



FIGURES

Figure 1: Monitoring Well Groundwater Analytical Map (09/14/17)

Figure 2: Groundwater Elevation Map (09/14/17)

Figure 3: Grab Surface Water Sample Location Map



- LEGEND**
- APPROXIMATE LOCATION OF UNINTENTIONAL RELEASE
 - APPROXIMATE FLOW LINE LOCATION
 - APPROXIMATE EXCAVATION BOUNDARIES
 - APPROXIMATE MONITORING WELL LOCATIONS
 - DESTROYED MONITORING WELL LOCATIONS

PARAMETERS

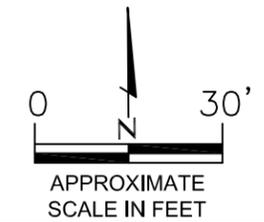
SAMPLE LOCATION
DATE
 B = BENZENE (µg/L)
 T = TOLUENE (µg/L)
 E = ETHYLBENZENE (µg/L)
 X = TOTAL XYLENES (µg/L)

µg/L = MICROGRAMS PER LITER

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

VALUES PRESENTED IN **BOLD** TYPEFACE EXCEED COGCC TABLE 910-1 REGULATORY LIMITS

COGCC - COLORADO OIL AND GAS CONSERVATION COMMISSION



MONITORING WELL GROUNDWATER ANALYTICAL MAP
 (09/14/17)
 WARDLAW #20-28
 FLOW LINE RELEASE
 40.452377 / -104.550395
 SE1/4 SE1/4 SEC.28 T6N R64W 6PM
 WELD COUNTY, COLORADO
 REMEDIATION # 10185

DATE 10/18/17

FIG. NO. 1

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

DRAWN BY AMN

MW-03
09/14/17
B = <1.00
T = <1.00
E = <1.00
X = <1.00

MW-02
09/14/17
B = <1.00
T = <1.00
E = <1.00
X = <1.00

MW-13
09/14/17
B = <1.00
T = <1.00
E = <1.00
X = <1.00

MW-04
09/14/17
B = <1.00
T = <1.00
E = <1.00
X = <1.00

MW-12
09/14/17
B = **1310**
T = <1.00
E = 52.3
X = 344

MW-05
09/14/17
B = <4.00
T = <4.00
E = <4.00
X = <4.00

MW-11
09/14/17
B = <1.00
T = <1.00
E = <1.00
X = <1.00

MW-06
09/14/17
B = <1.00
T = <1.00
E = <1.00
X = <1.00

MW-10
09/14/17
B = <1.00
T = <1.00
E = <1.00
X = <1.00

MW-14
09/14/17
B = **73.6**
T = <1.00
E = <1.00
X = <1.00

MW-07
09/14/17
B = <1.00
T = <1.00
E = <1.00
X = <1.00

MW-08
09/14/17
B = <1.00
T = <1.00
E = <1.00
X = <1.00

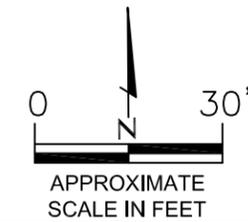
MW-09
09/14/17
B = 3.15
T = <1.00
E = <1.00
X = <1.00



- LEGEND**
- APPROXIMATE LOCATION OF UNINTENTIONAL RELEASE
 - APPROXIMATE FLOW LINE LOCATION
 - APPROXIMATE EXCAVATION BOUNDARIES
 - APPROXIMATE MONITORING WELL LOCATIONS
 - DESTROYED MONITORING WELL LOCATIONS
 - (4748.25)** GROUNDWATER ELEVATION (FT.)
 - INFERRED GROUNDWATER ELEVATION CONTOUR (FT.)
 - APPROXIMATE GROUNDWATER FLOW DIRECTION

FT. = FEET

NOTE:
GROUNDWATER ELEVATION DATA WAS COLLECTED ON 09/14/17.



