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Subject:

**Summary Report for Site GP-11
McElmo Dome Unit, Southwestern Colorado**

ENVIRONMENT

Dear Mr. Hale:

Date:

February 8, 2017

Included herein is the Summary Report for site GP-11, which is part of the McElmo Dome Unit in southwestern Colorado. Arcadis U.S., Inc. (Arcadis) completed field work at site GP-11 in support of Kinder Morgan CO₂ Company, LP's (KM) efforts to evaluate how the former drill pits were reclaimed and to determine if remediation is warranted, as may be required by the Colorado Oil and Gas Conservation Commission (COGCC).

Contact:

Kelli Jo Preston

Phone:

303.471.3403

Objectives

The objective of the work completed at site GP-11 (described in the Form 27 application [**Attachment A**]) was to demonstrate that *"soils beneath the pit meet the acceptable concentration levels for various constituents of concern (COCs), as outlined in COGCC's Table 910-1 of their 900 Series Rules"*. Additionally, if groundwater was encountered during site activities, characterization would be conducted.

Email:

kellijo.preston@arcadis.com

Our ref:

CO002055

Methodology

Soil conditions beneath the former pit location were investigated by advancing eight shallow soil borings as illustrated in **Figure 1**. The soil borings were used to evaluate and confirm the thickness of clean soil cover material, evaluate thickness and characterize COC concentrations of any drilling material left in the

former pit, document the presence or absence of any liner material, and determine the depth and characteristics of native soils beneath the former pit extent. Arcadis subcontracted Kyvek Drilling, out of Aztec, New Mexico to complete the borings.

Soil borings were advanced using hollow stem auger methods, with collection of continuous soil cores, to a target depth of 2 feet below the bottom of the former pit excavation, or an approximate depth up to 15 to 20 feet below ground surface (bgs). Detailed boring logs for the shallow soil borings are provided in **Attachment B**. The borings were drilled with a 5-foot section of hollow stem auger and borehole materials were continuously sampled using two-foot long split spoons. An Arcadis geologist recorded sample recovery footages and field screened recovered materials in one-foot intervals using a photo-ionization detector (PID) and a soil conductivity probe. Sample materials were logged in accordance with the unified soil classification system (USCS) and field boring logs were prepared with annotations regarding the disposition and depth of any foreign debris (e.g., liner materials) encountered. All shallow soil borings were backfilled using auger cuttings. The drillers also added hydrated bentonite chips, as necessary, to backfill each location and meet existing grade.

Arcadis collected soil aliquots from each recovered one-foot interval in a labeled Ziplock® baggie to facilitate headspace PID screening. Samples from select intervals were transferred into laboratory prepared sample containers for subsequent laboratory analysis of COCs. All samples were submitted to ALS Environmental Laboratory (ALS) for analysis. Each soil sample was analyzed for the following:

- Metals by USEPA Method SW6020A
- Volatiles by USEPA Method SW8260
- Soluble cations (calcium, magnesium, sodium) by Method La29B-6020
- Hexavalent chromium by USEPA Method SW7196 (trivalent chromium was subsequently calculated)
- Electrical conductivity (EC), saturation point, and sodium absorption ratio (SAR) by LaDNR-29B
- Gasoline range organics (GRO) by USEPA Method SW8015
- Diesel range organics (DRO) by USEPA Method SW8015M
- Mercury by USEPA Method SW7471A
- pH by USEPA Method SW9045B

Photos were also collected at the site documenting current surface vegetation; reclamation is considered successful by COGCC when vegetative cover reaches 80%. The photos provide an indication of current land use at, and surrounding the site, which can be used as reference for comparison purposes. The photo log for site GP-11 is provided in **Attachment C**.

Detailed notes were kept during the field activities completed at site GP-11 and are provided in **Attachment D**.

Results

Analytical results received from ALS for the soil samples collected at site GP-11 are presented in **Table 1**. Laboratory report(s) are provided in **Attachment E**.

A total of 24 soil samples collected from eight soil borings, were submitted to ALS for site GP-11. For comparison purposes, **Table 1** also includes screening levels (SLs) where applicable, as defined in Table 910-1 of the COGCC's 900 Series Rules. Analytical results that exceed the Table 910-1 SLs are highlighted in yellow. Key findings are summarized as follows:

- Five EC exceedances, one pH exceedance, and four SAR exceedances were observed in soils shallower than 3 feet from five boring locations (boring 4 through boring 8; **Figure 1** and **Table 1**). Per COGCC guidance, provided under their Rules and Regulation frequently asked questions (FAQs) from 2008 (COGCC 2016); EC, pH, and SAR SLs only need to be applied to samples collected from the first 3 feet bgs. Therefore, any SL exceedances observed at a depth greater than 3 feet bgs "should not adversely affect the successful reclamation of the site" and therefore have not been highlighted.
- Arsenic was observed in multiple locations at concentrations greater than SLs, with a maximum observed concentration of 4.88 milligrams per kilogram (mg/kg). It is generally accepted that background concentrations of arsenic may be as high as 11 mg/kg per the Colorado Department of Public Health and Environment (CDPHE 2014, **Attachment F**). All concentrations were below 11 mg/kg.
- Liner material was observed at 6, 5.5, 8, and 4 feet bgs in borings 1, 5, 6, and 7, respectively, but was otherwise absent from the other borings.

References

- Colorado Department of Public Health and Environment (CDPHE). 2014. Arsenic Concentrations in Soil: Risk Management Guidance for Evaluating. July.
- Colorado Oil and Gas Conservation Commission (COGCC). Rules & Regulations online FAQ from 2008, accessed July 14, 2016. <http://cogcc.state.co.us/documents/reg/Rules/2008/FAQ.cfm#204>

Mr. Aaron Hale
February 8, 2017

Please let us know if you have any questions regarding the content of this summary report.

Sincerely,

Arcadis U.S., Inc.

A handwritten signature in black ink that reads "Kelli Jo Preston". The signature is written in a cursive, flowing style.

Kelli Jo Preston
Project Manager

Tables

- 1 Soil Analytical Results for Samples Collected at McElmo Dome Site GP-11

Figures

- 1 GP-11 Site Features

Attachments

- A Form 27 Application
- B Boring Logs
- C Photo Log
- D Field Notes
- E Laboratory Analytical Reports
- F CDPHE White Paper on Arsenic Concentrations in Soil

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TABLES



Table 1 - Soil Analytical Results for Samples Collected at McElmo Dome Site GP-11
Kinder Morgan CO2 Company LP

