



Mr. Scot Donato  
Great Western Operating Company LLC  
1801 Broadway, Suite 500  
Denver, Co. 80202

May 19, 2014

Facility ID: 444442

RE: Sampling, December 2013 and March 2014, Weld County Airport - Drilling Mud Beneficial Re-Use Application Site (portion of E1/2 Section 35, T6N, R65W), MEC # 2013.INT/GW2

Attached please find the results of the December 2013 and the March 2014 sampling at the Great Western, Drilling Mud Beneficial Re-Use Airport site, Weld County, Co. The Great Western site is located within a portion of the East ½, Section 35, T6N, R65W. The sampling was performed on December 1, 2013 and March 12, 2014.

The Airport site was previously subdivided into 'Pods' by Integrity who was initially managing the application and incorporation of the drilling mud materials. The Great Western application area included POD-C and POD-D which for the field sampling was further subdivided into POD-C north & south, POD-D north & south.

The sampling included the collection four soil samples from the respective sampling area, which were mixed together as a representative composite samples. The composite samples were mixed in a pre-cleaned stainless steel bowl and a lab sample was collected in pre-cleaned sampling jar provided by the laboratory.

The composite samples collected on December 1, 2013 were analyzed for BTEX, TPH-volatile (TPH-V); TPH-extractable (TPH-E), and TPH-recoverable (TPH-R); pH; EC; Calcium, Magnesium, Sodium, and SAR. The THP-R analysis was included since the drilling muds applied at the site were reportedly generated from an oil well location. Based on the results of these analysis additional sampling was determined to be necessary, which was collected on March 12, 2014. Due to laboratory delays and lab equipment issues it was necessary to re-sample for PAH and (4) metals analytes on April 4, 2014.

### **POD Description, Status, and Sampling Results**

**PODs C / D:** The Great Western reuse PODs C/D are located in NE corner of airport site. The drilling muds were applied in the summer and fall of 2013. The materials were tilled and incorporated into the surface soils. Background sample for this area were collected in June 2013, sample # POD-C/D Bkg, the results of which were summarized in a memo dated July 10, 2013. The lab results from these samples are included in the summary table included with this memo.

Composite soil samples, from the north and south portions, were collected from both Pod C and D. A total of four composite samples were collected in March 2014. Each composite sample was comprised of 4 grab samples collected from the surface to a depth of 12-18 inches. The grab samples were mixed in a pre-cleaned bowl, from which the composite sample was collected.

Based on the results of the December 2013 sampling, MEC Inc. decided to resample the site in March 2014 after the site had time to further incorporate the materials and the site was exposed to additional winter moisture. Additional samples were collected subsequently collected in March 2014 and April/May 2014.

The March 2014 samples were submitted to Weld Laboratories for analysis. Delays were encountered, due to laboratory equipment problems the samples could not be analyzed for volatiles/PAHs and a few metal analytes. Unfortunately the holding times were compromised so MEC Inc. subsequently resampled the site on April 4, 2014. Weld Laboratories arranged with Accutest Laboratories to perform these analyses. Again, even though the lab analyses were performed within the applicable holding times, delays were encountered in the lab report documentation from Accutest.

The results of the sampling are included in the summary tables for the respective sampling Pods.

Lab Sampling Results summary:

No BTEX or TPH-V and TPH-E compounds (volatile or extractable) were detected in the laboratory analysis.

TPH- recoverable (TPH-R) concentrations ranged from 155 to 430 mg/Kg. The sample from Pod D – North had the 430 mg/Kg. The TPH-R concentrations are likely associated with drilling muds associated with drilling from oil well locations.

PAH analysis : The 430 mg/Kg TPH-R concentration was the highest of the four TPH-R analysis performed. This POD area sample was subsequently selected for analysis of PAH compounds. PAH compounds detected for this Pod (30.4 ug/kg).D – North area included Chrysene (28.3 ug/kg), 1-Methlnaphthalene (40.8 ug/kg), 2-Methlnaphthalene (48.8 ug/kg), Napthalene (26.9 ug/kg), and Phenanthrene (30.4 ug/kg). All of these detections are below the respective regulatory guideline levels.

pH results within acceptable range.

EC soil sample results were slightly above the respective COGCC guideline limits for POD D – North at 6.86. Elevated EC levels is likely associated with residual brine water impact.

SAR results for the December 2013 sampling, for the four composite samples ranged from 12.1 to 14. These results were slightly above the recommended COGCC <12 guideline. Based on these results an additional sample from the two highest SAR measurements POD D – North (12.9); Pod C – South (14.0) were collected on March 12, 2013. The sampling three months after the December 2013 sampling was performed to determine if the additional winter moisture

may influence the SAR results. The SAR levels for the two March 2013 samples decreased below the regulatory 12.0 level (POD D – North (10.3); Pod C – South (7.0). SAR is a ratio measurement of calcium, magnesium, and sodium. Fluctuations or elevated ratio measurements are likely associated with brine water or residual oil compounds.

## **FINDINGS & RECOMMENDATIONS**

BTEX compounds were not detected in the December 2013 lab sampling. TPH-V and TPH-E (volatile & extractable) were not detected in the December 2013 sampling. The TPH-R (recoverable) concentrations for the four samples collected ranged from 155 to 430 mg/kg. These results are below the regulatory guideline level of 500 mg/kg. The presence of the TPH-R measurements is likely associated with muds that originated from oil wells, not gas wells. A sample from the POD area with the highest TPH-R concentration, POD D-North was selected for PAH analysis in March/April 2014. This PAH analysis results was below the regulatory guideline.