GROUNDWATER ELEVATION MAP
(09/14/17)
WARDLAW #20-28
FLOW LINE RELEASE
40.452377 / -104.550395
SE1/4 SE1/4 SEC.28 T6N R64W 6PM
WELD COUNTY, COLORADO
REMEDIAION # 10185

DATE	10/18/17
FIG. NO.	2
DRAWN BY	AMN

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



SW-01	SW-01	SW-01	SW-01
02/20/17	03/17/17	06/13/17	09/14/17
B = <1.00	B = <1.00	B = <1.00	B = <1.00
T = <1.00	T = <1.00	T = <1.00	T = <1.00
E = <1.00	E = <1.00	E = <1.00	E = <1.00
X = <1.00	X = <1.00	X = <1.00	X = <1.00

SW-02	SW-02	SW-02	SW-02
02/20/17	03/17/17	06/13/17	09/14/17
B = <1.00	B = <1.00	B = <1.00	B = <1.00
T = <1.00	T = <1.00	T = <1.00	T = <1.00
E = <1.00	E = <1.00	E = <1.00	E = <1.00
X = 3.18	X = <1.00	X = <1.00	X = <1.00

SW-04	SW-04	SW-04	SW-04
02/20/17	03/17/17	06/13/17	09/14/17
B = <1.00	B = <1.00	B = <1.00	B = <1.00
T = <1.00	T = <1.00	T = <1.00	T = <1.00
E = <1.00	E = <1.00	E = <1.00	E = <1.00
X = 1.49	X = <1.00	X = <1.00	X = <1.00

SW-03	SW-03	SW-03	SW-03
02/20/17	03/17/17	06/13/17	09/14/17
B = <1.00	B = <1.00	B = <1.00	B = <1.00
T = <1.00	T = <1.00	T = <1.00	T = <1.00
E = <1.00	E = <1.00	E = <1.00	E = <1.00
X = 2.45	X = <1.00	X = <1.00	X = <1.00

SW-05	SW-05	SW-05	SW-05
02/20/17	03/17/17	06/13/17	02/13/17
B = <1.00	B = <1.00	B = <1.00	B = <1.00
T = <1.00	T = <1.00	T = <1.00	T = 1.06
E = <1.00	E = <1.00	E = <1.00	E = <1.00
X = <1.00	X = <1.00	X = <1.00	X = 22.8

SW-06	SW-06	SW-06	SW-06
02/20/17	03/17/17	06/13/17	09/14/17
B = <1.00	B = <1.00	B = <1.00	B = <1.00
T = <1.00	T = <1.00	T = <1.00	T = <1.00
E = <1.00	E = <1.00	E = <1.00	E = <1.00
X = <1.00	X = <1.00	X = <1.00	X = <1.00

SW-08	SW-08	SW-08	SW-08
02/20/17	03/17/17	06/13/17	09/14/17
B = <1.00	B = <1.00	B = <1.00	B = <1.00
T = <1.00	T = <1.00	T = <1.00	T = <1.00
E = <1.00	E = <1.00	E = <1.00	E = <1.00
X = <1.00	X = <1.00	X = <1.00	X = <1.00

SW-07	SW-07	SW-07	SW-07
02/20/17	03/17/17	06/13/17	09/14/17
B = <1.00	B = <1.00	B = <1.00	B = <1.00
T = <1.00	T = <1.00	T = <1.00	T = <1.00
E = <1.00	E = <1.00	E = <1.00	E = <1.00
X = <1.00	X = <1.00	X = <1.00	X = <1.00

SW-09	SW-09	SW-09	SW-09
02/20/17	03/17/17	06/13/17	09/14/17
B = <1.00	B = <1.00	B = <1.00	B = <1.00
T = <1.00	T = <1.00	T = <1.00	T = <1.00
E = <1.00	E = <1.00	E = <1.00	E = <1.00
X = <1.00	X = <1.00	X = <1.00	X = <1.00