						Metals											Volatiles					
Site	Sample Location	Depth (ft bgs)	Date Collected	Sample ID	Matrix	Arsenic	Barium	Boron	Cadmium	Chromium	Copper	Lead	Nickel	Selenium	Silver	Zinc	Benzene	Ethylbenzene	m&p-Xylenes	o-Xylene	Toluene	Total Xylenes
			Table 910-1 Screening Level			0.39	15000	2 mg/L (results below in mg/kg)	70	NS	3100	400	1600	390	390	23000	0.17	100	NS	NS	85	175
			Units			mg/kg											mg/kg					
GP-11	Boring 1	1-2	11/11/2016	GP-11-1-1-2-111116	Soil	2.64	185	5.86	< 0.472	6.81	4.95	5.18	7.72	< 0.472	< 0.472	19.6	< 0.0050	< 0.0050	< 0.010	< 0.0050	< 0.0050	< 0.010
GP-11	Boring 1	5-6	11/11/2016	GP-11-1-5-6-111116	Soil	4.19	117	16.6	< 0.483	12.5	7.70	5.70	11.2	1.59	< 0.483	666	< 0.0048	< 0.0048	0.013	< 0.0048	0.019	0.016
GP-11	Boring 1	9-10	11/11/2016	GP-11-1-9-10-111116	Soil	2.48	106	3.91	< 0.468	4.29	3.60	3.94	5.13	< 0.468	< 0.468	15.2	< 0.0049	< 0.0049	< 0.0098	< 0.0049	< 0.0049	< 0.0098
GP-11	Boring 2	1-2	11/11/2016	GP-11-2-1-2-111116	Soil	2.93	179	5.12	< 0.463	7.57	6.04	6.25	8.35	0.521	< 0.463	22.4	< 0.0050	< 0.0050	< 0.010	< 0.0050	< 0.0050	< 0.010
GP-11	Boring 2	3-4	11/11/2016	GP-11-2-3-4-111116	Soil	2.43	128	3.11	< 0.471	7.70	6.36	6.41	8.81	0.476	< 0.471	22.8	< 0.0048	< 0.0048	< 0.0095	< 0.0048	< 0.0048	< 0.0095
GP-11	Boring 2	8-9	11/11/2016	GP-11-2-8-9-111116	Soil	2.41	147	4.02	< 0.466	5.37	5.98	5.76	7.24	< 0.466	< 0.466	19.3	< 0.0047	< 0.0047	< 0.0094	< 0.0047	< 0.0047	< 0.0094
GP-11	Boring 3	2-3	11/11/2016	GP-11-3-2-3-111116	Soil	2.79	162	3.66	< 0.457	7.93	7.25	6.77	8.40	0.474	< 0.457	26.2	< 0.0051	< 0.0051	< 0.010	< 0.0051	< 0.0051	< 0.010
GP-11	Boring 3	8-9	11/11/2016	GP-11-3-8-9-111116	Soil	3.23	172	5.18	< 0.465	7.14	5.24	5.67	8.12	0.516	< 0.465	22.4	< 0.0048	< 0.0048	< 0.0096	< 0.0048	< 0.0048	< 0.0096
GP-11	Boring 3	12-13	11/11/2016	GP-11-3-12-13-111116	Soil	3.79	120	2.82	< 0.474	3.32	3.23	3.49	5.00	< 0.474	< 0.474	10.9	< 0.0048	< 0.0048	< 0.0096	< 0.0048	< 0.0048	< 0.0096
GP-11	Boring 4	1-2	11/11/2016	GP-11-4-1-2-111116	Soil	2.82	162	3.02	< 0.459	7.33	6.72	6.51	7.81	< 0.459	< 0.459	22.4	< 0.0049	< 0.0049	< 0.0098	< 0.0049	< 0.0049	< 0.0098
GP-11	Boring 4	10-11	11/11/2016	GP-11-4-10-11-111116	Soil	2.52	338	5.86	< 0.475	6.28	3.98	3.93	6.51	< 0.475	< 0.475	16.6	< 0.0051	< 0.0051	< 0.010	< 0.0051	< 0.0051	< 0.010
GP-11	Boring 4	11-12	11/11/2016	GP-11-4-11-12-111116	Soil	2.33	198	< 11.8	< 0.474	2.23	3.63	2.02	2.79	< 0.474	< 0.474	9.18	< 0.0049	< 0.0049	< 0.0098	< 0.0049	< 0.0049	< 0.0098
GP-11	Boring 5	2-3	11/11/2016	GP-11-5-2-3-111116	Soil	2.87	473	5.86	< 0.467	6.94	5.55	5.43	7.08	< 0.467	< 0.467	20.2	< 0.0048	< 0.0048	< 0.0097	< 0.0048	< 0.0048	< 0.0097
GP-11	Boring 5	7-8	11/11/2016	GP-11-5-7-8-111116	Soil	2.74	185	< 12.0	< 0.481	5.34	4.20	3.81	6.08	< 0.481	< 0.481	14.9	< 0.0050	< 0.0050	< 0.010	< 0.0050	< 0.0050	< 0.010
GP-11	Boring 5	9-10	11/11/2016	GP-11-5-9-10-111116	Soil	2.66	0.787	< 2.35	< 0.470	5.11	3.60	< 0.470	5.51	< 0.470	< 0.470	14.3	< 0.0049	< 0.0049	< 0.0098	< 0.0049	< 0.0049	< 0.0098
GP-11	Boring 6	2-3	11/11/2016	GP-11-6-2-3-111116	Soil	2.76	161	9.01	< 0.472	13.4	7.24	7.15	7.20	< 0.472	< 0.472	32.7	< 0.0051	< 0.0051	< 0.010	< 0.0051	< 0.0051	< 0.010
GP-11	Boring 6	4-5	11/11/2016	GP-11-6-4-5-111116	Soil	2.39	105	10.6	< 0.475	16.5	6.59	5.48	5.46	< 0.475	< 0.475	39.1	< 0.0049	< 0.0049	< 0.0098	< 0.0049	< 0.0049	< 0.0098
GP-11	Boring 6	8-9	11/11/2016	GP-11-6-8-9-111116	Soil	4.88	179	3.61	< 0.482	4.08	3.18	4.20	3.33	< 0.482	< 0.482	20.2	< 0.0048	< 0.0048	< 0.0096	< 0.0048	< 0.0048	< 0.0096
GP-11	Boring 7	2-3	11/11/2016	GP-11-7-2-3-111116	Soil	3.00	141	6.65	< 0.480	10.0	6.53	5.82	7.74	< 0.480	< 0.480	29.4	< 0.0050	< 0.0050	< 0.010	< 0.0050	< 0.0050	< 0.010
GP-11	Boring 7	4-5	11/11/2016	GP-11-7-4-5-111116	Soil	4.12	81.7	21.0	< 0.469	8.74	6.55	5.47	5.98	< 0.469	< 0.469	22.7	< 0.0050	< 0.0050	< 0.0099	< 0.0050	< 0.0050	< 0.0099
GP-11	Boring 7	11-12	11/11/2016	GP-11-7-11-12-111116	Soil	3.05	188	< 11.8	< 0.471	2.65	2.10	2.76	3.57	< 0.471	< 0.471	10.6	< 0.0050	< 0.0050	< 0.0099	< 0.0050	< 0.0050	< 0.0099
GP-11	Boring 8	2-3	11/11/2016	GP-11-8-2-3-111116	Soil	2.89	175	< 11.7	< 0.467	7.79	6.10	6.44	7.98	< 0.467	< 0.467	24.4	< 0.0048	< 0.0048	< 0.0097	< 0.0048	< 0.0048	< 0.0097
GP-11	Boring 8	8-9	11/11/2016	GP-11-8-8-9-111116	Soil	2.13	115	4.59	< 0.463	5.46	3.74	4.30	6.32	< 0.463	< 0.463	16.4	< 0.0048	< 0.0048	< 0.0097	< 0.0048	< 0.0048	< 0.0097
GP-11	Boring 8	10-11	11/11/2016	GP-11-8-10-11-111116	Soil	3.29	588	< 11.5	< 2.30	3.05	2.93	2.55	3.52	< 2.30	< 2.30	10.6	< 0.0050	< 0.0050	< 0.0099	< 0.0050	< 0.0050	< 0.0099

Notes:
bgs = below ground surface
Cr(III) = Trivalent Chromium
Cr(VI) = Hexavalent Chromium
DRO = Diesel Range Organics
EC = Electrical Conductivity
ft = feet
GRO = Gasoline Range Organics
meq/meq = milliequivalent
mg/kg = milligrams per kilogram
mg/L = milligrams per liter
mmhos/cm = micromho per centimeter
NS = not specified
pH = acidic/basic of water
SAR = Sodium Adsorption Ratio
sat = saturation
TPH= total petroleum hydrocarbons
Exceed the corresponding Table 910-1 concentration screening level.