The March 2014 sampling SAR readings for POD C- South (SAR 7) and POD D-North (SAR 10.3) indicate that the SAR levels are lower than the December 2013 measurements. Based on these results the additional winter moisture improved the SAR soil condition.

The pH measurements were within the acceptable state guideline parameters.

The EC measurements were slightly above the respective regulatory limits.

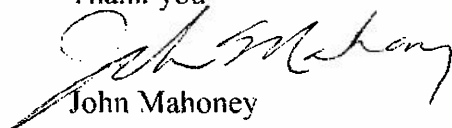
Based on the results, it is recommended that the area be sampled again within 3-6 months or after any subsequent additional application at the site.

If subsequent application is made at the site, includes drilling muds from oil well locations it is suggested that the analysis included TPH-R analysis. Also, the SAR should be closely monitored since the sampling results have indicated that the SAR has been close to the allowable regulatory guideline levels.

If the site is not re-use for application, it is suggested that the Pods be planted with a crop such as winter wheat or native grasses which can improve the organic component to the soils.

Following the application of manure and mixing in the pods the pods should be re-sampled. MEC Inc. appreciates the opportunity to provide you with these environmental consulting services. If you have any further questions, please contact me, 970-381-5951.

Thank you



John Mahoney

Professional Geologist

	A	B	C	D	E	F	G	H
1	TABLE 1: Airport Area Site, Pod C North, Site Screening Results							
2	Analysis / Analyte	BKG	POD-C North	POD-C North	POD-C North		POD-C North	COGCC LIMIT - COGCC Table 910-1 Concentration Levels
3			6/19/2013	12/1/2013	3/12/2013			
4	TPH - G (Gas)	ND	ND	ND	NA			500
5	TPH - D (diesel)	ND	ND	ND	NA			500
6	TPH - O (Oil range)	NA	NA	306	NA			500
7	Benzene	ND	ND	ND	NA			0.17
8	Toluene	ND	ND	ND	NA			85
9	Ethylbenzene	ND	ND	ND	NA			100
10	Total Xylenes	ND	ND	ND	NA			175
11	Acenaphthene	NA	NA	NA	NA			
12	Acenaphthylene	NA	NA	NA	NA			1,000
13	Anthracene	NA	NA	NA	NA			1,000
14	Benzo(A)anthracene	NA	NA	NA	NA			0.22
15	Benzo(A)pyrene	NA	NA	NA	NA			0.022
16	Benzo(K)fluoranthene	NA	NA	NA	NA			2.2
17	Benzo (g,h,i)perylene	NA	NA	NA	NA			
18	Benzo (k) fluoranthene	NA	NA	NA	NA			
19	Bis(2-chloroethoxy)menthane	NA	NA	NA	NA			
20	Chrysene	NA	NA	NA	NA			22
21	Dibenzo(A,H)anthracene	NA	NA	NA	NA			0.022
22	Fluoranthene	NA	NA	NA	NA			1,000
23	Fluorene	NA	NA	NA	NA			1,000
24	Indeno(1,2,3,C,D)pyrene	NA	NA	NA	NA			0.22
25	Napthalene	NA	NA	NA	NA			23
26	Phenanthrene	NA	NA	NA	NA			
27	Pyrene	NA	NA	NA	NA			1,000
28	Arsenic	NA	NA	NA	NA			0.39
29	Barium	NA	NA	NA	NA			15,000
30	Cadmium	NA	NA	NA	NA			70
31	Chromium	NA	NA	NA	NA			*
32	Copper	NA	NA	NA	NA			3,100
33	Lead	NA	NA	NA	NA			400
34	Mercury	NA	NA	NA	NA			23
35	Nickel	NA	NA	NA	NA			1,600
36	Selenium	NA	NA	NA	NA			390
37	Silver	NA	NA	NA	NA			390
38	Zinc	NA	NA	NA	NA			23,000
39	EC (mmhos/sq cm	1.54	4	NA	NA			4 or 2XBKG
40	pH	7.06	7.59	NA	NA			6-9
41	Calcium	110	223	265	NA			
42	Magnesium	69.5	84.5	223	NA			
43	Sodium	88.1	735	1108	NA			
44	SAR	1.62	10.6	12.1	NA			12
45	* ND: Results below method reporting limit (see lab analysis sheet for individual analyte); NA: Not Analyzed							

