 / -104.797073)	04/05/19	5-7.5	<b>0.612</b>	<0.050	0.466	<0.050	<0.200	<b>131</b>	<b>497</b>	NA	NA	NA
MW-05 @ 0-2.5' (40.269534 / -104.797222)	04/05/19	0-2.5	<0.050	<0.050	<0.050	<0.050	<0.200	<b>25.0</b>	<50.0	NA	NA	NA
MW-06 @ 2.5-5' (40.269640 / -104.797210)	04/05/19	2.5-5	<0.050	<0.050	<0.050	<0.050	<0.200	<5.00	<50.0	NA	NA	NA

COGCC = Colorado Oil and Gas Conservation Commission

mg/kg = milligrams per kilogram

mmhos/cm = millimhos per centimeter

NA = Not Analyzed

TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics

TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics

SAR = Sodium Adsorption Ratio

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

Note: Values presented in **BOLD** contained concentrations exceeding COGCC Table 910-1 Regulatory Limits

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS SUMMARY**  
**AGRICULTURAL PRODUCTS FEDERAL #32-17**  
**HISTORICAL RELEASE**  
**40.269576 / -104.797120**  
**SW¼ NE¼ SEC.32 T4N R66W 6PM**  
**WELD COUNTY, COLORADO**  
**REMEDATION # 12471**

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 (40.269576 / -104.797125)	02/21/19	<b>8250</b>	<4.00	<b>898</b>	<b>8890</b>
MW-01 (40.269582 / -104.797111)	04/09/19	<b>255</b>	<1.00	99.3	1390
MW-02 (40.269667 / -104.797065)	04/09/19	<b>475</b>	<1.00	116	482
MW-03 (40.269580 / -104.796995)	04/09/19	<b>438</b>	<1.00	175	<b>2740</b>
MW-04 (40.269496 / -104.797073)	04/09/19	<b>1990</b>	<1.00	480	<b>2720</b>
MW-05 (40.269534 / -104.797222)	04/09/19	<4.00	<4.00	76.6	583
MW-06 (40.269640 / -104.797210)	04/09/19	<1.00	<1.00	69.9	<b>1650</b>
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 <b>bold</b> typeface exceed their respective COGCC - Regulatory Limits (Table 910-1).					

**TABLE 3  
GROUNDWATER ELEVATION SUMMARY  
AGRICULTURAL PRODUCTS FEDERAL #32-17  
HISTORICAL RELEASE  
40.269576 / -104.797120  
SW¼ NE¼ SEC.32 T4N R66W 6PM  
WELD COUNTY, COLORADO  
REMEDIAION # 12471**

Sample Location (Latitude/Longitude)	Date	Top of Casing Elevation (feet)	Depth to Groundwater from TOC (feet)	Relative Groundwater Elevation (feet) (TOC)	Depth to Groundwater (feet)(bgs)	Stick Up Height (feet)
MW-01 (40.269582 / -104.797111)	04/09/19	99.54	11.28	88.26	8.79	2.49
MW-02 (40.269667 / -104.797065)	04/09/19	99.72	11.60	88.12	8.90	2.70
MW-03 (40.269580 / -104.796995)	04/09/19	98.90	10.61	88.29	8.55	2.06
MW-04 (40.269496 / -104.797073)	04/09/19	100	11.53	88.47	8.90	2.63
MW-05 (40.269534 / -104.797222)	04/09/19	99.67	11.41	88.26	8.89	2.52
MW-06 (40.269640 / -104.797210)	04/09/19	99.57	11.44	88.13	8.95	2.49
Notes: bgs- below ground surface TOC - Top of Casing						



## **ATTACHMENT A**

### **Soil Boring Logs / 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	(0-8.5') clayey SAND - brown, dry to wet, medium dense, fine to medium grained, well-graded with ~25% clay	SC	DP	1	75	9.1	N/A	0-5		
3-8.5'	@3-8.5' - black HC staining and odor					719.8				
5	@8' - wet	CL	DP	2	75	41.9	N/A	5-10		
8-12'	(8.5-12') sandy CLAY - brown, wet, soft, moderate plasticity, well-graded with ~25% sand					446.7				
10	@8.5-12' - black HC staining and odor	SC	DP	3	100	285.4	N/A	10-15		
12-15'	(12-15') clayey SAND - light brown, wet, medium dense, fine to medium grained, well-graded with ~30% clay					23.4				
15	@12-13' - black HC staining and odor									
15	@13' - N/O, N/S									
	BoB @ 15'									

DP - Direct push  
 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: 04/05/19		SAND PACK INTERVAL (FEET): 3-15	
PROJECT: AGRICULTURAL PRODUCTS FEDERAL #32-17		BENTONITE/GROUT INTERVAL (FEET): 0-3	
LOGGED BY: A. ROMANSKY		WELL SCREEN INTERVAL (FEET): 5-15	
DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE		WELL DIAMETER (INCHES): 1	
BORING DEPTH (FEET): 15	WELL DEPTH (FEET): 15	<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 - #13			
TIME STARTED/COMPLETED: 1145/1205			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 2.5-5/1155			

# 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	(0-3') sandy CLAY - brown, dry to moist, soft, low plasticity, well-graded with ~30% sand, N/O N/S	CL	DP	1	75	0.0	N/A			
3	(3-15') clayey SAND - brown, moist to wet, medium dense to dense, fine to medium grained, well-graded with ~30% clay	SC	DP	2	75	1.0	N/A			
5	@3-9' - N/O, N/S					0.8				
8	@8' - wet	SC	DP	3	100	835.6	N/A			
9	@9-12' - black HC staining and odor					160.6				
12	@12' - N/O, N/S					2.6				
15	BoB @ 15'									

DP - Direct push  
 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: 04/05/19	SAND PACK INTERVAL (FEET): 3-15
PROJECT: AGRICULTURAL PRODUCTS FEDERAL #32-17	BENTONITE/GROUT INTERVAL (FEET): 0-3
LOGGED BY: A. ROMANSKY	WELL SCREEN INTERVAL (FEET): 5-15
DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE	WELL DIAMETER (INCHES): 1
BORING DEPTH (FEET): 15	WELL DEPTH (FEET): 15
PID INSTRUMENT: MINIRAE 3000 - #13	<p><b>EAGLE</b>          ENVIRONMENTAL          CONSULTING, INC.</p> <p>4101 INCA STREET, DENVER, CO 80211          Ph: 303-433-0479 • F: 303-325-5449</p>
TIME STARTED/COMPLETED: 1035/1100	
SAMPLE COLLECTION DEPTH (FEET)/TIME: 2.5-5/1045	