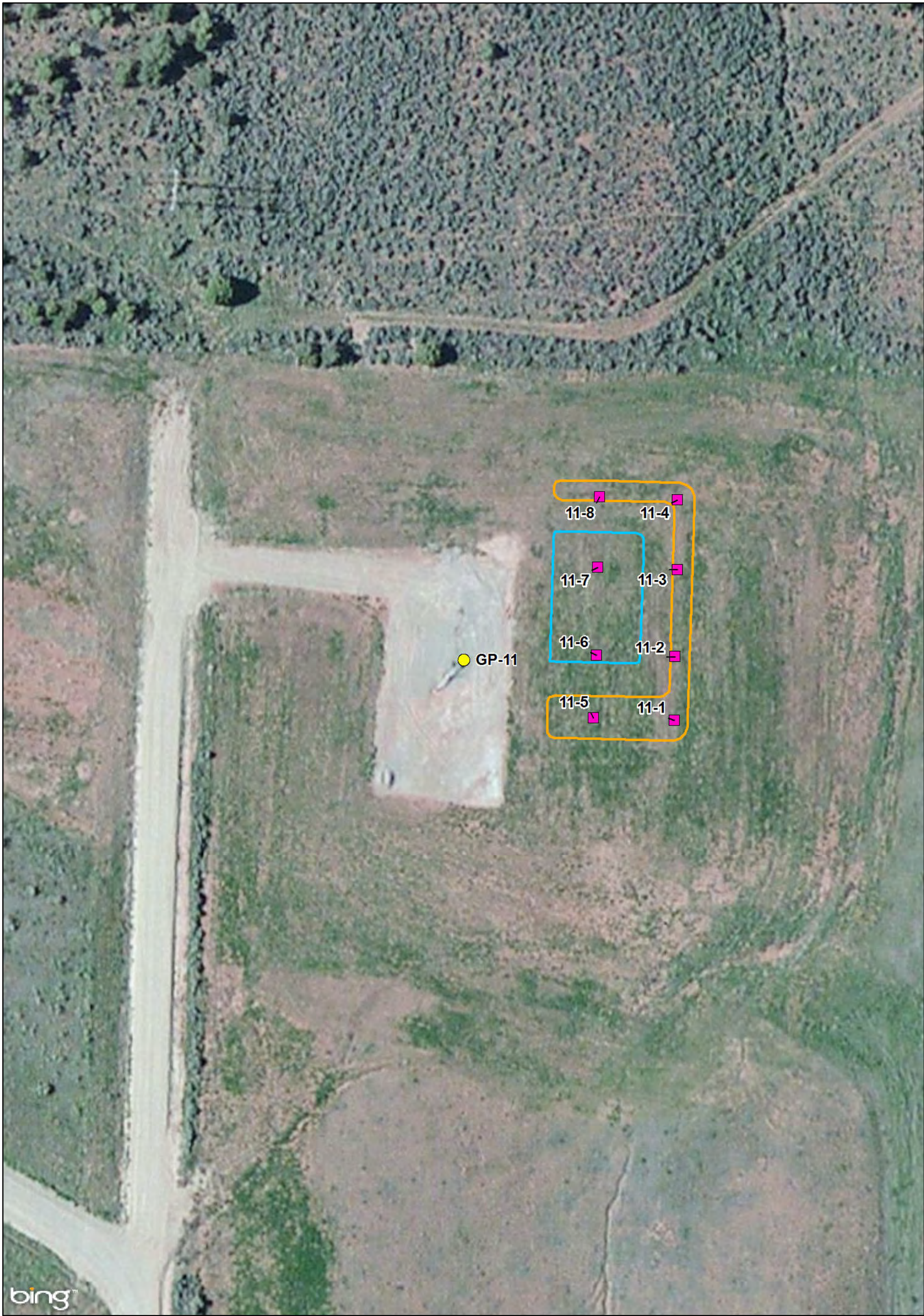
Table 1 - Soil Analytical Results for Samples Collected at McElmo Dome Site GP-11
Kinder Morgan CO2 Company LP