	A	B	C	D	E	F	G	H
1	TABLE 1: Airport Area Site, Pod C South, Site Screening Results							
2	Analysis / Analyte	BKG	POD-C South	POD-C South	POD-C South		POD-C South	COGCC LIMIT - COGCC Table 910-1 Concentration Levels
3			6/19/2013	12/1/2013	3/12/2013 4/4/14			
4	TPH - G (Gas)	ND	ND	ND	NA			500
5	TPH - D (diesel)	ND	ND	ND	NA			500
6	TPH - O (Oil range)	NA	NA	155	NA			500
7	Benzene	ND	ND	ND	NA			0.17
8	Toluene	ND	ND	ND	NA			85
9	Ethylbenzene	ND	ND	ND	NA			100
10	Total Xylenes	ND	ND	ND	NA			175
11	Acenaphthene	NA	NA	NA	NA			
12	Acenaphthylene	NA	NA	NA	NA			1,000
13	Anthracene	NA	NA	NA	NA			1,000
14	Benzo(A)anthracene	NA	NA	NA	NA			0.22
15	Benzo(A)pyrene	NA	NA	NA	NA			0.022
16	Benzo(K)fluoranthene	NA	NA	NA	NA			2.2
17	Benzo (g,h,i)perylene	NA	NA	NA	NA			
18	Benzo (k) fluoranthene	NA	NA	NA	NA			
19	Bis(2-chloroethoxy)menthane	NA	NA	NA	NA			
20	Chrysene	NA	NA	NA	NA			22
21	Dibenzo(A,H)anthracene	NA	NA	NA	NA			0.022
22	Fluoranthene	NA	NA	NA	NA			1,000
23	Fluorene	NA	NA	NA	NA			1,000
24	Indeno(1,2,3,C,D)pyrene	NA	NA	NA	NA			0.22
25	Napthalene	NA	NA	NA	NA			23
26	Phenanthrene	NA	NA	NA	NA			
27	Pyrene	NA	NA	NA	NA			1,000
28	Arsenic	NA	NA	NA	NA			0.39
29	Barium	NA	NA	NA	NA			15,000
30	Cadmium	NA	NA	NA	NA			70
31	Chromium	NA	NA	NA	NA			*
32	Copper	NA	NA	NA	NA			3,100
33	Lead	NA	NA	NA	NA			400
34	Mercury	NA	NA	NA	NA			23
35	Nickel	NA	NA	NA	NA			1,600
36	Selenium	NA	NA	NA	NA			390
37	Silver	NA	NA	NA	NA			390
38	Zinc	NA	NA	NA	NA			23,000
39	Ec	1.54	4.67	NA	1.34			4 or 2XBKG
40	pH	7.06	7.48	NA	8.1			6-9
41	Calcium	110	260	350	92			
42	Magnesium	69.5	120	92.5	32			
43	Sodium	88.1	798	1138	304			
44	SAR	1.62	10.3	14	7			
45	* ND: Results below method reporting limit (see lab analysis sheet for individual analyte); NA: Not Analyzed							

	A	B	C	D	E	F	G	H
1	<b>TABLE 1: Airport Area Site, Pod D North, Site Screening Results</b>							
2	Analysis / Analyte	BKG	POD-D North	POD-D North	POD-D North		POD-D North	COGCC LIMIT - COGCC Table 910-1 Concentration Levels
3			6/19/2013	12/1/2013	4/4/2014			mg/kg (unless indicated)
4	TPH - G (Gas) (mg/Kg)	ND	ND	ND	NA			500
5	TPH - D (diesel) (mg/Kg)	ND	ND	ND	NA			500
6	TPH - O (Oil range) (mg/Kg)	NA	NA	430	NA			500
7	Benzene (ug/Kg)	ND	ND	ND	NA			0.17
8	Toluene (ug/Kg)	ND	ND	ND	NA			85
9	Ethylbenzene (ug/Kg)	ND	ND	ND	NA			100
10	Total Xylenes (ug/Kg)	ND	ND	ND	NA			175
11	Acenaphthene (ug/Kg)	NA	NA	NA	ND			
12	Acenaphthylene (ug/Kg)	NA	NA	NA	ND			1,000
13	Anthracene (ug/Kg)	NA	NA	NA	ND			1,000
14	Benzo(A)anthracene (ug/Kg)	NA	NA	NA	ND			0.22
15	Benzo(A)pyrene (ug/Kg)	NA	NA	NA	ND			0.022
16	Benzo(b)fluoranthene (ug/Kg)	NA	NA	NA	ND			2.2
17	Benzo (k) fluoranthene (ug/Kg)	NA	NA	NA	ND			
18	Bis(2-chloroethoxy)menthane (ug/Kg)	NA	NA	NA	ND			
19	Chrysene (ug/Kg)	NA	NA	NA	28.3			22
20	Dibenzo(A,H)anthracene (ug/Kg)	NA	NA	NA	ND			0.022
21	Fluoranthene (ug/Kg)	NA	NA	NA	ND			1,000
22	Fluorene (ug/Kg)	NA	NA	NA	ND			1,000
23	Indeno(1,2,3,C,D)pyrene (ug/Kg)	NA	NA	NA	ND			0.22
24	1-Methylnaphthalene (ug/Kg)	NA	NA	NA	40.8			
25	2-Methylnaphthalene (ug/Kg)	NA	NA	NA	48.8			
26	Napthalene (ug/Kg)	NA	NA	NA	26.9			23
27	Phenanthrene (ug/Kg)	NA	NA	NA	30.4			
28	Pyrene (ug/Kg)	NA	NA	NA	ND			1,000
29	Arsenic (mg/Kg)	NA	NA	NA	< 2.8			0.39
30	Barium (mg/Kg)	NA	NA	NA	122			15,000
31	Boron (mg/Kg)	NA	NA	NA	0.4			
32	Cadmium (mg/Kg)	NA	NA	NA	0.58			70
33	Chromium (mg/Kg)	NA	NA	NA	7.3			*
34	Copper (mg/Kg)	NA	NA	NA	11			3,100
35	Lead (mg/Kg)	NA	NA	NA	15.3			400
36	Mercury (mg/Kg)	NA	NA	NA	<0.096			23
37	Nickel (mg/Kg)	NA	NA	NA	8.3			1,600
38	Selenium (mg/Kg)	NA	NA	NA	<5.5			390
39	Silver (mg/Kg)	NA	NA	NA	0.8			390
40	Zinc (mg/Kg)	NA	NA	NA	75			23,000
41	EC (mmhos/sq cm)	1.54	6.49	NA	6.86			4 or 2XBKG
42	pH	7.06	7.41	NA	7.6			6-9
43	Calcium (mg/Kg)	110	396	141	468			
44	Magnesium (mg/Kg)	69.5	127	270	338			
45	Sodium (mg/Kg)	88.1	2665	1135	1196			
46	SAR	1.62	29.8	12.9	10.3			