# 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	(0-8.5') clayey SAND - brown, dry to wet, medium dense to dense, fine to medium grained, well-graded with ~30% clay	SC	DP	1	60	9.6	N/A	15		
5	@7-8.5' - black HC staining and odor @8' - wet					4.0				
8.5	(8.5-12') sandy CLAY - brown, wet, stiff, moderate plasticity, well-graded with ~20% sand	CL	DP	2	75	368.7	N/A	10		
10	@8.5-12' - black HC staining and odor					878.6				
12	(12-15') clayey SAND - brown, wet, dense, fine to medium grained, well-graded with ~40% clay, N/O N/S	SC	DP	3	100	357.2	N/A	5		
15	BoB @ 15'					33.0				

DP - Direct push  
 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: 04/05/19		SAND PACK INTERVAL (FEET): 3-15	
PROJECT: AGRICULTURAL PRODUCTS FEDERAL #32-17		BENTONITE/GROUT INTERVAL (FEET): 0-3	
LOGGED BY: A. ROMANSKY		WELL SCREEN INTERVAL (FEET): 5-15	
DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE		WELL DIAMETER (INCHES): 1	
BORING DEPTH (FEET): 15	WELL DEPTH (FEET): 15	<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 - #13			
TIME STARTED/COMPLETED: 1100/1120			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 5-7.5/1110			

# 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	(0-9') sandy CLAY - dark brown, dry to wet, stiff, low plasticity, well-graded with ~30% sand	CL	DP	1	95	67.9	N/A	0-5		
	@2-9' - black HC staining and odor					241.2				
5	@9' - wet	SC	DP	2	75	261.0	N/A	5-10		
	(9-12') clayey SAND - brown, wet, dense, fine to medium grained, well-graded with ~40% clay					948.0				
10	@9-12' - black HC staining and odor	CL	DP	3	100	666.2	N/A	10-15		
	(12-15') sandy CLAY - light brown, wet, medium stiff, moderate plasticity, well-graded with ~20% sand, N/O N/S					36.7				
15	BoB @ 15'									
20										
25										
30										

DP - Direct push  
 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: 04/05/19		SAND PACK INTERVAL (FEET): 3-15	
PROJECT: AGRICULTURAL PRODUCTS FEDERAL #32-17		BENTONITE/GROUT INTERVAL (FEET): 0-3	
LOGGED BY: A. ROMANSKY		WELL SCREEN INTERVAL (FEET): 5-15	
DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE		WELL DIAMETER (INCHES): 1	
BORING DEPTH (FEET): 15	WELL DEPTH (FEET): 15	<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 - #13			
TIME STARTED/COMPLETED: 1120/1140			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 5-7.5/1130			

# 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	(0-8.5') clayey SAND - brown, dry to wet, medium dense, fine to medium grained, well-graded with ~20% clay, N/O N/S	SC	DP	1	60	8.9	N/A	15		
5						4.2				
8	@8' - wet	CL	DP	2	75	4.0	N/A	15		
10	(8.5-15') sandy CLAY - brown, wet, medium stiff, moderate plasticity, well-graded with ~20% sand					136.2				
12	@9-12' - black HC staining and odor	CL	DP	3	70	392.8	N/A	15		
15	@12' - N/O, N/S					22.7				
15	BoB @ 15'									
20										
25										
30										

DP - Direct push  
 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: 04/05/19		SAND PACK INTERVAL (FEET): 3-15	
PROJECT: AGRICULTURAL PRODUCTS FEDERAL #32-17		BENTONITE/GROUT INTERVAL (FEET): 0-3	
LOGGED BY: A. ROMANSKY		WELL SCREEN INTERVAL (FEET): 5-15	
DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE		WELL DIAMETER (INCHES): 1	
BORING DEPTH (FEET): 15	WELL DEPTH (FEET): 15	<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 - #13			
TIME STARTED/COMPLETED: 1205/1225			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 0-2.5/1210			

# 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	(0-6.5') clayey SAND - brown, dry to moist, medium dense, fine to medium grained, well-graded with ~20% clay, N/O N/S	SC	DP	1	70	1.8	N/A	0		
5						2.3				
6.5	(6.5-15') sandy CLAY - brown, moist to wet, medium stiff, moderate plasticity, well-graded with ~25% sand @8' - wet @8.5-12' - black HC staining and odor	CL	DP	2	90	1.1	N/A	5		
10						155.2				
12	@12' - N/O, N/S	CL	DP	3	100	158.2	N/A	10		
15						6.9				
15	BoB @ 15'							15		
20								20		
25								25		
30								30		

DP - Direct push  
 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: 04/05/19		SAND PACK INTERVAL (FEET): 3-15	
PROJECT: AGRICULTURAL PRODUCTS FEDERAL #32-17		BENTONITE/GROUT INTERVAL (FEET): 0-3	
LOGGED BY: A. ROMANSKY		WELL SCREEN INTERVAL (FEET): 5-15	
DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE		WELL DIAMETER (INCHES): 1	
BORING DEPTH (FEET): 15	WELL DEPTH (FEET): 15	<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 - #13			
TIME STARTED/COMPLETED: 1225/1250			
SAMPLE COLLECTION DEPTH (FEET)/TIME: 2.5-5/1235			

## **ATTACHMENT B**

### **Laboratory Analytical Reports**



February 28, 2019

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

**Project Name - Noble - Agricultural Products  
Federal #32-17**

**Project Number - [none]**

Attached are your analytical results for Noble - Agricultural Products Federal #32-17 received by Origins Laboratory, Inc. February 21, 2019. This project is associated with Origins project number Y902291-01.

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 - Agricultural Products Federal  
#32-17

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-01@3'	Y902291-01	Soil	February 21, 2019 12:31	02/21/2019 17:59
SS-02@3'	Y902291-02	Soil	February 21, 2019 12:33	02/21/2019 17:59
SS-03@3'	Y902291-03	Soil	February 21, 2019 12:35	02/21/2019 17:59
SS-04@3'	Y902291-04	Soil	February 21, 2019 12:37	02/21/2019 17:59
SS-05@6'	Y902291-05	Soil	February 21, 2019 12:39	02/21/2019 17:59
PH-02@12'	Y902291-06	Soil	February 21, 2019 12:50	02/21/2019 17:59
GW-01	Y902291-07	Water	February 21, 2019 13:34	02/21/2019 17:59

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 - Agricultural Products Federal #32-17

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: 7902291

Client: Eagle Env.