Site						Soluble Cations for SAR			Chromium		EC (mmhos/cm@25C)	TPH		Mercury	pH Units	SAR
						Calcium	Magnesium	Sodium	Cr(III)	Cr(VI)	EC@sat	GRO	DRO	Mercury	pH	SAR
						NS	NS	NS	120000	23	<4 mmhos/cm or 2x background	500		23	6-9	<12
Units						mg/L			mg/kg		mmhos/cm	mg/kg		mg/kg	SU	meq/meq
GP-11	Boring 1	1-2	11/11/2016	GP-11-1-1-2-111116	Soil	27.6	13.6	23.0	6.81	< 2.00	0.651	< 0.050	< 1.7	0.0158	8.86	0.896
GP-11	Boring 1	5-6	11/11/2016	GP-11-1-5-6-111116	Soil	2840	< 5.00	24400	12.5	< 2.00	279	0.65	24	0.0121	12.0	126
GP-11	Boring 1	9-10	11/11/2016	GP-11-1-9-10-111116	Soil	722	165	9900	< 5.00	< 2.00	145	< 0.050	2.4	0.0136	8.27	86.5
GP-11	Boring 2	1-2	11/11/2016	GP-11-2-1-2-111116	Soil	33.1	12.8	39.3	7.57	< 2.00	0.764	< 0.050	2.6	0.0128	8.89	1.47
GP-11	Boring 2	3-4	11/11/2016	GP-11-2-3-4-111116	Soil	66.8	32.1	18.5	7.70	< 1.99	1.60	< 0.050	2.4	0.0173	8.29	0.466
GP-11	Boring 2	8-9	11/11/2016	GP-11-2-8-9-111116	Soil	185	180	548	5.37	< 2.00	13.0	< 0.050	< 1.7	0.0110	8.15	6.88
GP-11	Boring 3	2-3	11/11/2016	GP-11-3-2-3-111116	Soil	28.1	8.39	19.8	7.93	< 2.00	0.595	< 0.050	< 1.7	0.0138	8.73	0.842
GP-11	Boring 3	8-9	11/11/2016	GP-11-3-8-9-111116	Soil	109	48.0	44.9	7.14	< 2.00	2.63	< 0.050	< 1.7	0.0117	8.44	0.901
GP-11	Boring 3	12-13	11/11/2016	GP-11-3-12-13-111116	Soil	71.0	44.1	62.8	< 5.00	< 2.00	2.97	< 0.050	< 1.7	0.0116	8.43	1.44
GP-11	Boring 4	1-2	11/11/2016	GP-11-4-1-2-111116	Soil	239	46.4	241	7.33	< 2.00	7.35	< 0.050	< 1.7	0.0127	7.41	3.74
GP-11	Boring 4	10-11	11/11/2016	GP-11-4-10-11-111116	Soil	859	324	715	6.28	< 1.99	27.3	< 0.050	2.1	0.0250	8.12	5.28
GP-11	Boring 4	11-12	11/11/2016	GP-11-4-11-12-111116	Soil	79.1	69.8	146	< 5.00	< 2.00	4.83	< 0.050	< 1.7	0.0124	8.62	2.88
GP-11	Boring 5	2-3	11/11/2016	GP-11-5-2-3-111116	Soil	466	57.6	3070	6.94	< 1.99	45.3	< 0.050	< 1.7	0.0108	8.15	35.7
GP-11	Boring 5	7-8	11/11/2016	GP-11-5-7-8-111116	Soil	769	145	11900	5.34	< 2.00	141	< 0.050	1.8	0.00888	8.37	103
GP-11	Boring 5	9-10	11/11/2016	GP-11-5-9-10-111116	Soil	2120	398	7480	5.11	< 2.00	119	< 0.050	< 1.7	0.0200	8.07	39.1
GP-11	Boring 6	2-3	11/11/2016	GP-11-6-2-3-111116	Soil	909	< 5.00	1920	13.4	< 2.00	25.6	< 0.050	< 1.7	0.00844	9.94	17.5
GP-11	Boring 6	4-5	11/11/2016	GP-11-6-4-5-111116	Soil	425	< 5.00	4540	16.5	< 2.00	31.3	0.11	47	0.00572	11.9	60.5
GP-11	Boring 6	8-9	11/11/2016	GP-11-6-8-9-111116	Soil	318	< 5.00	809	< 5.00	< 2.00	14.3	< 0.050	2.7	0.0171	9.44	12.4
GP-11	Boring 7	2-3	11/11/2016	GP-11-7-2-3-111116	Soil	606	55.0	1710	10.0	< 2.00	26.0	< 0.050	16	0.0134	8.26	17.8
GP-11	Boring 7	4-5	11/11/2016	GP-11-7-4-5-111116	Soil	978	< 5.00	10300	8.74	< 2.00	92.3	0.19	24	0.00446	12.4	90.6
GP-11	Boring 7	11-12	11/11/2016	GP-11-7-11-12-111116	Soil	779	71.8	1040	< 5.00	< 2.00	32.4	< 0.050	< 1.7	0.00949	8.26	9.56
GP-11	Boring 8	2-3	11/11/2016	GP-11-8-2-3-111116	Soil	443	82.2	1720	7.79	< 2.00	24.5	< 0.050	< 1.7	0.0120	8.12	19.7
GP-11	Boring 8	8-9	11/11/2016	GP-11-8-8-9-111116	Soil	835	148	12100	5.46	< 2.00	142	< 0.050	< 1.7	0.0122	7.97	101
GP-11	Boring 8	10-11	11/11/2016	GP-11-8-10-11-111116	Soil	1370	123	6270	< 5.00	< 2.00	112	< 0.050	< 1.7	0.0201	8.11	43.5

Notes:
bgs = below ground surface
Cr(III) = Trivalent Chromium
Cr(VI) = Hexavalent Chromium
DRO = Diesel Range Organics
EC = Electrical Conductivity
ft = feet
GRO = Gasoline Range Organics
meq/meq = milliequivalent
mg/kg = milligrams per kilogram
mg/L = milligrams per liter
mmhos/cm = micromho per centimeter
NS = not specified
pH = acidic/basic of water
SAR = Sodium Adsorption Ratio
sat = saturation
TPH= total petroleum hydrocarbons
Exceed the corresponding Table 910-1 concentration screening level.

FIGURES





LEGEND

- Production Well
- Shallow Boring Location
- Salt Water Pit 10 Feet Deep
- Fresh Water Reserve Pit 10 Feet Deep

SCALE IN FEET

KINDER MORGAN
CORTEZ, CO

GP-11 SITE FEATURES

ARCADIS

FIGURE
1

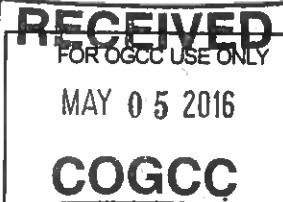
ATTACHMENT A

Form 27 Application



**State of Colorado
Oil and Gas Conservation Commission**

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax: (303)894-2109



SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

☐ Spill or Release ☐ Plug & Abandon ☐ Central Facility Closure ☐ Site/Facility Closure ☒ Other (describe): Evaluation of Former Drilling Pit Area

OGCC Employee:
☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV
Tracking No:

OGCC Operator Number: 46685

Name of Operator: Kinder Morgan CO2 Co

Address: 17801 Hwy 491

City: Cortez State: CO Zip: 81321

Contact Name and Telephone:

Andrew Antipas

No: 970-882-5534

Fax: 970-882-5521

API Number: 05-083-06635

County: Montezuma

Facility Name: N/A

Facility Number: N/A

Well Name: Goodman Point (GP-11)

Well Number: 11

Location (QtrQtr, Sec, Twp, Rng, Meridian): NW 1/4 SW 1/4, Sec. 1, T36N, R18W Latitude: 37.40675 N Longitude: 108.79003 W

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Potential for CO2 well drill cuttings exceeding Pre 2008 COGCC Table 910-1 concentrations

Site Conditions: Is location within a sensitive area (according to Rule 901e)? ☐ Y ☒ N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): cultivated, dry land farming, industrial, and non-cropland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Submitted on previous Form 2A

Potential receptors (water wells within 1/4 mi, surface waters, etc.): No surface water, water wells, or residences identified within 1/2 mile of location.

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):



Soils



Vegetation



Groundwater



Surface Water

Extent of Impact:

Not yet determined

How Determined:

See attached assessment scope

REMEDIALTION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

To date the only initial actions that have taken place is to conduct a water well review to identify water wells within 1/2 mile of the location and the preparation of the attached scope of work for the assessment of the former drilling pit location.

Describe how source is to be removed:

Upon completion of assessment activities, Kinder Morgan will meet with COGCC to review assessment results and present a Remediation Work plan if subsurface conditions warrant.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

Upon the completion of the assessment activities, Kinder Morgan will submit the results to the COGCC along with any remediation plans (as needed) for the consideration and approval of the COGCC.



Tracking Number: _____
Name of Operator: _____
OGCC Operator No: _____
Received Date: _____
Well Name & No: _____
Facility Name & No: _____

Page 2

REMEDIATION WORKPLAN (Cont.)