\* ND: Results below method reporting limit (see lab analysis sheet for individual analyte); NA: Not Analyzed

	A	B	C	D	E	F	G	H
1	TABLE 1: Airport Area Site, Pod D South, Site Screening Results							
2	Analysis / Analyte	BKG	POD-D South	POD-D South	POD-D South		POD-D South	COGCC LIMIT - COGCC Table 910-1 Concentration Levels
3			6/19/2013	12/1/2013	3/12/2013			
4	TPH - G (Gas)	ND	ND	ND	NA			500
5	TPH - D (diesel)	ND	ND	ND	NA			500
6	TPH - O (Oil range)	NA	NA	210	NA			500
7	Benzene	ND	ND	ND	NA			0.17
8	Toluene	ND	ND	ND	NA			85
9	Ethylbenzene	ND	ND	ND	NA			100
10	Total Xylenes	ND	ND	ND	NA			175
11	Acenaphthene	NA	NA	NA	NA			
12	Acenaphthylene	NA	NA	NA	NA			1,000
13	Anthracene	NA	NA	NA	NA			1,000
14	Benzo(A)anthracene	NA	NA	NA	NA			0.22
15	Benzo(A)pyrene	NA	NA	NA	NA			0.022
16	Benzo(K)fluoranthene	NA	NA	NA	NA			2.2
17	Benzo (g,h,i)perylene	NA	NA	NA	NA			
18	Benzo (k) fluoranthene	NA	NA	NA	NA			
19	Bis(2-chloroethoxy)menthane	NA	NA	NA	NA			
20	Chrysene	NA	NA	NA	NA			22
21	Dibenzo(A,H)anthracene	NA	NA	NA	NA			0.022
22	Fluoranthene	NA	NA	NA	NA			1,000
23	Fluorene	NA	NA	NA	NA			1,000
24	Indeno(1,2,3,C,D)pyrene	NA	NA	NA	NA			0.22
25	Napthalene	NA	NA	NA	NA			23
26	Phenanthrene	NA	NA	NA	NA			
27	Pyrene	NA	NA	NA	NA			1,000
28	Arsenic	NA	NA	NA	NA			0.39
29	Barium	NA	NA	NA	NA			15,000
30	Cadmium	NA	NA	NA	NA			70
31	Chromium	NA	NA	NA	NA			*
32	Copper	NA	NA	NA	NA			3,100
33	Lead	NA	NA	NA	NA			400
34	Mercury	NA	NA	NA	NA			23
35	Nickel	NA	NA	NA	NA			1,600
36	Selenium	NA	NA	NA	NA			390
37	Silver	NA	NA	NA	NA			390
38	Zinc	NA	NA	NA	NA			23,000
39	EC (mmhos/sq cm	1.54	4.54	NA	NA			4 or 2XBKG
40	pH	7.06	7.36	NA	NA			6-9
41	Calcium	110	258	190	NA			
42	Magnesium	69.5	108	168	NA			
43	Sodium	88.1	803	958	NA			
44	SAR	1.62	10.6	12.2	NA			
45	* ND: Results below method reporting limit (see lab analysis sheet for individual analyte); NA: Not Analyzed							



See figure 2 for the approximate location of the 4 aliquot sample locations for each pod that were mixed to form the composite sample from each pod.

### DELINEATION OF POD SAMPLE AREAS - JUNE 2013

GREAT WESTERN - AIRPORT AREA  
 DRILLING MUD BENEFICIAL RE-USE SITE  
 Portion of E1/2, SECTION 35, T6N, R65W WELD, CO.