Client Project ID: Noble - Agricultural Products Federal #32-17

Checklist Completed by: D. Baker

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

Date/time completed: 2-21-19

Airbill #: N/A

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

Cooler Number/Temperature: 14.3 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C (Describe)

Thermometer ID: 1603

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

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

Reviewed by: [Signature] (Project Manager)

Date/Time Reviewed: 2-21-19

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 - Agricultural Products Federal #32-17

SS-01@3'

2/21/2019 12:31:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
 Y902291-01 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9B2102	JTD	02/21/2019	02/21/2019	U
Surrogate: o-Terphenyl	83.6 %	59-131			"	"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	0.310	0.200	mg/kg	1	B9B2101	KDK	02/21/2019	02/21/2019	
Benzene	ND	0.002	"	"	"	KDK	"	"	U
Toluene	ND	0.002	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.002	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.002	"	"	"	KDK	"	"	U
Napthalene	ND	0.008	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	107 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	99.8 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	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 - Agricultural Products Federal #32-17

SS-02@3'

2/21/2019 12:33:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
 Y902291-02 (Soil)

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

Diesel (C10-C28)	263	50.0	mg/kg	1	B9B2102	JTD	02/21/2019	02/21/2019	
Surrogate: o-Terphenyl	81.3 %	59-131			"	"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	1.59	0.200	mg/kg	1	B9B2101	KDK	02/21/2019	02/21/2019	
Benzene	ND	0.002	"	"	"	KDK	"	"	U
Toluene	ND	0.002	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.002	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.002	"	"	"	KDK	"	"	U
Naphthalene	ND	0.008	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	106 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	100 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"	"	

**Metals (Saturated Paste Prep)**

Calcium	1.49		me/L	1	'[none]'		02/25/2019	02/27/2019	
Magnesium	1.71		"	"	"		"	"	
Sodium	12.08		"	"	"		"	"	

**pH in Soil by EPA 9045D**

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 - Agricultural Products Federal #32-17

**SS-02@3'**

**2/21/2019 12:33:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y902291-02 (Soil)**

**pH in Soil by EPA 9045D**

pH	8.94		pH Units	1	B9B2109	OLAB	02/21/2019	02/21/2019	
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**SAR by 20B Saturated Paste**

SAR	9.55			1	'[none]'		02/25/2019	02/27/2019	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.183	0.00500	mmhos/cm	1	B9B2111	OLAB	02/21/2019	02/21/2019	
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Origins Laboratory, Inc.



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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

SS-03@3'

2/21/2019 12:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
 Y902291-03 (Soil)

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

Diesel (C10-C28)	56.0	50.0	mg/kg	1	B9B2102	JTD	02/21/2019	02/21/2019	
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Surrogate: o-Terphenyl	80.5 %	59-131			"	"	"	"	
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**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	0.276	0.200	mg/kg	1	B9B2101	KDK	02/21/2019	02/21/2019	
Benzene	ND	0.002	"	"	"	KDK	"	"	U
Toluene	ND	0.002	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.002	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.002	"	"	"	KDK	"	"	U
Naphthalene	ND	0.008	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	107 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	99.2 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

SS-04@3'

2/21/2019 12:37:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
 Y902291-04 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9B2102	JTD	02/21/2019	02/21/2019	U
Surrogate: <i>o</i> -Terphenyl	81.7 %	59-131			"	"	"	"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B9B2101	KDK	02/21/2019	02/21/2019	U
Benzene	ND	0.002	"	"	"	KDK	"	"	U
Toluene	ND	0.002	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.002	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.002	"	"	"	KDK	"	"	U
Napthalene	ND	0.008	"	"	"	KDK	"	"	U
Surrogate: 1,2-Dichloroethane-d4	107 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	98.8 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	97.8 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

SS-05@6'

2/21/2019 12:39:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
 Y902291-05 (Soil)

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

Diesel (C10-C28)	270	50.0	mg/kg	1	B9B2102	JTD	02/21/2019	02/21/2019	
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Surrogate: o-Terphenyl	75.5 %	59-131			"	"	"	"	
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**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	133	50.0	mg/kg	250	B9B2101	KDK	02/21/2019	02/21/2019	
Benzene	ND	0.050	"	25	"	KDK	"	02/22/2019	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	0.098	0.050	"	"	"	KDK	"	"	
Xylenes, total	ND	0.050	"	"	"	KDK	"	"	U
Naphthalene	ND	0.200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	105 %	70-130			"	"		02/21/2019	
Surrogate: Toluene-d8	100 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	99.1 %	70-130			"	"		"	

Origins Laboratory, Inc.



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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

**PH-02@12'**

**2/21/2019 12:50:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y902291-06 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9B2102	JTD	02/21/2019	02/21/2019	U
Surrogate: <i>o</i> -Terphenyl	81.8 %	59-131			"	"		"	

**GBTEX + Napthalene by 8260C**

Gasoline Range Hydrocarbons	<b>584</b>	50.0	mg/kg	250	B9B2101	KDK	02/21/2019	02/21/2019	
Benzene	<b>1.30</b>	0.050	"	25	"	KDK	"	02/22/2019	
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	<b>1.20</b>	0.050	"	"	"	KDK	"	"	
Xylenes, total	<b>16.0</b>	0.050	"	"	"	KDK	"	"	
Napthalene	ND	0.200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %	70-130			"	"		02/21/2019	
Surrogate: Toluene-d8	99.3 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	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 - Agricultural Products Federal #32-17

**GW-01**  
**2/21/2019 1:34:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y902291-07 (Water)**

**BTEX by EPA 8260C**

Benzene	<b>8250</b>	100	ug/L	100	B9B1905	KDK	02/21/2019	02/21/2019	
Toluene	ND	4.00	"	4	"	KDK	"	02/21/2019	U
Ethylbenzene	<b>898</b>	100	"	100	"	KDK	"	02/21/2019	
Xylenes, total	<b>8890</b>	100	"	"	"	KDK	"	02/21/2019	

Surrogate: 1,2-Dichloroethane-d4	109 %	84-121			"	"		02/21/2019	
Surrogate: Toluene-d8	96.6 %	85-115			"	"		"	
Surrogate: 4-Bromofluorobenzene	101 %	84-114			"	"		"	

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 - Agricultural Products Federal #32-17

**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 B9B1905 - EPA 5030B (Water)**

**Blank (B9B1905-BLK1)**

Prepared: 02/19/2019 Analyzed: 02/21/2019

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	72		"	62.5		115	84-121			
Surrogate: Toluene-d8	60		"	62.5		96.4	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	84-114			

Origins Laboratory, Inc.