LEGEND

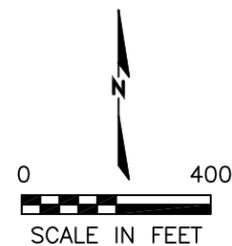
- APPROXIMATE LOCATION OF UNINTENTIONAL RELEASE
- WELL HEAD LOCATION
- APPROXIMATE LOCATION OF SURFACE WATER SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

PARAMETERS

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

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

µg/L = MICROGRAMS PER LITER



GRAB SURFACE WATER SAMPLE LOCATION MAP
 WARDLAW #20-28
 FLOW LINE RELEASE
 40.452377 / -104.550395
 SE1/4 SE1/4 SEC.28 T6N R64W 6PM
 REMEDIATION # 10185

DATE:	10/18/17
FIG. NO.	3
DRAWN BY:	RAL



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



TABLES

Table 1: Water Analytical Results Summary

Table 2: Groundwater Elevation Summary

TABLE 1
WATER ANALYTICAL RESULTS SUMMARY
WARDLAW #20-28
FLOW LINE RELEASE
40.452377 / -104.550395
SE1/4 SE1/4 SEC.28 T6N R64W 6PM
WELD COUNTY, COLORADO
REMEDATION # 10185

Sample Location (Latitude/Longitude)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Table 910-1 Regulatory Limits (µg/L)		5	560	700	1400
SW-01 (40.452432487/-104.550326268)	02/09/17	<1.00	2.54	<1.00	2.58
	02/13/17	<1.00	<1.00	<1.00	<1.00
	02/20/17	<1.00	<1.00	<1.00	<1.00
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
SW-02 (40.451283697/-104.550667387)	02/09/17	100	514	54.9	659
	02/13/17	11.3	83.8	9.64	240
	02/20/17	<1.00	<1.00	<1.00	3.18
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
SW-03 (40.451208284/-104.550759293)	02/09/17	90.7	459	48.8	605
	02/10/17	6.24	40.2	4.92	109
	02/13/17	8.52	42.8	4.36	152
	02/20/17	<1.00	<1.00	<1.00	2.45
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
SW-04 (40.450779462/-104.551161230)	02/10/17	4.92	28.4	<4.00	90.9
	02/13/17	6.80	32.0	<4.00	147
	02/20/17	<1.00	<1.00	<1.00	1.49
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
SW-05 (40.449982352/-104.551611892)	02/10/17	<4.00	8.20	<4.00	73.8
	02/13/17	<1.00	1.06	<1.00	22.8
	02/20/17	<1.00	<1.00	<1.00	<1.00
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00

TABLE 1
WATER ANALYTICAL RESULTS SUMMARY
WARDLAW #20-28
FLOW LINE RELEASE
40.452377 / -104.550395
SE1/4 SE1/4 SEC.28 T6N R64W 6PM
WELD COUNTY, COLORADO
REMEDATION # 10185

Sample Location (Latitude/Longitude)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Table 910-1 Regulatory Limits (µg/L)		5	560	700	1400
SW-06 (40.449897202/-104.551692223)	02/10/17	<4.00	<4.00	<4.00	16.5
	02/13/17	<1.00	<1.00	<1.00	<1.00
	02/20/17	<1.00	<1.00	<1.00	<1.00
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
SW-07 (40.449690628/-104.551677355)	02/10/17	<4.00	<4.00	<4.00	<4.00
	02/13/17	<1.00	<1.00	<1.00	<1.00
	02/20/17	<1.00	<1.00	<1.00	<1.00
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
SW-08 (40.448928873/-104.551685603)	02/10/17	<4.00	<4.00	<4.00	<4.00
	02/13/17	<1.00	<1.00	<1.00	<1.00
	02/20/17	<1.00	<1.00	<1.00	<1.00
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
SW-09 (40.448299817/-104.551680172)	02/10/17	<4.00	<4.00	<4.00	<4.00
	02/13/17	<1.00	<1.00	<1.00	<1.00
	02/20/17	<1.00	<1.00	<1.00	<1.00
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
GW-01	02/11/17	434	1560	138	1530