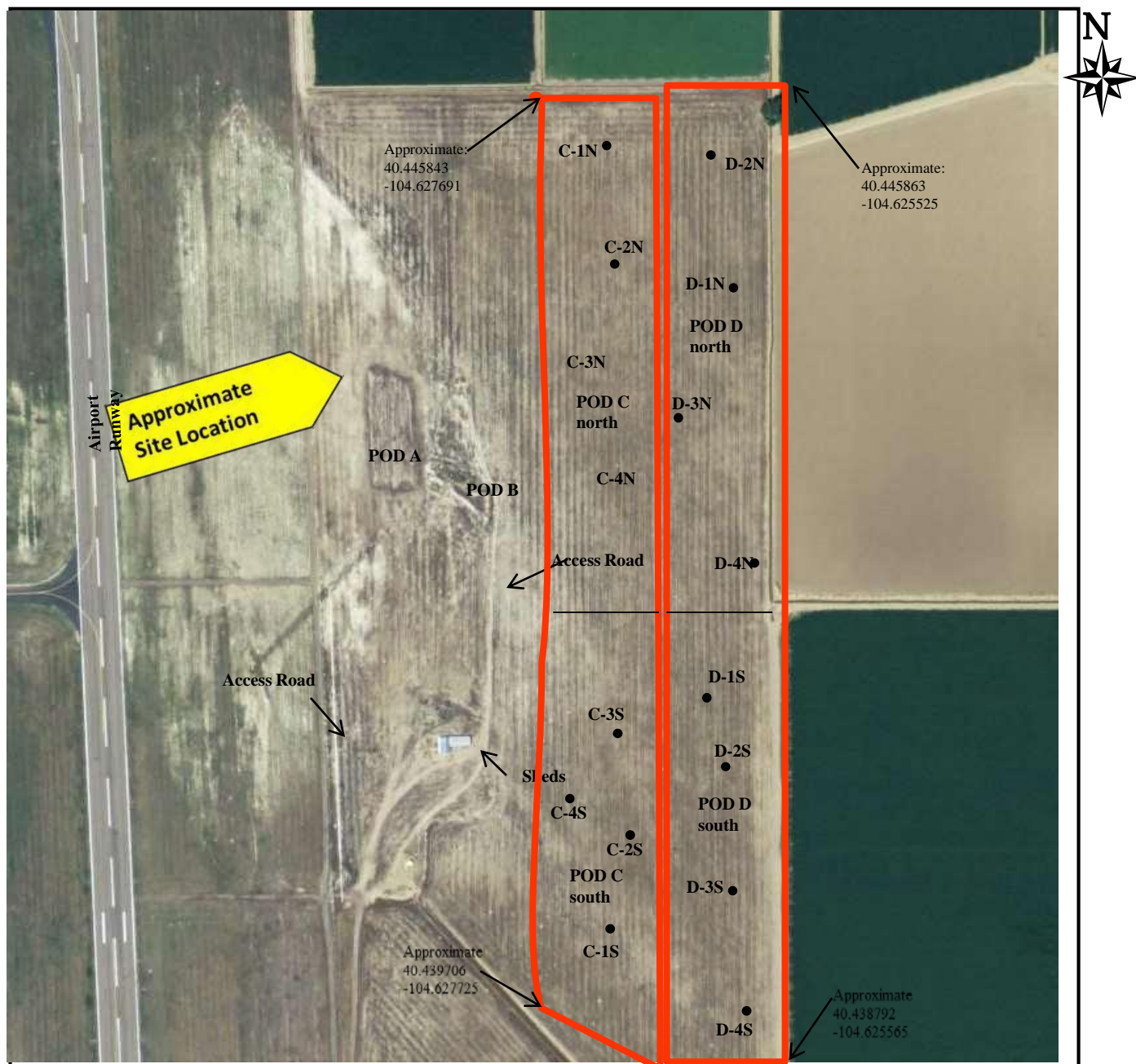
From Aerial Photograph  
 Mapcard Internet Website

MAHONEY ENVIRONMENTAL CONSULTING, INC.  
 1601 10<sup>th</sup> AVENUE, GREELEY, CO 80631  
 (970) 352-2644 (TEL) (888)-219-5357 (FAX)

Project No: 2013.INT-GW1

Boundaries are approximate,  
 Scale 1:12,500





Note lab samples consisted of upto 4 composite aliquot samples. The approximate location of the respective aliquot samples are illustrated for each POD.