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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

**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 B9B1905 - EPA 5030B (Water)**

**LCS (B9B1905-BS1)**

Prepared: 02/19/2019 Analyzed: 02/21/2019

Benzene	47.9	1.00	ug/L	50.0		95.8	73.3-129			
Toluene	45.8	1.00	"	50.0		91.7	76.2-123			
Ethylbenzene	46.0	1.00	"	50.0		92.0	73.6-130			
m,p-Xylene	96.8	2.00	"	100		96.8	76.1-126			
o-Xylene	45.8	1.00	"	50.0		91.6	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		104	84-121			
Surrogate: Toluene-d8	60		"	62.5		96.6	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.5	84-114			

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 - Agricultural Products Federal #32-17

**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 B9B1905 - EPA 5030B (Water)**

Matrix Spike (B9B1905-MS1)	Source: Y902219-02			Prepared: 02/19/2019 Analyzed: 02/21/2019						
Benzene	59.0	1.00	ug/L	50.0	4.75	108	74-130			
Toluene	51.3	1.00	"	50.0	0.200	102	73-131			
Ethylbenzene	51.6	1.00	"	50.0	1.25	101	76-132			
m,p-Xylene	118	2.00	"	100	0.580	117	69-139			
o-Xylene	50.7	1.00	"	50.0	0.450	101	74-131			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.9	84-121			
Surrogate: Toluene-d8	61		"	62.5		98.1	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.7	84-114			

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 - Agricultural Products Federal #32-17

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

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

**Batch B9B1905 - EPA 5030B (Water)**

Matrix Spike Dup (B9B1905-MSD1)	Source: Y902219-02			Prepared: 02/19/2019 Analyzed: 02/21/2019						
Benzene	49.2	1.00	ug/L	50.0	4.75	89.0	74-130	18.0	20	
Toluene	45.0	1.00	"	50.0	0.200	89.7	73-131	13.0	20	
Ethylbenzene	43.3	1.00	"	50.0	1.25	84.1	76-132	17.5	20	
m,p-Xylene	89.0	2.00	"	100	0.580	88.4	69-139	28.0	20	QR-02
o-Xylene	43.2	1.00	"	50.0	0.450	85.5	74-131	16.1	20	
Surrogate: 1,2-Dichloroethane-d4	69		"	62.5		110	84-121			
Surrogate: Toluene-d8	59		"	62.5		94.8	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.5	84-114			

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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

**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 B9B2101 - EPA 5030 (soil)**

**Blank (B9B2101-BLK1)**

Prepared: 02/21/2019 Analyzed: 02/21/2019

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Naphthalene	ND	0.008	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125	104		70-130			
Surrogate: Toluene-d8	0.13		"	0.125	100		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	97.6		70-130			

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

**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 B9B2101 - EPA 5030 (soil)**

**Blank (B9B2101-BLK2)**

Prepared: 02/21/2019 Analyzed: 02/21/2019

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Naphthalene	ND	0.008	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125	107		70-130			
Surrogate: Toluene-d8	0.13		"	0.125	100		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	99.9		70-130			

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

**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 B9B2101 - EPA 5030 (soil)**

**LCS (B9B2101-BS1)**

Prepared: 02/21/2019 Analyzed: 02/21/2019

Benzene	0.089	0.002	mg/kg	0.100		88.7	70-130			
Toluene	0.087	0.002	"	0.100		86.6	70-130			
Ethylbenzene	0.080	0.002	"	0.100		80.5	70-130			
m,p-Xylene	0.198	0.004	"	0.200		98.8	70-130			
o-Xylene	0.089	0.002	"	0.100		89.0	70-130			
Naphthalene	0.097	0.008	"	0.100		96.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		100	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	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 - Agricultural Products Federal #32-17

**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 B9B2101 - EPA 5030 (soil)**

**LCS (B9B2101-BS2)**

Prepared: 02/21/2019 Analyzed: 02/21/2019

Benzene	0.104	0.002	mg/kg	0.100		104	70-130			
Toluene	0.103	0.002	"	0.100		103	70-130			
Ethylbenzene	0.094	0.002	"	0.100		94.4	70-130			
m,p-Xylene	0.234	0.004	"	0.200		117	70-130			
o-Xylene	0.104	0.002	"	0.100		104	70-130			
Naphthalene	0.103	0.008	"	0.100		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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 - Agricultural Products Federal #32-17

**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 B9B2101 - EPA 5030 (soil)

Matrix Spike (B9B2101-MS1)	Source: Y902261-02			Prepared: 02/21/2019 Analyzed: 02/21/2019						
Benzene	0.101	0.002	mg/kg	0.100	ND	101	70-130			
Toluene	0.100	0.002	"	0.100	ND	99.8	70-130			
Ethylbenzene	0.093	0.002	"	0.100	ND	93.2	70-130			
m,p-Xylene	0.228	0.004	"	0.200	ND	114	70-130			
o-Xylene	0.103	0.002	"	0.100	ND	103	70-130			
Naphthalene	0.092	0.008	"	0.100	ND	92.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	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 - Agricultural Products Federal #32-17

**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 B9B2101 - EPA 5030 (soil)

Matrix Spike (B9B2101-MS2)	Source: Y902291-04			Prepared: 02/21/2019 Analyzed: 02/22/2019						
Benzene	0.093	0.002	mg/kg	0.100	ND	92.6	70-130			
Toluene	0.091	0.002	"	0.100	ND	91.2	70-130			
Ethylbenzene	0.083	0.002	"	0.100	ND	83.0	70-130			
m,p-Xylene	0.203	0.004	"	0.200	ND	101	70-130			
o-Xylene	0.092	0.002	"	0.100	ND	92.1	70-130			
Naphthalene	0.088	0.008	"	0.100	ND	88.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

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Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