TABLE 1
WATER ANALYTICAL RESULTS SUMMARY
WARDLAW #20-28
FLOW LINE RELEASE
40.452377 / -104.550395
SE1/4 SE1/4 SEC.28 T6N R64W 6PM
WELD COUNTY, COLORADO
REMEDATION # 10185

Sample Location (Latitude/Longitude)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Table 910-1 Regulatory Limits (µg/L)		5	560	700	1400
MW-01 (40.452393003/-104.550433142)	03/27/17	188	<4.00	12.6	327
	06/15/17	614	<1.00	<1.00	2.26
	09/14/17	DES			
MW-02 (40.452504816/-104.550455313)	03/30/17	<1.00	<1.00	6.58	43.4
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
MW-03 (40.452454447/-104.550546129)	03/30/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
MW-04 (40.452342502/-104.550577837)	03/27/17	<4.00	<4.00	<4.00	<4.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
MW-05 (40.452208431/-104.550603406)	03/27/17	<4.00	<4.00	<4.00	<4.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
MW-06 (40.452070696/-104.550630887)	03/27/17	<4.00	<4.00	<4.00	<4.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
MW-07 (40.452002981/-104.55055025)	03/27/17	<4.00	<4.00	<4.00	<4.00
	06/15/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
MW-08 (40.451924937/-104.550467803)	03/27/17	<4.00	<4.00	<4.00	<4.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
MW-09 (40.452077465/-104.550441169)	03/27/17	<4.00	<4.00	<4.00	<4.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	3.15	<1.00	<1.00	<1.00

**TABLE 2
GROUNDWATER ELEVATION SUMMARY
WARDLAW #20-28
FLOW LINE RELEASE
40.452377 / -104.550395
SE1/4 SE1/4 SEC.28 T6N R64W 6PM
WELD COUNTY, COLORADO
REMEDATION # 10185**

Sample Location (Latitude/Longitude)	Date	TOC Elevation (feet)	Depth to Groundwater from TOC (feet)	Relative Groundwater Elevation (feet)	Depth to Groundwater (bgs) (feet)	Stickup Height (feet)	
MW-01 (40.452393003/-104.550433142)	03/28/17	98.78	7.74	91.04	4.88	2.86	
	06/15/17		7.20	91.58	4.34		
	09/14/17	DES					
MW-02 (40.452504816/-104.550455313)	03/28/17	99.22	NM	NA	NA	2.92	
	03/30/17		9.83	89.39	6.91		
	06/13/17		5.54	93.68	2.62		
	09/14/17		5.41	93.81	2.49		
MW-03 (40.452454447/-104.550546129)	03/28/17	99.62	NM	NA	NA	3.10	
	03/30/17		12.97	86.65			
	06/13/17		6.00	93.62	2.90		
	09/14/17		5.89	93.73	2.79		
MW-04 (40.452342502/-104.550577837)	03/28/17	99.20	6.78	92.42	3.80	2.98	
	06/13/17		6.00	93.20	3.02		
	09/14/17		5.86	93.34	2.88		
MW-05 (40.452208431/-104.550603406)	03/28/17	98.64	6.63	92.01	3.63	3.00	
	06/13/17		6.05	92.59	3.05		
	09/14/17		5.93	92.71	2.93		
MW-06 (40.452070696/-104.550630887)	03/28/17	98.38	6.44	91.94	3.49	2.95	
	06/13/17		6.04	92.34	3.09		
	09/14/17		5.93	92.45	2.98		
MW-07 (40.452002981/-104.55055025)	03/28/17	98.37	6.57	91.80	3.65	2.92	
	06/15/17		6.66	91.71	3.74		
	09/14/17		6.56	91.81	3.64		
MW-08 (40.451924937/-104.550467803)	03/28/17	98.32	6.60	91.72	3.89	2.71	
	06/13/17		6.53	91.79	3.82		
	09/14/17		6.41	91.91	3.70		
MW-09 (40.452077465/-104.550441169)	03/28/17	98.78	7.14	91.64	4.48	2.66	
	06/13/17		6.85	91.93	4.19		
	09/14/17		6.76	92.02	4.10		