Composite Sample #, Aliquots ID for each POD

POD -C north C -1N, 2N, 3N, 4N

POD -D north D: -1N, 2N, 3N, 4N

Sampling locations also apply to the March / April 2014 follow-up sampling,

Composite Sample #, Aliquots ID for each POD

POD-C South C: 1S, 2S, 3S, 4S

POD-D South D: 1S, 2S, 3S, 4S

## COMPOSITE SURFACE SOIL SAMPLE LOCATIONS - December 2013 – April 2014

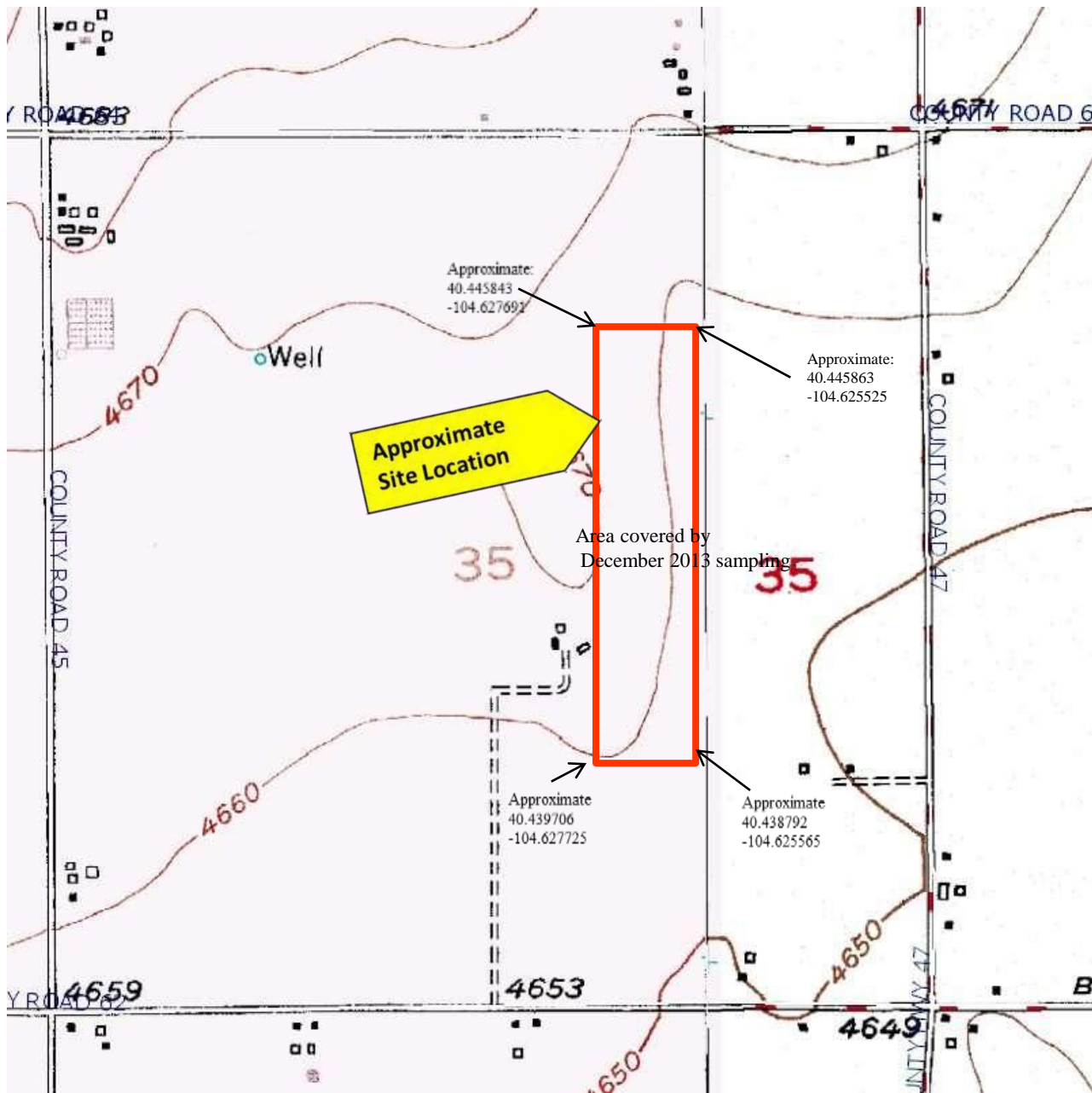
GREAT WESTERN - AIRPORT AREA  
DRILLING MUD BENEFICIAL RE-USE SITE  
SECTION 35, T6N, R65W WELD, CO.

From Aerial Photograph  
Mapcard Internet Website

MAHONEY ENVIRONMENTAL CONSULTING, INC.  
1601 10<sup>th</sup> AVENUE, GREELEY, CO 80631  
(970) 352-2644 (TEL) (888)-219-5357 (FAX)

Project No: 2013.INT-GW1

Boundaries are approximate,  
Scale 1:12,500



**TOPOGRAPHIC MAP**  
 GREAT WESTERN - AIRPORT AREA  
 DRILLING MUD BENEFICIAL RE-USE SITE  
 SECTION 35, T6N, R65W WELD, CO.

From USGS Map

MAHONEY ENVIRONMENTAL CONSULTING, INC.  
 1601 10<sup>th</sup> AVENUE, GREELEY, CO 80631  
 (970) 352-2644 (TEL) (888)-219-5357 (FAX)

Project No: 2013.INT-GW1

Boundaries are approximate,  
 Scale 1:12,500

# WELD LABORATORIES, INC.

1527 First Avenue • Greeley, Colorado 80631

Phone: (970) 353-8118 • Fax: (970) 353-1671

www.weldlabs.com

April 28, 2014

Laboratory No. E14070-3B (page 1 of 2)  
Date Sampled: 4/4/2014  
Date Received: 4/4/2014  
Date Prepared: 4/8/2014  
Date Analyzed: 4/9/2014 (Accutest Laboratories)  
Method: SW846 8270C SW846 3546

Project: Airport GW  
Sample ID: POD-D-North-2B

## Volatile Organics

Units: ug/kg

Analyte	Concentration	RL	MDL
Acenaphthene	U	70	19
Acenaphthylene	U	70	19
Anthracene	U	70	19
Benzo(a)anthracene	U	70	19
Benzo(b)fluoranthene	U	70	19
Benzo(k)fluoranthene	U	70	19
Benzo(a)pyrene	U	70	19
Chrysene	28.3	70	19
Dibenzo(a,h)anthracene	U	70	19
Fluoranthene	U	70	19
Fluorene	U	70	19
Indeno(1,2,3-cd)pyrene	U	70	19
1-Methylnaphthalene	40.8	70	19
2-Methylnaphthalene	48.8	70	38
Naphthalene	26.9	70	19
Phenanthrene	30.4	70	19
Pyrene	U	70	19

Surrogate Recovery	QC Limits
2-Fluorobiphenyl	78% 30-130%
Nitrobenzene-d5	65% 19-130%
Terphenyl-d14	94% 40-130%

### Qualifiers:

U = Not Detected at Reporting Limit

J = Analyte detected below Practical Quantitation Limit (PQL)

E = Reported concentration above quantitation range

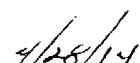
B = Analyte detected in Method Blank

S = Spike Recovery outside accepted recovery limits

\* = Compound detected above regulatory limit

X = Not Applicable

  
Project Manager

  
Date

Sampling procedures can affect the value of analytical results - customers are advised to use appropriate sampling protocol to insure samples are truly representative of the bulk sample.