**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 B9B2101 - EPA 5030 (soil)

Matrix Spike Dup (B9B2101-MSD1)	Source: Y902261-02			Prepared: 02/21/2019 Analyzed: 02/21/2019						
Benzene	0.090	0.002	mg/kg	0.100	ND	90.4	70-130	11.3	20	
Toluene	0.090	0.002	"	0.100	ND	89.5	70-130	10.9	20	
Ethylbenzene	0.081	0.002	"	0.100	ND	81.5	70-130	13.4	20	
m,p-Xylene	0.200	0.004	"	0.200	ND	99.9	70-130	13.4	20	
o-Xylene	0.090	0.002	"	0.100	ND	90.4	70-130	12.9	20	
Naphthalene	0.088	0.008	"	0.100	ND	88.1	70-130	4.46	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

**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 B9B2101 - EPA 5030 (soil)

Matrix Spike Dup (B9B2101-MSD2)	Source: Y902291-04			Prepared: 02/21/2019 Analyzed: 02/22/2019						
Benzene	0.081	0.002	mg/kg	0.100	ND	80.6	70-130	13.8	20	
Toluene	0.081	0.002	"	0.100	ND	80.6	70-130	12.4	20	
Ethylbenzene	0.072	0.002	"	0.100	ND	71.7	70-130	14.6	20	
m,p-Xylene	0.178	0.004	"	0.200	ND	88.9	70-130	13.2	20	
o-Xylene	0.080	0.002	"	0.100	ND	79.9	70-130	14.2	20	
Naphthalene	0.074	0.008	"	0.100	ND	73.5	70-130	18.2	20	
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		109	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

**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 B9B2102 - EPA 3580**

**Blank (B9B2102-BLK1)**

Prepared: 02/21/2019 Analyzed: 02/21/2019

Diesel (C10-C28) ND 50.0 mg/kg U

Surrogate: o-Terphenyl 41 " 50.0 82.7 59-131

**Blank (B9B2102-BLK2)**

Prepared: 02/21/2019 Analyzed: 02/21/2019

Diesel (C10-C28) ND 50.0 mg/kg U

Surrogate: o-Terphenyl 40 " 50.0 80.7 59-131

**LCS (B9B2102-BS1)**

Prepared: 02/21/2019 Analyzed: 02/21/2019

Diesel (C10-C28) 962 50.0 mg/kg 1000 96.2 64-121

Surrogate: o-Terphenyl 47 " 50.0 94.8 59-131

**LCS (B9B2102-BS2)**

Prepared: 02/21/2019 Analyzed: 02/21/2019

Diesel (C10-C28) 964 50.0 mg/kg 1000 96.4 64-121

Surrogate: o-Terphenyl 48 " 50.0 96.3 59-131

**Matrix Spike (B9B2102-MS1)**

Source: Y902261-02

Prepared: 02/21/2019 Analyzed: 02/21/2019

Diesel (C10-C28) 910 50.0 mg/kg 1000 ND 91.0 53-125

Surrogate: o-Terphenyl 44 " 50.0 87.8 59-131

**Matrix Spike (B9B2102-MS2)**

Source: Y902291-04

Prepared: 02/21/2019 Analyzed: 02/21/2019

Diesel (C10-C28) 973 50.0 mg/kg 1000 ND 97.3 53-125

Surrogate: o-Terphenyl 47 " 50.0 93.6 59-131

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

**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 B9B2102 - EPA 3580**

<b>Matrix Spike Dup (B9B2102-MSD1)</b>		<b>Source: Y902261-02</b>			Prepared: 02/21/2019 Analyzed: 02/21/2019					
Diesel (C10-C28)	941	50.0	mg/kg	1000	ND	94.1	53-125	3.32	20	
Surrogate: o-Terphenyl	45		"	50.0		89.3	59-131			
<b>Matrix Spike Dup (B9B2102-MSD2)</b>		<b>Source: Y902291-04</b>			Prepared: 02/21/2019 Analyzed: 02/21/2019					
Diesel (C10-C28)	988	50.0	mg/kg	1000	ND	98.8	53-125	1.52	20	
Surrogate: o-Terphenyl	47		"	50.0		94.2	59-131			

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Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

**Classical Chemistry Parameters - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9B2109 - NO PREP</b>										
<b>Duplicate (B9B2109-DUP1)</b>		<b>Source: Y902277-01</b>			Prepared: 02/21/2019 Analyzed: 02/21/2019					
pH	8.03		pH Units		8.07			0.497	25	
<b>Batch B9B2111 - NO PREP</b>										
<b>Blank (B9B2111-BLK1)</b>		Prepared: 02/21/2019 Analyzed: 02/21/2019								
Specific Conductance (EC)	0.00240	0.00500	mmhos/cm							
<b>Duplicate (B9B2111-DUP1)</b>		<b>Source: Y902287-01</b>			Prepared: 02/21/2019 Analyzed: 02/21/2019					
Specific Conductance (EC)	0.412	0.00500	mmhos/cm		0.371			10.7	25	

Origins Laboratory, Inc.



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4101 Inca Street  
Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Agricultural Products Federal  
#32-17

### Notes and Definitions

U Sample is Non-Detect.

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President



April 11, 2019

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

**Project Name - Noble - Agricultural Products  
Federal #32-17**

**Project Number - [none]**

Attached are your analytical results for Noble - Agricultural Products Federal #32-17 received by Origins Laboratory, Inc. April 05, 2019. This project is associated with Origins project number Y904125-01.

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 - Agricultural Products Federal  
#32-17

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-01@2.5-5'	Y904125-01	Soil	April 5, 2019 11:55	04/05/2019 14:00
MW-02@2.5-5'	Y904125-02	Soil	April 5, 2019 10:45	04/05/2019 14:00
MW-03@5-7.5'	Y904125-03	Soil	April 5, 2019 11:10	04/05/2019 14:00
MW-04@5-7.5'	Y904125-04	Soil	April 5, 2019 11:30	04/05/2019 14:00
MW-05@0-2.5'	Y904125-05	Soil	April 5, 2019 12:10	04/05/2019 14:00
MW-06@2.5-5'	Y904125-06	Soil	April 5, 2019 12:35	04/05/2019 14:00

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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 1904125

Client: Eagle  
 Client Project ID: Agricultural Products

Checklist Completed by: JG  
 Date/time completed: 4/5/2019

Shipped Via: HD  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Airbill #: N/A