**TABLE 2
GROUNDWATER ELEVATION SUMMARY
WARDLAW #20-28
FLOW LINE RELEASE
40.452377 / -104.550395
SE1/4 SE1/4 SEC.28 T6N R64W 6PM
WELD COUNTY, COLORADO
REMEDATION # 10185**

Sample Location (Latitude/Longitude)	Date	TOC Elevation (feet)	Depth to Groundwater from TOC (feet)	Relative Groundwater Elevation (feet)	Depth to Groundwater (bgs) (feet)	Stickup Height (feet)	
MW-10 (40.452207178/-104.55040854)	03/28/17	98.91	NM	NA	NA	2.83	
	06/13/17		6.60	92.31	3.77		
	09/14/17		6.48	92.43	3.65		
MW-11 (40.452321549/-104.550383609)	03/28/17	99.27	NM	NA	NA	2.74	
	06/13/17		6.64	92.63	3.90		
	09/14/17		6.38	92.89	3.64		
MW-12 (40.45239442/-104.550368154)	03/28/17	99.34	NM	NA	NA	2.71	
	03/30/17		13.64	85.70	10.93		
	06/13/17		6.48	92.86	3.77		
	09/14/17		6.26	93.08	3.55		
MW-13 (40.452664489/-104.550339323)	03/28/17	100.00	NM	NA	NA	2.64	
	06/13/17		6.55	93.45	3.91		
	09/14/17		6.31	93.69	3.67		
MW-14 (40.452664489/-104.550339323)	03/28/17	98.41	7.32	91.09	4.60	2.72	
	06/15/17		6.60	91.81	3.88		
	09/14/17		6.48	91.93	3.76		
MW-15 (40.452232004/-104.550269649)	03/28/17	99.54	NM	NA	NA	2.82	
	06/15/17		7.33	92.21	4.51		
	09/14/17		DES				
MW-16 (40.452334255/-104.550243785)	03/28/17	99.73	NM	NA	NA	2.86	
	06/15/17		7.11	92.62	4.25		
	09/14/17		DES				
MW-17 (40.452418346/-104.55022411)	03/28/17	99.72	NM	NA	NA	2.75	
	06/15/17		8.42	91.30	5.67		
	09/14/17		DES				

NOTES:

All wells completed as PVC stick ups.
bgs= below ground surface

TOC = top of casing
NA = not applicable

PVC = polyvinyl chloride
DES = Destroyed

NM = not measured





ATTACHMENT A

Laboratory Analytical Reports



September 21, 2017

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - Wardlaw #20-28

Project Number - [none]

Attached are your analytical results for Noble - Wardlaw #20-28 received by Origins Laboratory, Inc. September 15, 2017. This project is associated with Origins project number Y709191-01.