# Chain of Custody Record

**Weld Laboratories, Inc.**

Company Name Mattum Environmental

1527 1st Ave. Established 1978

Address 1601 10<sup>th</sup> Ave

Greeley, CO 80631

Phone: (970)353-8118 Fax: (970)353-1671

Contact John Mattum

Phone No 970-381-5757

Fax No 866-219-5357

JMATTUM@WELDLAB.COM 644

Sampler: Print Name John Mattum

Signature [Signature]

Analysis

Project No.: 1

Sample ID	Sample Location	Composite	Grab	Date	Time	Sample Type				No. of Containers	Analysis					Remarks
						Water	Liquid	Oil	Solid		PCB	PAH	DEG	DO	VAP	
Pod D-North		1		12/1/13					1	1	✓	✓	✓	✓	✓	
Pod D-South		1		12/1/13					1	1	✓	✓	✓	✓	✓	
Pod C-North		1		12/1/13					1	1	✓	✓	✓	✓	✓	
Pod C-South		1		12/1/13					1	1	✓	✓	✓	✓	✓	

Comments:

Relinquished by: (Signature) <u>[Signature]</u>	Date <u>12/1/13</u>	Time	Received by: (Signature) <u>[Signature]</u>	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory: (Signature) <u>[Signature]</u>	Date <u>12/6/13</u>	Time <u>12:30</u>
Method of shipment: <u>Delivered by FedEx</u>					

January 15, 2014

Mahoney Environmental  
1601 10th Ave.  
Greeley, CO 80631

Laboratory No.: E13340-3

Project: Great Western  
(page 1 of 3)

Method EPA 602/SW8020 A, EPA 624/SW8015 and SW8260

Sample ID	Date Sampled	Date Analyzed	Benzene	Toluene	Ethyl-benzene	o,p-Xylene	m-Xylene	TVPH	Surrogate Recovery
			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	%
PoD D-North-2	12/01/13	12/10/13	U	U	U	U	U	U	79.6
PoD D-South-2	12/01/13	12/10/13	U	U	U	U	U	U	81.5
PoD C-North-2	12/01/13	12/11/13	U	U	U	U	U	U	81.1
PoD C-South-2	12/01/13	12/11/13	U	U	U	U	U	U	90.6

Reporting Limit:

4

4

4

4

4

1

QC Limits: 74-147

U=Compound analyzed for but not detected

J=Compound detected at a level below reporting limit.

Project Manager

Date

1527 First Avenue • Greeley, Colorado 80631  
Phone: (970) 353-8118 • Fax: (970) 353-1671

WELD LABORATORIES, INC.

Sampling procedures can affect the value of analytical results. Customers are advised to use appropriate sampling procedures to insure samples are truly representative of the bulk sample.

January 15, 2014

**Total Oil Range Hydrocarbons (C29-C40)**

Method No. SW8015M

Laboratory No. E13340-3

(page 3 of 3)

Date Sampled: 12/1/2013

Date Received: 12/6/2013

Date Prepared: 12/9/2013

Sample ID	Analysis Date	Moisture (%)	Dilution Factor	Surr. % Recov.	Sample Result	RL	Units
PoD D-North-2	12/20/2013	1/10/1900	1.12	102	430	22.5	mg/kg -dry wt.
PoD D-South-2	12/20/2013	1/11/1900	1.14	116	210	22.7	mg/kg -dry wt.
PoD C-North-2	12/22/2013	1/13/1900	1.16	120	306	23.1	mg/kg -dry wt.
PoD C-South-2	12/23/2013	1/13/1900	1.15	121	155	23.0	mg/kg -dry wt.

Surrogate QC Limits: 46-141 (1,2,4-Trichlorobenzene Surrogate)

**Qualifiers:**

U=Compound analyzed for but not detected

S=Spike Recovery outside accepted recovery limits

J=Indicates an estimated value when compound is detected

**Definitions:**

RL=Reporting Limit

TVH=Total Volatile Hydrocarbons

TEH=Total Extractable Hydrocarbons

Project Manager

Date

**WELD LABORATORIES, INC.**  
1527 First Avenue • Greeley, Colorado 80631  
Phone: (970) 353-8118 • Fax: (970) 353-1671  
www.weldlabs.com

Sampling procedures can affect the value of analytical results. Customers are advised to use appropriate sampling protocol to insure samples are truly representative of the bulk sample.

January 15, 2014

**Diesel Fuel (No. 2)**  
**Total Extractable Hydrocarbons (Diesel C:11-C28)**

Method No. SW8015M

Laboratory No. E13340-3

(page 2 of 3)

Date Sampled: 12/1/2013

Date Received: 12/6/2013

Date Prepared: 12/9/2013

Sample ID	Analysis Date	Moisture (%)	Dilution Factor	Surr. % Recov.	Sample Result	RL	Units
PoD D-North-2	12/20/2013	10.94	1.12	102	U	22.5	mg/kg -dry wt.
PoD D-South-2	12/20/2013	11.93	1.14	116	U	22.7	mg/kg -dry wt.
PoD C-North-2	12/22/2013	13.53	1.16	120	U	23.1	mg/kg -dry wt.
PoD C-South-2	12/23/2013	13.18	1.15	121	U	23.0	mg/kg -dry wt.