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

Cooler Number/Temperature: 1 / 4.7 °c \_\_\_\_\_ / \_\_\_\_\_ °c \_\_\_\_\_ / \_\_\_\_\_ °c (Describe)

Thermometer ID: T003

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

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

[Signature]  
 Reviewed by (Project Manager)

4/8/19  
 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 - Agricultural Products Federal #32-17

**MW-01@2.5-5'**  
**4/5/2019 11:55:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y904125-01 (Soil)**

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

Diesel (C10-C28)	57.6	50.0	mg/kg	1	B9D0904	JTD	04/09/2019	04/10/2019	
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Surrogate: o-Terphenyl	69.0 %	50-150			"	"	"	"	
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**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	15.0	5.00	mg/kg	25	B9D0903	JTD	04/09/2019	04/10/2019	
Benzene	ND	0.050	"	"	"	JTD	"	"	U
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	0.210	0.050	"	"	"	JTD	"	"	
Xylenes, total	3.80	0.050	"	"	"	JTD	"	"	
Naphthalene	ND	0.200	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	99.1 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	70-130			"	"	"	"	

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Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

**MW-02@2.5-5'**  
**4/5/2019 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y904125-02 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9D0904	JTD	04/09/2019	04/10/2019	U
<i>Surrogate: o-Terphenyl</i>	70.6 %	50-150			"	"	"	"	

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B9D0903	JTD	04/09/2019	04/09/2019	U
Benzene	ND	0.050	"	"	"	JTD	"	"	U
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.050	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.050	"	"	"	JTD	"	"	U
Naphthalene	ND	0.200	"	"	"	JTD	"	"	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	101 %	70-130			"	"	"	"	
<i>Surrogate: Toluene-d8</i>	103 %	70-130			"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	98.7 %	70-130			"	"	"	"	

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 Project: Noble - Agricultural Products Federal #32-17

**MW-03@5-7.5'**  
**4/5/2019 11:10:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y904125-03 (Soil)**

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

Diesel (C10-C28)	114	50.0	mg/kg	1	B9D0904	JTD	04/09/2019	04/10/2019	
Surrogate: o-Terphenyl	67.9 %	50-150			"	"	"	"	

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	74.6	5.00	mg/kg	25	B9D0903	JTD	04/09/2019	04/10/2019	
Benzene	ND	0.050	"	"	"	JTD	"	04/10/2019	U
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.050	"	"	"	JTD	"	"	U
Xylenes, total	0.643	0.050	"	"	"	JTD	"	04/10/2019	
Naphthalene	ND	0.200	"	"	"	JTD	"	"	U
Surrogate: 1,2-Dichloroethane-d4	103 %	70-130			"	"	"	04/10/2019	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	70-130			"	"	"	"	

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**MW-04@5-7.5'**  
**4/5/2019 11:30:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y904125-04 (Soil)**

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

Diesel (C10-C28)	497	50.0	mg/kg	1	B9D0904	JTD	04/09/2019	04/10/2019	
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Surrogate: o-Terphenyl	75.6 %	50-150			"	"	"	"	
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**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	131	5.00	mg/kg	25	B9D0903	JTD	04/09/2019	04/10/2019	
Benzene	0.612	0.050	"	"	"	JTD	"	"	
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	0.466	0.050	"	"	"	JTD	"	"	
Xylenes, total	ND	0.050	"	"	"	JTD	"	"	U
Naphthalene	ND	0.200	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	107 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	99.1 %	70-130			"	"	"	"	

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**MW-05@0-2.5'**  
**4/5/2019 12:10:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y904125-05 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9D0904	JTD	04/09/2019	04/10/2019	U
Surrogate: <i>o</i> -Terphenyl	78.0 %	50-150			"	"	"	"	

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	25.0	5.00	mg/kg	25	B9D0903	JTD	04/09/2019	04/10/2019	
Benzene	ND	0.050	"	"	"	JTD	"	"	U
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.050	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.050	"	"	"	JTD	"	"	U
Naphthalene	ND	0.200	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	99.1 %	70-130			"	"	"	"	

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 Project: Noble - Agricultural Products Federal #32-17

**MW-06@2.5-5'**  
**4/5/2019 12:35:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y904125-06 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9D0904	JTD	04/09/2019	04/10/2019	U
Surrogate: <i>o</i> -Terphenyl	69.1 %	50-150			"	"	"	"	

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B9D0903	JTD	04/09/2019	04/10/2019	U
Benzene	ND	0.050	"	"	"	JTD	"	"	U
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.050	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.050	"	"	"	JTD	"	"	U
Naphthalene	ND	0.200	"	"	"	JTD	"	"	U
Surrogate: 1,2-Dichloroethane-d4	100 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	96.7 %	70-130			"	"	"	"	

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 Project: Noble - Agricultural Products Federal #32-17

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9D0903 - EPA 5030 (soil)**

**Blank (B9D0903-BLK1)**

Prepared: 04/09/2019 Analyzed: 04/09/2019

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Naphthalene	ND	0.008	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125	102		70-130			
Surrogate: Toluene-d8	0.13		"	0.125	102		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	98.2		70-130			

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 Project: Noble - Agricultural Products Federal #32-17

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9D0903 - EPA 5030 (soil)**

**Blank (B9D0903-BLK2)**

Prepared: 04/09/2019 Analyzed: 04/09/2019

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Naphthalene	ND	0.008	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125	103		70-130			
Surrogate: Toluene-d8	0.13		"	0.125	103		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	98.2		70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9D0903 - EPA 5030 (soil)**

**LCS (B9D0903-BS1)**

Prepared: 04/09/2019 Analyzed: 04/09/2019

Benzene	0.087	0.002	mg/kg	0.100		87.4	70-130			
Toluene	0.082	0.002	"	0.100		81.7	70-130			
Ethylbenzene	0.079	0.002	"	0.100		79.0	70-130			
m,p-Xylene	0.163	0.004	"	0.200		81.7	70-130			
o-Xylene	0.083	0.002	"	0.100		83.4	70-130			
Naphthalene	0.091	0.008	"	0.100		91.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		95.2	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.9	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9D0903 - EPA 5030 (soil)**