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 - Wardlaw #20-28

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-02	Y709191-01	Water	September 14, 2017 13:40	09/15/2017 09:03
MW-03	Y709191-02	Water	September 14, 2017 13:50	09/15/2017 09:03
MW-04	Y709191-03	Water	September 14, 2017 14:00	09/15/2017 09:03
MW-05	Y709191-04	Water	September 14, 2017 14:10	09/15/2017 09:03
MW-06	Y709191-05	Water	September 14, 2017 14:20	09/15/2017 09:03
MW-07	Y709191-06	Water	September 14, 2017 14:30	09/15/2017 09:03
MW-08	Y709191-07	Water	September 14, 2017 14:40	09/15/2017 09:03
MW-09	Y709191-08	Water	September 14, 2017 14:50	09/15/2017 09:03
MW-10	Y709191-09	Water	September 14, 2017 15:00	09/15/2017 09:03
MW-11	Y709191-10	Water	September 14, 2017 15:10	09/15/2017 09:03
MW-12	Y709191-11	Water	September 14, 2017 15:20	09/15/2017 09:03
MW-13	Y709191-12	Water	September 14, 2017 15:30	09/15/2017 09:03
MW-14	Y709191-13	Water	September 14, 2017 15:40	09/15/2017 09:03
SW-01	Y709191-14	Water	September 14, 2017 16:05	09/15/2017 09:03

Origins Laboratory, Inc.



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

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Wardlaw #20-28

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW-02	Y709191-15	Water	September 14, 2017 16:10	09/15/2017 09:03
SW-03	Y709191-16	Water	September 14, 2017 16:15	09/15/2017 09:03
SW-04	Y709191-17	Water	September 14, 2017 16:20	09/15/2017 09:03
SW-05	Y709191-18	Water	September 14, 2017 16:25	09/15/2017 09:03
SW-06	Y709191-19	Water	September 14, 2017 16:30	09/15/2017 09:03
SW-07	Y709191-20	Water	September 14, 2017 16:35	09/15/2017 09:03
SW-08	Y709191-21	Water	September 14, 2017 16:40	09/15/2017 09:03
SW-09	Y709191-22	Water	September 14, 2017 16:45	09/15/2017 09:03

Origins Laboratory, Inc.



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

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

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

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

Sample Receipt Checklist

Origins Work Order: 4709191 Client: Eagle Env
 Client Project ID: Noble - Wardlaw 20-28

Checklist Completed by: Dan Lu Shipped Via: HD
 Date/time completed: 9-15-17 1300 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: NA

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
 Cooler Number/Temperature: 1 / 5.8 °C / _____ °C / _____ °C (Describe)
 Thermometer ID: TD03

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ^{(1)?}	/			
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		/		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		/		
Were all samples received intact ^{(1)?}	/			
Was adequate sample volume provided ^{(1)?}	/			
Are short holding time analytes or samples with HTs due within 48 hours present ^{(1)?}		/		
Is a chain-of-custody (COC) present and filled out completely ^{(1)?}	/			
Does the COC agree with the number and type of sample bottles received ^{(1)?}	/			
Do the sample IDs on the bottle labels match the COC ^{(1)?}	/			
Is the COC properly relinquished by the client with date and time recorded ^{(1)?}	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		/		
Are samples preserved that require preservation and was it checked ^{(1)?} (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)		/		
Additional Comments (if any):	<u>2 of 3 vials for MW-5 broke due to sample freezing.</u>			

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

Dan Lu 9-15-17 1300
 Reviewed by (Project Manager) Date/Time Reviewed

Origins Laboratory, Inc.



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

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Wardlaw #20-28

MW-02
9/14/2017 1:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B71906	09/19/2017	09/19/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	100 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

MW-03
9/14/2017 1:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-02 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B71906	09/19/2017	09/19/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	97.0 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

MW-04
9/14/2017 2:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-03 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B71906	09/19/2017	09/19/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	103 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.9 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Wardlaw #20-28

MW-05
9/14/2017 2:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-04 (Water)

BTEX by EPA 8260C

Benzene	ND	4.00	ug/L	4	B71906	09/19/2017	09/19/2017	U
Toluene	ND	4.00	"	"	"	"	"	U
Ethylbenzene	ND	4.00	"	"	"	"	"	U
Xylenes, total	ND	4.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	103 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

MW-06
9/14/2017 2:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-05 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B71906	09/19/2017	09/19/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	103 %	84-121			"	"	"	
<i>Surrogate: Toluene-d8</i>	98.0 %	85-115			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	101 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