Surrogate QC Limits: 46-141 (1,2,4-Trichlorobenzene Surrogate)

**Qualifiers:**

U=Compound analyzed for but not detected

S=Spike Recovery outside accepted recovery limits

J=Indicates an estimated value when compound is detected

**Definitions:**

RL=Reporting Limit

TVH=Total Volatile Hydrocarbons

TEH=Total Extractable Hydrocarbons

Project Manager

Date

**WELD LABORATORIES, INC.**  
1527 First Avenue • Greeley, Colorado 80631  
Phone: (970) 353-8118 • Fax: (970) 353-1671  
www.weldlabs.com

Sampling procedures can affect the value of analytical results - customers are advised to use appropriate sampling protocol to insure samples are truly representative of the bulk sample.

# WELD LABORATORIES, INC.

1527 First Avenue • Greeley, Colorado 80631

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www.weldlabs.com

January 8, 2014

Mahoney Environmental Consulting, Inc.

1601 10th Ave.

Greeley, CO 80631

Laboratory No. E13340-3

Date Sampled: 12/1/2013

Date Received: 12/6/2013

Method of Analysis: 418.1

Sample ID	SAR	Ca (mg/kg)	Mg (mg/kg)	Na (mg/kg)
POD D-North-2	12.9	141	270	1135
POD D-South-2	12.2	190	168	958
POD C-North-2	12.1	265	223	1108
POD C-South-2	14.0	350	92.5	1138



Project Manager



Date

Sampling procedures can affect the value of analytical results. Customers are advised to use appropriate sampling protocol to insure samples are truly representative of the bulk sample.



MAHONEY  
Company Name Environmental

Address 1601 10<sup>th</sup> AV. GREELEY, CO. 80631

Contact JOHN MAHONEY

# Chain of Custody Record

Weld Laboratories, Inc.

1527 1st Ave. Established 1978

Greeley, CO 80631

Phone (970)353-8118 Fax: (970)353-1671

Phone No 970-351-5951

Fax No

988-219-5357

Airport  
Great West  
Pod. C + D.

Sampler: Print Name John Mahoney		Signature <i>John Mahoney</i>		Analysis										
Project No.:		Composite	Grab	Date	Time	Sample Type				No. of Containers	Remarks			
Sample ID	Sample Location					Water	Liquid	Oil	Solid					
POD C-South-2B		X		3/12/14						1	G print Sample			
POD D-North-2B		X		3/12/14						1	SAME "			
											AA:14-2P4H			
											resample,			
											Equipment Problem.			

Comments: COGCC TABLE 910-1 ANALYSES

Relinquished by: (Signature) <i>John Mahoney</i>	Date 3/12/14	Time Noon	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date 3/12/14	Time 1200
Method of shipment: Delivered by MEZ Inc.					

9/4/14

# WELD LABORATORIES, INC.

1527 First Avenue • Greeley, Colorado 80631  
Phone: (970) 353-8118 • Fax: (970) 353-1671  
www.weldlabs.com

May 15, 2014

Mahoney Environmental Consulting, Inc.  
1601 10th Ave.  
Greeley, CO 80631


Laboratory No. E14070-3 (page 2 of 2, updated report)

Date Sampled: 3/12/2014  
Date Received: 3/12/2014  
Project: Airport Great Western Pod C+D

Sample ID	POD C- South-2B	POD D- North-2B
Total Petroleum Hydrocarbons (mg/kg)	---	---
pH (SI)	8.1	7.6
EC (mmhos/cm)	1.34	6.86
Calcium (mg/kg)	92	468
Magnesium (mg/kg)	32.0	338
Sodium (mg/kg)	304	1196
SAR	7.0	10.3
Arsenic (mg/kg)*	---	< 2.8
Boron (mg/l)	---	0.4
Barium (mg/kg)*	---	122
Cadmium (mg/kg)	---	0.58
Chromium (mg/kg)	---	7.3
Copper (mg/kg)	---	11.0
Lead (mg/kg)	---	15.3
Nickel (mg/kg)	---	8.3
Mercury (mg/kg)*	---	<0.096
Selenium (mg/kg)*	---	<5.5
Silver (mg/kg)	---	0.80
Zinc (mg/kg)	---	75.0

\*Analyses performed by Accutest Laboratories

  
Project Manager

  
Date

Green  
POD-RE Sample

# Chain of Custody Record

**Weld Laboratories, Inc.**

Company Name Mahoney Environmental

1527 1st Ave. Established 1978

Address 1601 10<sup>th</sup> Av. Greeley

Greeley, CO 80631

Phone: (970)353-8118 Fax: (970)353-1671

Contact John Mahoney

Phone No. 970-381-5951

Fax No. 888-219-5357 JMAHONEY 264421 COMCAST  
RE

Sampler, Print Name

Signature

Analysis

Project No.:

Sample ID	Sample Location	Composite	Grab	Date	Time	Sample Type				No. of Containers	PAH METALS										Remarks
						Water	Liquid	Oil	Solid												
POD-North-28		Q		4/4/14					Q	1	Q										METALS: ARSENIC, BARIUM, MANGANESE, SELENIUM.

Comments:

Relinquished by: (Signature) <u>John Mahoney</u>	Date <u>4/4/14</u>	Time <u>10:54 AM</u>	Received by: (Signature) <u>John Mahoney</u>	Date <u>4/4/14</u>	Time <u>10:54</u>
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: By (Signature)	Date	Time
Method of shipment: <u>Delivered by MEC INC.</u>					