**LCS (B9D0903-BS2)**

Prepared: 04/09/2019 Analyzed: 04/09/2019

Benzene	0.098	0.002	mg/kg	0.100		98.5	70-130			
Toluene	0.095	0.002	"	0.100		95.0	70-130			
Ethylbenzene	0.091	0.002	"	0.100		90.5	70-130			
m,p-Xylene	0.185	0.004	"	0.200		92.4	70-130			
o-Xylene	0.094	0.002	"	0.100		94.1	70-130			
Naphthalene	0.091	0.008	"	0.100		90.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		100	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.0	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9D0903 - EPA 5030 (soil)

Matrix Spike (B9D0903-MS1)	Source: Y904125-02			Prepared: 04/09/2019 Analyzed: 04/09/2019						
Benzene	2.60	0.050	mg/kg	2.50	ND	104	70-130			
Toluene	2.46	0.050	"	2.50	ND	98.4	70-130			
Ethylbenzene	2.41	0.050	"	2.50	ND	96.2	70-130			
m,p-Xylene	4.95	0.100	"	5.00	ND	99.0	70-130			
o-Xylene	2.44	0.050	"	2.50	ND	97.6	70-130			
Naphthalene	2.34	0.200	"	2.50	0.038	92.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		95.0	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.0	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9D0903 - EPA 5030 (soil)

Matrix Spike (B9D0903-MS2)	Source: Y904125-03			Prepared: 04/09/2019 Analyzed: 04/10/2019						
Benzene	2.20	0.050	mg/kg	2.50	ND	88.0	70-130			
Toluene	2.05	0.050	"	2.50	ND	82.0	70-130			
Ethylbenzene	1.94	0.050	"	2.50	0.020	77.0	70-130			
m,p-Xylene	4.43	0.100	"	5.00	0.643	75.7	70-130			
o-Xylene	2.29	0.050	"	2.50	ND	91.8	70-130			
Naphthalene	5.65	0.200	"	2.50	0.022	225	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		96.4	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		104	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.6	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9D0903 - EPA 5030 (soil)

Matrix Spike Dup (B9D0903-MSD1)	Source: Y904125-02			Prepared: 04/09/2019 Analyzed: 04/09/2019						
Benzene	2.57	0.050	mg/kg	2.50	ND	103	70-130	1.28	20	
Toluene	2.44	0.050	"	2.50	ND	97.7	70-130	0.775	20	
Ethylbenzene	2.38	0.050	"	2.50	ND	95.0	70-130	1.25	20	
m,p-Xylene	4.83	0.100	"	5.00	ND	96.6	70-130	2.43	20	
o-Xylene	2.38	0.050	"	2.50	ND	95.2	70-130	2.51	20	
Naphthalene	2.65	0.200	"	2.50	0.038	105	70-130	12.5	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		96.1	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		95.8	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9D0903 - EPA 5030 (soil)

Matrix Spike Dup (B9D0903-MSD2)	Source: Y904125-03			Prepared: 04/09/2019 Analyzed: 04/10/2019						
Benzene	2.27	0.050	mg/kg	2.50	ND	90.7	70-130	3.02	20	
Toluene	2.16	0.050	"	2.50	ND	86.2	70-130	5.07	20	
Ethylbenzene	1.95	0.050	"	2.50	0.020	77.1	70-130	0.154	20	
m,p-Xylene	4.37	0.100	"	5.00	0.643	74.5	70-130	1.38	20	
o-Xylene	2.12	0.050	"	2.50	ND	84.8	70-130	7.95	20	
Naphthalene	2.86	0.200	"	2.50	0.022	113	70-130	65.6	20	QR-03
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		91.2	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		95.1	70-130			

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 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9D0904 - EPA 3580</b>										
<b>Blank (B9D0904-BLK1)</b>										
					Prepared: 04/09/2019 Analyzed: 04/10/2019					
Diesel (C10-C28)	ND	50.0	mg/kg							U
Surrogate: o-Terphenyl	34		"	50.0		68.4	50-150			

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Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9D0904 - EPA 3580**

**LCS (B9D0904-BS1)**

Prepared: 04/09/2019 Analyzed: 04/10/2019

Diesel (C10-C28)	734	50.0	mg/kg	1000		73.4	70-130			
Surrogate: o-Terphenyl	40		"	50.0		80.0	50-150			

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Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9D0904 - EPA 3580**

<b>Matrix Spike (B9D0904-MS1)</b>	<b>Source: Y904153-03</b>			Prepared: 04/09/2019 Analyzed: 04/10/2019						
Diesel (C10-C28)	809	50.0	mg/kg	1000	21.3	78.7	70-130			
Surrogate: o-Terphenyl	40		"	50.0		79.6	50-150			

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 - Agricultural Products Federal #32-17

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9D0904 - EPA 3580</b>										
<b>Matrix Spike Dup (B9D0904-MSD1)</b>		<b>Source: Y904153-03</b>			Prepared: 04/09/2019 Analyzed: 04/10/2019					
Diesel (C10-C28)	761	50.0	mg/kg	1000	21.3	73.9	70-130	6.15	35	
Surrogate: o-Terphenyl	39		"	50.0		77.6	50-150			

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 - Agricultural Products Federal  
#32-17

### Notes and Definitions

U Sample is Non-Detect.

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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Jen Pellegrini For Noelle Doyle Mathis, President



April 15, 2019

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

**Project Name - Noble - Agricultural Products  
Federal #32-17**

**Project Number - [none]**

Attached are your analytical results for Noble - Agricultural Products Federal #32-17 received by Origins Laboratory, Inc. April 09, 2019. This project is associated with Origins project number Y904197-01.

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 - Agricultural Products Federal  
#32-17

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-01	Y904197-01	Water	April 9, 2019 13:34	04/09/2019 16:05
MW-02	Y904197-02	Water	April 9, 2019 13:43	04/09/2019 16:05
MW-03	Y904197-03	Water	April 9, 2019 13:52	04/09/2019 16:05
MW-04	Y904197-04	Water	April 9, 2019 14:01	04/09/2019 16:05
MW-05	Y904197-05	Water	April 9, 2019 14:12	04/09/2019 16:05
MW-06	Y904197-06	Water	April 9, 2019 14:23	04/09/2019 16:05

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 - Agricultural Products Federal #32-17

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y904197

Client: Eagle

Client Project ID: Agricultural Products Federal

Checklist Completed by: JG

Shipped Via: HD

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

Date/time completed: 4/10/2019

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 4.5 °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"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> / ( pH > 10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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 (Project Manager) [Signature]

Date/Time Reviewed 4/11/19

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 - Agricultural Products Federal #32-17