MW-07
9/14/2017 2:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-06 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B71906	09/19/2017	09/19/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.0 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

MW-08
9/14/2017 2:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-07 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B71906	09/19/2017	09/19/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	103 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.1 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.7 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

MW-09
9/14/2017 2:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-08 (Water)

BTEX by EPA 8260C

Benzene	3.15	1.00	ug/L	1	B711906	09/19/2017	09/19/2017	
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.8 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Wardlaw #20-28

MW-10
9/14/2017 3:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-09 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B71906	09/19/2017	09/19/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	105 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.2 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

MW-11
9/14/2017 3:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-10 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B71906	09/19/2017	09/19/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	103 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.3 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

MW-12
9/14/2017 3:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-11 (Water)

BTEX by EPA 8260C

Benzene	1310	50.0	ug/L	50	B71906	09/19/2017	09/21/2017	
Toluene	ND	1.00	"	1	"	"	09/19/2017	U
Ethylbenzene	52.3	1.00	"	"	"	"	"	
Xylenes, total	344	1.00	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	117 %	84-121			"	"	"	
Surrogate: Toluene-d8	102 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

MW-13
9/14/2017 3:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-12 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B71906	09/19/2017	09/19/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	105 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Wardlaw #20-28

MW-14
9/14/2017 3:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-13 (Water)

BTEX by EPA 8260C

Benzene	73.6	1.00	ug/L	1	B711906	09/19/2017	09/19/2017	
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	108 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.2 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Wardlaw #20-28

SW-01

9/14/2017 4:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-14 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B71906	09/19/2017	09/19/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.9 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

SW-02
9/14/2017 4:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-15 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B71906	09/19/2017	09/19/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	104 %	84-121			"	"	"	
Surrogate: Toluene-d8	97.7 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

SW-03
9/14/2017 4:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-16 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B71906	09/19/2017	09/19/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	106 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	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 - Wardlaw #20-28

SW-04
9/14/2017 4:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-17 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B71906	09/19/2017	09/19/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	104 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.4 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	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 - Wardlaw #20-28

SW-05

9/14/2017 4:25:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-18 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B711906	09/19/2017	09/20/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	103 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.4 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	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 - Wardlaw #20-28

SW-06

9/14/2017 4:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-19 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B711906	09/19/2017	09/20/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	105 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.1 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.8 %	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 - Wardlaw #20-28

SW-07
9/14/2017 4:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-20 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B711906	09/19/2017	09/20/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	103 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.6 %	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 - Wardlaw #20-28

SW-08
9/14/2017 4:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-21 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B711906	09/19/2017	09/20/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	102 %	84-121			"	"	"	
<i>Surrogate: Toluene-d8</i>	101 %	85-115			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	105 %	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 - Wardlaw #20-28

SW-09
9/14/2017 4:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709191-22 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B71906	09/19/2017	09/20/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	101 %	84-121			"	"	"	
Surrogate: Toluene-d8	100 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	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 - Wardlaw #20-28

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 B711906 - EPA 5030B (Water)

Blank (B711906-BLK1)

Prepared: 09/19/2017 Analyzed: 09/19/2017

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	64		"	62.5	102		84-121			
Surrogate: Toluene-d8	64		"	62.5	102		85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5	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 - Wardlaw #20-28

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 B711906 - EPA 5030B (Water)

Blank (B711906-BLK2)

Prepared: 09/19/2017 Analyzed: 09/19/2017

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	64		"	62.5	102		84-121			
Surrogate: Toluene-d8	62		"	62.5	99.2		85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5	103		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 - Wardlaw #20-28

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 B711906 - EPA 5030B (Water)

LCS (B711906-BS1)