OGCC Employee: _____

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

There are no anticipated impacts to groundwater at this location. The depth to the Dakota-Glen Canyon aquifer system in this area is anticipated to be between 800-1,200 feet below ground surface.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

If a remediation plan is deemed necessary, Kinder Morgan will address any needed reclamation activities within the remediation plan. This would be completed after Kinder Morgan submits the soil assessment report to the COGCC.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? ☐ Y ☐ N If yes, describe:

No soil samples are available at this time. Proposed soil boring locations are presented on the figure included within the attached general scope of work.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

If offsite disposal of any material is deemed necessary, a properly licensed disposal facility will be used.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 2Q 2016 Date Site Investigation Completed: _____ Date Remediation Plan Submitted: _____
Remediation Start Date: _____ Anticipated Completion Date: _____ Actual Completion Date: _____

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Andrew Antipas

Signed: Andrew Antipas

Title: Project Manager

Date: 5-3-2016

OGCC Approved: [Signature]

Title: Environmental Protection Specialist

Date: 5/18/16



General Scope of Work for Goodman Point (GP-11)

Kinder Morgan CO2 – McElmo Dome and Doe Canyon Units
SW Colorado

Applicable COGCC 910 Table
Pre 2008 Table 910

Groundwater Assessment

No groundwater wells were identified within ½ mile of this well location. Based on the regional direction of flow of the Dakota-Glen Canyon aquifer system and estimated depth of this regional aquifer (between 800-1,200 feet below ground surface), impacts to groundwater resources in this area are not anticipated.

Site Assessment

This site assessment is intended to collect current data from the former drilling pit location including:

- Photographic documentation of current surface vegetation and current land use.
- Soil samples from 8 boring locations within the former pit area to gather the following data:
 - Thickness of the “clean” soil cap and collection of soil samples to determine constituents of the boring.
 - Thickness of any drilling material left in the former drilling pit and soil samples to evaluate current concentrations of applicable constituents.
 - Document the presence or absence of any liner material.
 - Depth to native soils below the former drilling pit.
- GPS coordinates of each soil boring location.
- Summary report

Soil Boring Program:

Eight soil borings will be advanced to native soils below the former drilling pit location to assess the current conditions of the former drilling pits. Borings will not extend more than 2 feet below the bottom of the former drilling pit. The soil boring program will be conducted as follows:

- All necessary utility notifications will be made prior to advancing soil borings.
- A hollow stem auger rig will be utilized to collect a continuous sample of each boring.
- Photograph each full diameter split spoon for inclusion in the assessment report.

- Field screen a sample of each 1 foot interval for total chloride concentration and note on a boring log. Jar the remainder of the sample for potential laboratory analysis for constituents identified on the pre 2008 COGCC Table 910. The typical sample submittal for laboratory analysis for each boring will be as follows:
 - Highest chloride sample interval observed from the surface to 3 feet bgs.
 - Highest chloride concentration of the visually identified drilling waste. If no waste is visible, the highest observed chloride concentration from 3 feet bgs to the bottom of the boring.
 - The bottom boring sample.
 - Please note that groundwater is not anticipated to be encountered, however, perched water may be encountered in the bottom of the hole in select locations. If groundwater is encountered, a sample will be submitted for analysis as well by the pre 2008 COGCC Table 910 constituents.
- Collect the GPS coordinate for each boring with an accuracy of less than 1 foot.
- Backfill each boring with removed material.

Summary Report:

Upon completion of the site assessment activities, a summary report will be completed. This summary report should contain all sampling information, including sampling data from laboratory, and drawings of sampling sites.

RECEIVED

SEP 27 2007

GP-1
COCGCC
pad plan view



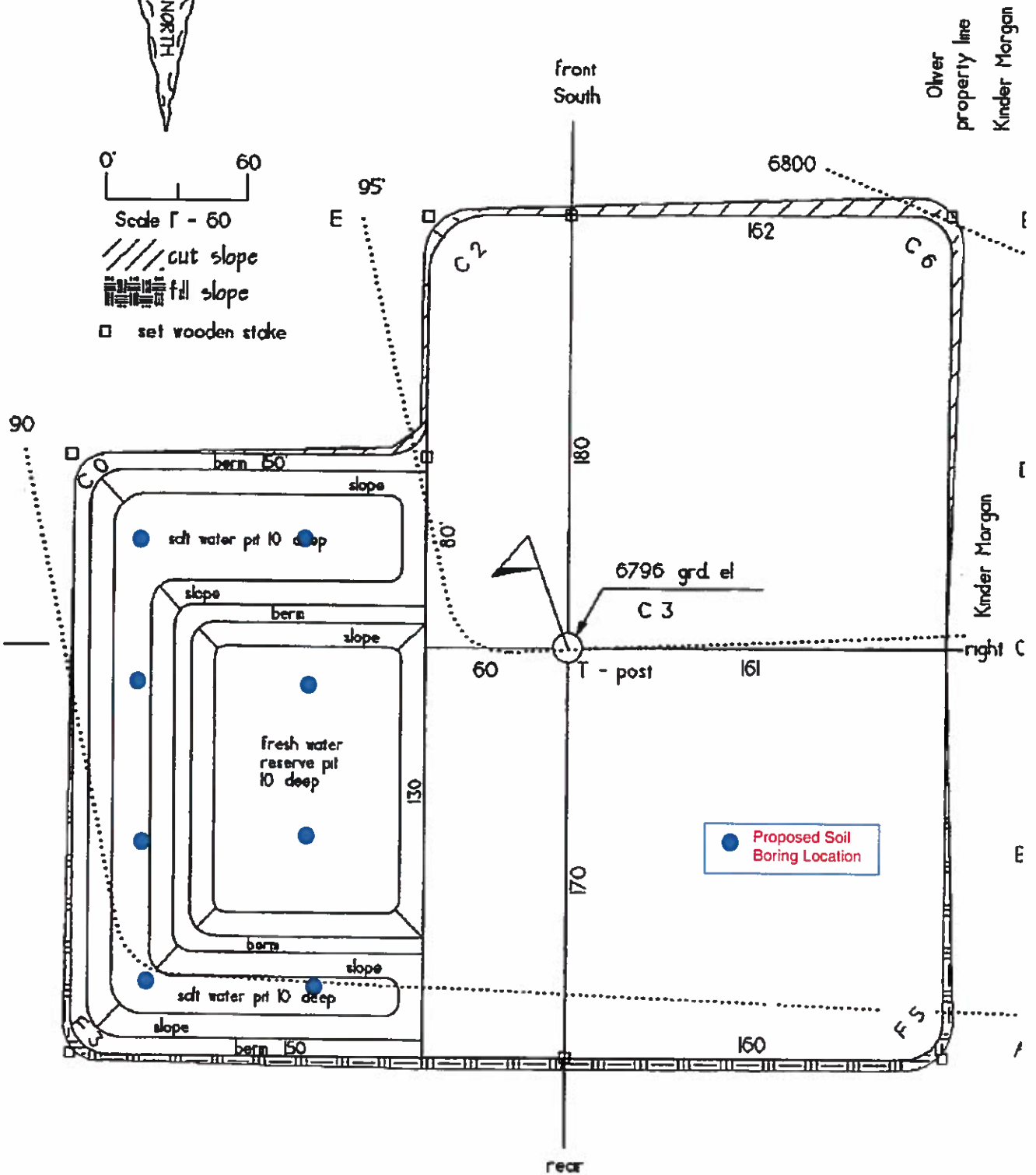
0' 60'

Scale 1" = 60'

cut slope

fill slope

□ set wooden stake



**Kinder Morgan CO₂ Co., NWSW Section 1, T36N, R18W, N PM, Montezuma County, Colorado, Form 27
Conditions of Approval (COAs)**

Conditions of Approval:

Conditionally approved, however, additional information or activities may be required during the course of remediation/reclamation.