**MW-01**

**4/9/2019 1:34:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y904197-01 (Water)**

**BTEX by EPA 8260D**

Benzene	255	10.0	ug/L	10	B9D1111	JTD	04/11/2019	04/15/2019	
Toluene	ND	1.00	"	1	"	JTD	"	04/13/2019	U
Ethylbenzene	99.3	1.00	"	"	"	JTD	"	"	
Xylenes, total	1390	10.0	"	10	"	JTD	"	04/15/2019	

Surrogate: 1,2-Dichloroethane-d4	99.0 %	70-130			"	"		04/13/2019	
Surrogate: Toluene-d8	103 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	97.1 %	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 - Agricultural Products Federal #32-17

**MW-02**

**4/9/2019 1:43:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y904197-02 (Water)**

**BTEX by EPA 8260D**

Benzene	475	10.0	ug/L	10	B9D1111	JTD	04/11/2019	04/15/2019	
Toluene	ND	1.00	"	1	"	JTD	"	04/13/2019	U
Ethylbenzene	116	1.00	"	"	"	JTD	"	"	
Xylenes, total	482	10.0	"	10	"	JTD	"	04/15/2019	

Surrogate: 1,2-Dichloroethane-d4	98.9 %	70-130			"	"		04/13/2019	
Surrogate: Toluene-d8	109 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	98.8 %	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 - Agricultural Products Federal #32-17

**MW-03**

**4/9/2019 1:52:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y904197-03 (Water)**

**BTEX by EPA 8260D**

Benzene	438	10.0	ug/L	10	B9D1111	JTD	04/11/2019	04/15/2019	
Toluene	ND	1.00	"	1	"	JTD	"	04/13/2019	U
Ethylbenzene	175	1.00	"	"	"	JTD	"	"	
Xylenes, total	2740	10.0	"	10	"	JTD	"	04/15/2019	

Surrogate: 1,2-Dichloroethane-d4	99.3 %	70-130			"	"		04/13/2019	
Surrogate: Toluene-d8	106 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	99.8 %	70-130			"	"		"	

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

**MW-04**

**4/9/2019 2:01:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y904197-04 (Water)**

**BTEX by EPA 8260D**

Benzene	1990	100	ug/L	100	B9D1111	JTD	04/11/2019	04/15/2019	
Toluene	ND	1.00	"	1	"	JTD	"	04/13/2019	U
Ethylbenzene	480	100	"	100	"	JTD	"	04/15/2019	
Xylenes, total	2720	100	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4	101 %	70-130			"	"		04/13/2019	
Surrogate: Toluene-d8	103 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	97.4 %	70-130			"	"		"	

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

**MW-05**

**4/9/2019 2:12:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y904197-05 (Water)**

**BTEX by EPA 8260D**

Benzene	ND	4.00	ug/L	4	B9D1111	JTD	04/11/2019	04/15/2019	U
Toluene	ND	4.00	"	"	"	JTD	"	04/13/2019	U
Ethylbenzene	<b>76.6</b>	4.00	"	"	"	JTD	"	04/15/2019	
Xylenes, total	<b>583</b>	4.00	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4	99.2 %	70-130			"	"		04/13/2019	
Surrogate: Toluene-d8	104 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	98.5 %	70-130			"	"		"	

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 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

**MW-06**

**4/9/2019 2:23:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y904197-06 (Water)**

**BTEX by EPA 8260D**

Benzene	ND	1.00	ug/L	1	B9D1111	JTD	04/11/2019	04/13/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	<b>69.9</b>	1.00	"	"	"	JTD	"	"	
Xylenes, total	<b>1650</b>	10.0	"	10	"	JTD	"	04/15/2019	

Surrogate: 1,2-Dichloroethane-d4	99.3 %	70-130			"	"		04/13/2019	
Surrogate: Toluene-d8	104 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	100 %	70-130			"	"		"	

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 4101 Inca Street  
 Denver CO 80211

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Agricultural Products Federal #32-17

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9D1111 - EPA 5030B (Water)**

**Blank (B9D1111-BLK1)**

Prepared: 04/11/2019 Analyzed: 04/12/2019

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	62		"	62.5	98.5		70-130			
<i>Surrogate: Toluene-d8</i>	64		"	62.5	103		70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	61		"	62.5	97.4		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 - Agricultural Products Federal #32-17

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9D1111 - EPA 5030B (Water)**

**LCS (B9D1111-BS1)**

Prepared: 04/11/2019 Analyzed: 04/12/2019

Benzene	49.6	1.00	ug/L	50.0		99.2	70-130			
Toluene	47.9	1.00	"	50.0		95.9	70-130			
Ethylbenzene	45.1	1.00	"	50.0		90.3	70-130			
m,p-Xylene	92.6	2.00	"	100		92.6	70-130			
o-Xylene	46.4	1.00	"	50.0		92.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5		94.4	70-130			
Surrogate: Toluene-d8	65		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.4	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 - Agricultural Products Federal #32-17

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9D1111 - EPA 5030B (Water)**

<b>Matrix Spike (B9D1111-MS1)</b>	<b>Source: Y904194-02</b>			<b>Prepared: 04/11/2019 Analyzed: 04/12/2019</b>						
Benzene	49.3	1.00	ug/L	50.0	ND	98.7	70-130			
Toluene	47.8	1.00	"	50.0	ND	95.5	70-130			
Ethylbenzene	45.1	1.00	"	50.0	0.080	90.1	70-130			
m,p-Xylene	91.5	2.00	"	100	ND	91.5	70-130			
o-Xylene	46.8	1.00	"	50.0	ND	93.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.0	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.6	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 - Agricultural Products Federal #32-17

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9D1111 - EPA 5030B (Water)**

Matrix Spike Dup (B9D1111-MSD1)	Source: Y904194-02			Prepared: 04/11/2019 Analyzed: 04/12/2019						
Benzene	49.1	1.00	ug/L	50.0	ND	98.1	70-130	0.528	20	
Toluene	47.7	1.00	"	50.0	ND	95.5	70-130	0.0209	20	
Ethylbenzene	44.7	1.00	"	50.0	0.080	89.2	70-130	1.00	20	
m,p-Xylene	91.6	2.00	"	100	ND	91.6	70-130	0.153	20	
o-Xylene	46.6	1.00	"	50.0	ND	93.2	70-130	0.300	20	
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		95.5	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.4	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 - Agricultural Products Federal  
#32-17

### Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President