Prepared: 09/19/2017 Analyzed: 09/19/2017

Benzene	48.8	1.00	ug/L	50.0		97.6	73.3-129			
Toluene	47.0	1.00	"	50.0		94.1	76.2-123			
Ethylbenzene	48.2	1.00	"	50.0		96.4	73.6-130			
m,p-Xylene	93.3	2.00	"	100		93.3	76.1-126			
o-Xylene	46.2	1.00	"	50.0		92.4	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		95.4	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.8	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

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Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

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 B711906 - EPA 5030B (Water)

LCS (B711906-BS2)

Prepared: 09/19/2017 Analyzed: 09/19/2017

Benzene	49.6	1.00	ug/L	50.0		99.2	73.3-129			
Toluene	47.5	1.00	"	50.0		95.0	76.2-123			
Ethylbenzene	48.6	1.00	"	50.0		97.2	73.6-130			
m,p-Xylene	93.7	2.00	"	100		93.7	76.1-126			
o-Xylene	46.1	1.00	"	50.0		92.2	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.1	84-121			
Surrogate: Toluene-d8	61		"	62.5		98.2	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	84-114			

Origins Laboratory, Inc.



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 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

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 B711906 - EPA 5030B (Water)

Matrix Spike (B711906-MS1)	Source: Y709191-01			Prepared: 09/19/2017 Analyzed: 09/19/2017						
Benzene	49.5	1.00	ug/L	50.0	ND	99.1	74-130			
Toluene	48.8	1.00	"	50.0	ND	97.6	73-131			
Ethylbenzene	49.7	1.00	"	50.0	ND	99.3	76-132			
m,p-Xylene	97.0	2.00	"	100	ND	97.0	69-139			
o-Xylene	48.1	1.00	"	50.0	ND	96.2	74-131			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		95.7	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	84-114			

Origins Laboratory, Inc.



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 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

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 B711906 - EPA 5030B (Water)

Matrix Spike (B711906-MS2)	Source: Y709191-02			Prepared: 09/19/2017 Analyzed: 09/19/2017						
Benzene	51.7	1.00	ug/L	50.0	ND	103	74-130			
Toluene	50.8	1.00	"	50.0	ND	102	73-131			
Ethylbenzene	51.7	1.00	"	50.0	ND	103	76-132			
m,p-Xylene	99.9	2.00	"	100	ND	99.9	69-139			
o-Xylene	50.7	1.00	"	50.0	ND	101	74-131			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.0	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

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Eagle Environmental Consulting, Inc.
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 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

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 B711906 - EPA 5030B (Water)

Matrix Spike Dup (B711906-MSD1)	Source: Y709191-01			Prepared: 09/19/2017 Analyzed: 09/19/2017						
Benzene	48.6	1.00	ug/L	50.0	ND	97.3	74-130	1.83	20	
Toluene	46.2	1.00	"	50.0	ND	92.5	73-131	5.41	20	
Ethylbenzene	46.1	1.00	"	50.0	ND	92.1	76-132	7.52	20	
m,p-Xylene	89.5	2.00	"	100	ND	89.5	69-139	7.96	20	
o-Xylene	45.5	1.00	"	50.0	ND	90.9	74-131	5.64	20	
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.8	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.4	85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	84-114			

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 4101 Inca Street
 Denver CO 80211

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Wardlaw #20-28

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 B711906 - EPA 5030B (Water)

Matrix Spike Dup (B711906-MSD2)	Source: Y709191-02			Prepared: 09/19/2017 Analyzed: 09/19/2017						
Benzene	55.5	1.00	ug/L	50.0	ND	111	74-130	7.20	20	
Toluene	55.0	1.00	"	50.0	ND	110	73-131	7.82	20	
Ethylbenzene	55.8	1.00	"	50.0	ND	112	76-132	7.46	20	
m,p-Xylene	108	2.00	"	100	ND	108	69-139	7.38	20	
o-Xylene	53.9	1.00	"	50.0	ND	108	74-131	6.21	20	
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.0	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		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 - Wardlaw #20-28

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