COGCC approval is contingent on operator providing notice to SW Environmental Protection Specialist Jim Hughes, jimo.hughes@state.co.us or 970-903-4072 a minimum of 72 hours prior to conducting field operations.

The operator shall collect discrete soil samples to adequately characterize impacted material. Composite samples will NOT be accepted for this purpose. Current COGCC Rules and Regulations regarding pit closures and clean-up standards shall be applied, specifically, but not limited to, the 900 and 1000 series rules. Given that there is no evidence or documentation of pit closure, the current COGCC Rules and Regulations effective May 1, 2009 on federal lands and April 1, 2009 on fee surface shall apply.

Should impacted material be discovered, regardless of size, the operator shall document the source and location, the impacted media and the extent of impact, how and when the operator plans to remediate the impacts, the final disposition of any impacted material removed from the location, as well as analytical results from confirmation samples.

Preliminary review of Colorado Division of Water Resources water well information indicates nearest static water levels to range from 40-130 ft. bgs. Kinder Morgan shall advance an addition boring to a depth of 50 ft. bgs at the location to evaluate the potential for shallow groundwater in the area. If groundwater is present in this 50 ft. boring, a water sample will be collected and submitted for analysis by the current COGCC Table 910-1 constituents.

Boreholes shall be abandoned per the Colorado Division of Water Resources Water Well Construction Rules.

If any impacted material generated during investigation is temporarily stored on adjacent well pad per COGCC rules and regulations, a Form 4 Sundry Notice shall be submitted by the Operator stating the reason and estimated timeline proposed for the storage of impacted material.

Surface reclamation must meet the COGCC 1000 series rules. Approval of this Form 27 does not imply approval of the reclamation plan submitted by the operator. The operator shall contact the COGCC regional reclamation specialist (Catherine Roy) regarding compliance with 1000 series Rules.

**Kinder Morgan CO₂ Co., NWSW Section 1, T36N, R18W, N PM, Montezuma County, Colorado, Form 27
Conditions of Approval (COAs)**

ATTACHMENT B

Boring Logs



EXPLORATORY BORING LOG

project no: C0002255.0001 date: 11 - 11 - 16 boring number: GP-11-161
 client: Kinder Morgan
 location: Cortez, CO
 logged by: B. Draeger
 driller/helper: Kyrek

page 1 of 1

field location of boring:

N: 775559.00ft

E: -8645800.03ft

drilling method: Hollow Stem Auger

hole diameter:

casing diameter:

well completion data:

ground elevation: 6730.62ft

datum: NAD 1983

boring/well construction	headspace: (ft) gas test (PID) FID ppm	Conductivity sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level	time	date
	7.4	0.07	4						
	12.2	0.03	7	1	①				
	10.4	0.91	6	2					
	8.6	3.38	5	3					
	23.3	7.16	5	4					
	28.9	10.12	11	5	②				
	12.4	11.02	5	6					
	9.4	6.2	10	7					
	18.8	9.07	5	8					
	30.0	4.99	50.5"	9	③				
			20/40; 2	10					
				11					
				12					
				13					
				14					
				15					
				16					
				17					
				18					
				19					
				20					

water level

time

date

Top Soil

Sandy silt w/ clay, f. sand, v. hard, clay, non plastic, brittle, poorly graded, reddish brown

Increase in f. sand, mod soft, slightly damp

damp, soft, low to mod plasticity

Some black soil in last 1" of 3

Silty clay, damp, mod soft, mod to high plasticity

Sticky, some c. sand, poor to mod grading

black (contaminated)

4" layer of cemented clay and halite pieces

liner seen at 6'

Same as 4' but hard and slightly damp

to dry at top

4" side pocket of contaminated soil

End boring due to refusal

USCS lithology; Munsell color; sorting; grain size; lith. %s; modifiers; consistency; moisture.

EXPLORATORY BORING LOG

project no: C0002255.0001 date: 11 - 11 - 16 boring number: GP-11-2
 client: Kinder Morgan
 location: Cortez, CO
 logged by: B. Draeger
 filler/helper: Kyrek

page 1 of 1

field location of boring:

N: 775514.90'

E: -8645815.93

ground elevation: 6732.19'

datum: NAD 1983

drilling method: Hollow Stem Auger

hole diameter:

casing diameter:

well completion data:

boring/well construction	headspace: (FID) gas test	Conductivity FID ppm	sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level	time	date
	7.0	0.10	2	7	1					
	7.6	0.09	7	6	2	①				
	6.1	0.04	9	13	3					
	19.7	0.10	13	9	4	②				
	8.4	0.18	7	11	5					
	7.9	0.26	13	12	6					
	8.2	0.58	10	22/30; 3	7					
	7.4	1.71	30/35 11	17	8					
	6.0	2.14	17 19	15	9	③				
			15		10					
					11					
					12					
					13					
					14					
					15					
					16					
					17					
					18					
					19					
					20					

Top Soil

Sandy silt w/ clay, f. sand, v. hard, dry, non plastic / brittle, poorly graded, reddish brown

0920

Increase in f. sand, mod hard to mod soft

0940

Some whitish stained thin veins

Becomes v. dry, crumbly, and light reddish brown

Silt content increases, becomes damp, sticky, low plasticity, reddish brown
End Boring

0950

USCS lithology; Munsell color; sorting; grain size; lith. %s; modifiers; consistency; moisture.

EXPLORATORY BORING LOG

project no: C0002255.0001 date: 11 - 11 - 16 boring number: GP-11-3
 client: Kinder Morgan
 location: Cortez, CO
 logged by: B. Draeger
 filler/helper: Kyrek

page 1 of 1

field location of boring:

N: 775538.97'

E: ~~673177~~ - 8645860.32'

ground elevation: 6731.74

datum: NAD 1983

drilling method: Hollow Stem Auger

hole diameter:

casing diameter:

well completion data:

boring/well construction	headspace: (PID) gastech FID ppm	conductivity sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level	time	date
	9.1	0.05	4						
			6	1					
	7.8	0.07	8						
			6	2					
	12.1	0.13	8		①				
			10	3					
	9.7	0.48	10						
	FE		8	4					
	10.3	0.77	7						
			10	5					
	13.2	1.09	12						
			11	6					
	11.2	6.0	8						
			16	7					
	11.4	6.55	24						
			30, 5"	8					
	20.5	1.86	13		②				
			26	9					
	19.4	1.01	28						
			21	10					
	9.6	1.01	8						
			15	11					
	10.5	0.99	20						
			18	12					
	7.6	0.38	4		③				
			30, 5"	13					
				14					
				15					
				16					
				17					
				18					
				19					
				20					

water level

time

date

Top Soil

Sandy silt w/ clay, f. sand, v. hard, dry, non plastic, brittle, poorly graded, reddish brown

Increase to primarily silt

Becomes v. dry and somewhat crumbly

Sandy silt, f. to med sand, dry, non plastic, crumbly, v. poorly graded, med hard, light brown to tan

Transition between above unit and silt, slightly damp, sticky/low plastic, v. poorly graded, med hard

Two units have marbled texture

Sand, dry, loose, med to coarse, v. poorly graded, whitish tan

End boring due to refusal

USCS lithology; Munsell color; sorting; grain size; lith. %s; modifiers; consistency; moisture.

EXPLORATORY BORING LOG

project no: C0002255.0001 date: 11 - 11 - 16 boring number: GP-11-4
 client: Kinder Morgan
 location: Cortez, CO
 logged by: B. Draeger
 logger/helper: Kyvek

page 1 of 1

field location of boring:

N: 775584.07'

E: -8645846.88'

drilling method: Hollow Stem Auger

hole diameter:

casing diameter:

well completion data:

ground elevation: 6732.47'

datum: NAD 1983

boring/well construction	headspace: gas tech. FID ppm	Conductivity sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level	time	date
	4.3	0.10	4						
	6.0	0.09	12	1	①		Top Soil		
	2.8	0.05	8	2			Silt w/ f. sand, dry, hard, non-plastic, poorly graded, reddish brown		
	11.5	0.05	9	3			Increase in f. sand, hard but breaks in flakes, lighter reddish brown		
	14.4	0.06	6	4			Same as 6" - 2'		
	10.9	0.13	6	5					
	8.0	0.21	6	6					
	8.8	0.11	21	7					
	9.7	0.38	9	8			Marked transition to sandy silt, f. sand, v. dry, hard, crumbly, poorly graded light tannish brown		
	10.5	0.26	30	9			Becomes SAA but silty sand and v. loose and crumbly		
	16.4	0.09	7	10	②		Returns to marbled mix but v. hard		
	11.0	0.20	40	11	③				
			29/50; 3"	12			Base rock at top of 12'		
				13			End boring due to refusal		
				14					
				15					
				16					
				17					
				18					
				19					
				20					

1100

1120

1130

USCS lithology; Munsell color; sorting; grain size; lith. %s; modifiers; consistency; moisture.

EXPLORATORY BORING LOG

project no: C0002255.0001
 client: Kinder Morgan
 location: Cortez, CO
 logged by: B. Draeger
 filler/helper: Kyrek

date: 11 - 11 - 16

boring number:

GP-11-5

page 1 of 1

field location of boring:

N: 775612.11'

E: -8645781.71'

drilling method: Hollow Stem Auger

hole diameter:

casing diameter:

well completion data:

ground elevation: 6730.65'

datum: NAD 1983

boring/well construction	headspace: (PID) gastech FID ppm	conductivity sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level	time	date
	1.0	0.02	5						
	1.5	0.05	16	1					
	3.5	1.26	8 6	2	①				
	7.9	4.59	8 7	3					
	7.0	12.60	8 3	4					
	10.2	1.84	4 5	5					
	3.4	3.79	6	6					
	12.0	4.36	14	7	②				
	4.4	1.74	8	8					
	4.7	2.04	20	9	③				
			22	10					
			5	11					
			25	12					
			50; 5"						
			40; 1"						
				13					
				14					
				15					
				16					
				17					
				18					
				19					
				20					

water level

time

date

Top Soil

Gravelly Sandy Silt, Subrounded gravel, med sand, dry, hard, non-plastic, med grading, tanish brown

SAA but w/o gravel

1500

Contaminated soil

Sandy silt, dry, sticky for first 6", very hard and cemented for next 3", more sticky for next 3" (no substantial odor though)

Silty Sand, med sand, loose, dry, non-plastic, liner seen at interface (5.5'), v poorly graded, light brown

1530

Becomes lighter and more crumbly w/ depth

1545

Unit

Unit above becomes mixed w/ darker, softer, more cohesive silt

Not enough recovery for sample

End boring due to refusal

USCS lithology; Munsell color; sorting; grain size; lith. %s; modifiers; consistency; moisture.

EXPLORATORY BORING LOG

project no: C0002255.0001 date: 11 - 11 - 16 boring number: GP-11-6
 client: Kinder Morgan
 location: Cortez, CO
 logged by: B. Draeger
 logger/helper: Kyvek

page 1 of 1

field location of boring:

N: 775656.79'

E: -8645768.29'

drilling method: Hollow Stem Auger

hole diameter:

casing diameter:

well completion data:

ground elevation: 6731.50'

datum: NAD 1983

boring/well construction	headspace: (ft) gas tech (ft) FID ppm	Conductivity sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level	time	date
	0.03	0.10	3						
	1.2	0.08	8	1					
	1.2		10	2					
	3.7	0.27	10	3	①				
	40.8	0.31	16	4					
	41.6	0.28	20	5	②				
	39.7	0.65	15	6					
	28.2	0.50	10	7					
	20.7	1.60	8	8					
	6.0	2.0	4	9	③				
			4	10					
			14 / 30; 1"	11					
				12					
				13					
				14					
				15					
				16					
				17					
				18					
				19					
				20					

Top Soil

Sandy silt, v. dry, v. hard/compacted, f. sand, poorly graded, tanish brown

Unit above mixed w/ halite bearing contaminated soil

While not very visually obvious, strong odor indicates contamination

At base of 7', silt becomes v. sticky, moist, med to high plasticity (liner seen at 8' 3" (two pieces))

Sandstone bedrock

End boring due to refusal

USCS lithology; Munsell color; sorting; grain size; lith. %s; modifiers; consistency; moisture.

EXPLORATORY BORING LOG

project no: C0002255.0001 date: 11 - 11 - 16 boring number: GP-11-7
 client: Kinder Morgan
 location: Cortez, CO
 logged by: B. Draeger
 logger/helper: Kyvek

page 1 of 1

field location of boring:

N: 775679.61'

E: -86458.21'

drilling method: Hollow Stem Auger

hole diameter:

casing diameter:

well completion data:

ground elevation: 6732.79'

datum: NAD 1983

boring/well construction	headspace: gastech FID ppm	conductivity sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level	time	date
	6.8	0.10	2						
			4	1					
	11.2	0.4	5						
			4	2					
	13.3	1.47	5	①					
			8	3					
	29.7	0.16	14						
			12	4					
	45.2	1.27	8	②					
			16	5					
	43.3	2.60	15						
			9	6					
	30.5	6.72							
				7					
	12.5	8.0							
				8					
	19.1	2.25	3						
			8	9					
	12.7	0.61	15						
			17	10					
	10.3	0.34	11						
			17	11					
	6.3	0.39	24	③					
			30; 4" / 30; 2"	12					
				13					
				14					
				15					
				16					
				17					
				18					
				19					
				20					

top soil

Sandy silt, v. hard and dry, non plastic, poorly graded, reddish brown

4" layer of gravelly silty sand, dry, hard, fairly cohesive, med to well graded, gray gravel, brown silt/sand 1315

SAA bit becomes mixed w/ halite bearing grayish blackish contaminated soil

liner seen at 4' (divided over) 1320

liner seen again at 4' 2" (divided over)

Mix of silty unit and contaminated black halite bearing soil continues

Transitions back Sandy Silty, slightly soft, damp, some c. sand, non to low plastic, poorly graded, reddish brown

Silty sand, v dry and crumbly, poorly graded, non-plastic, light brown

Sandstone

End boring due to refusal 1345

USCS lithology; Munsell color; sorting; grain size; lith. %s; modifiers; consistency; moisture.

EXPLORATORY BORING LOG

project no: C0002255.0001 date: 11 - 11 - 16 boring number: GP-11-8
 client: Kinder Morgan
 location: Cortez, CO
 logged by: B. Draeger
 filler/helper: Kyvek

page 1 of 1

field location of boring:

N: 775634.14'

E: -8645832.39'

drilling method: Hollow Stem Auger

hole diameter:

casing diameter:

well completion data:

ground elevation: 6733.31'

datum: NAD 1983

boring/well construction	headspace: (P.D.) gas tech FID ppm	Conductivity sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level	time	date
	8.5	0.08	4						
			12	1					
	6.2	0.09	12						
			8	2					
	14.5	0.72	5		①				
			5	3					
	3.9	4.04	3						
			3	4					
	8.8	3.78	5						
			5	5					
	13.5	4.02	5						
			5	6					
	12.1	7.81	4						
			5	7					
	11.9	1.56	25						
			35	8					
	13.5	8.7	9		②				
			35	9					
	9.0	3.2	50; 4"/14						
			50; 5"	10					
	5.4	1.73	50; 5"		③				
			20; 2"	11					
				12					
				13					
				14					
				15					
				16					
				17					
				18					
				19					
				20					

Top Soil

Gravelly, silty sand, f. to c. sand, subrounded gravel, loose, dry, non-plastic, well graded, gray gravel and brown silty sand

Sandy silt, f. sand, damp, mod soft, non to low plastic, v. poorly graded, dark reddish brown

Shaky, between damp and moist, black staining (2" layer)

Same as 2'-9"0"

Marked texture transition (6") to next unit

Silty sand, v. dry and crumbly, mod hard but loose chunks, poorly graded, light brown

USCS lithology; Munsell color; sorting; grain size; lith. %s; modifiers; consistency; moisture.

ATTACHMENT C

Photo Log



Project Photographs

McElmo Dome
Cortez, Colorado



Photo: 1

Date:
11/11/16

Description:
Looking north

Location:
GP-11



Photo: 2

Date:
11/11/16

Description:
Looking east

Location:
GP-11

Project Photographs

McElmo Dome
Cortez, Colorado



Photo: 3

Date:
11/11/16

Description:
Looking south

Location:
GP-11



Photo: 4

Date:
11/11/16

Description:
Looking west

Location:
GP-11

Project Photographs

McElmo Dome
Cortez, Colorado



Photo: 5

Date:

11/11/16

Description:

Pocket of soil seen at ~8.5 feet bgs.

Location:

GP-11 (boring 1)



Photo: 6

Date:

11/11/16

Description:

Example of bedrock frequently encountered resulting in refusal – Image taken at a depth of ~12 feet bgs.

Location:

GP-11 (boring 4)

Project Photographs

McElmo Dome
Cortez, Colorado



Photo: 7

Date:
11/11/16

Description:
Soil and liner seen at ~5.5 feet
bgs.

Location:
GP-11 (boring 5)

ATTACHMENT D

Field Notes



DAILY LOG

Project No.: C0002255.0001

Page 1 of 1

Site Location: Cortez, CO

Prepared By: B. Draeger

Date	Time	Description of Activities
11/11/16	0700	Arrive at warehouse; One Calls did not come in for 50' locations; Ard to repack for Soil boring / logging / collecting
	0715	Depart for GP-11
	0745	Arrive; take GPS and site photos
	0800	Drillers arrive and begin Setup on GP-11-1
	0830	Began advancing GP-11-1
	0900	Hit refusal at 10' Contaminated soil seen from 4' to 7'6"; liner seen at 6' Moved to GP-11-2
	0920	Began advancing GP-11-2
	0950	Got to 9' w/o seeing contaminated soil; location called by Jimmy; began moving to GP-11-3
	1000	Set up and advancing at GP-11-3 Hit refusal at 13' No contaminated soil seen
	1030	began moving to GP-11-4
	1100	began advancing at GP-11-4
	1130	Hit refusal at 12' Contaminated soil not seen
	1145	Lunch Break
	1215	Moving to GP-11-8 Began advancing GP-11-8 Drillers had to change out some hoses on the rig
	1230	Began advancing GP-11-8
	1315	Hit refusal at 10'; partial recovery to 11' No contaminated soil seen; began moving to GP-11-7
	1350	Hit refusal at 12'; Contamination seen from 2' to 6.5' with two layers of doubled over liner (@ 4' and 4'2"); moved to GP-11-6
	1430	Hit refusal at 9'; liner seen just before refusal @ 8'3" (two pieces, not connected but stacked)
	1450	Moved to GP-11-5
	1545	Hit refusal at 12'; demob to warehouse
	1620	Drillers demob augers; collect TD info
	1630	Arcadis works on sample labeling and packing; drillers demob

ATTACHMENT E

Laboratory Analytical Reports





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December 02, 2016

Aaron Hale
Kinder Morgan
1001 Louisiana Street
Suite 740D
Houston, TX 77002

Work Order: **HS16110729**

Laboratory Results for: **McElmo Dome & Doe Canyon**

Dear Aaron,

ALS Environmental received 27 sample(s) on Nov 15, 2016 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

A handwritten signature in black ink that reads "Sonia West".

Generated By: Jumoke.Lawal
Sonia West
Project Manager

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16110729

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS16110729-01	GP-11-1-1-2-111116	Soil		11-Nov-2016 08:30	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-02	GP-11-1-5-6-111116	Soil		11-Nov-2016 08:45	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-03	GP-11-1-9-10-111116	Soil		11-Nov-2016 09:00	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-04	GP-11-2-1-2-111116	Soil		11-Nov-2016 09:20	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-05	GP-11-2-3-4-111116	Soil		11-Nov-2016 09:40	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-06	GP-11-2-8-9-111116	Soil		11-Nov-2016 09:50	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-07	GP-11-3-2-3-111116	Soil		11-Nov-2016 10:00	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-08	GP-11-3-8-9-111116	Soil		11-Nov-2016 10:15	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-09	Trip Blank - 100716-66	Water		11-Nov-2016 00:00	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-10	GP-11-3-12-13-111116	Soil		11-Nov-2016 10:30	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-11	GP-11-4-1-2-111116	Soil		11-Nov-2016 11:00	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-12	GP-11-4-10-11-111116	Soil		11-Nov-2016 11:20	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-13	GP-11-4-11-12-111116	Soil		11-Nov-2016 11:30	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-14	GP-11-5-2-3-111116	Soil		11-Nov-2016 15:00	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-15	GP-11-5-7-8-111116	Soil		11-Nov-2016 15:30	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-16	GP-11-5-9-10-111116	Soil		11-Nov-2016 15:45	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-17	GP-11-6-2-3-111116	Soil		11-Nov-2016 14:00	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-18	Trip Blank - 082916-95	Water		11-Nov-2016 00:00	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-19	GP-11-6-8-9-111116	Soil		11-Nov-2016 14:30	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-20	GP-11-6-4-5-111116	Soil		11-Nov-2016 14:15	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-21	GP-11-7-2-3-111116	Soil		11-Nov-2016 13:15	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-22	GP-11-7-4-5-111116	Soil		11-Nov-2016 13:20	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-23	GP-11-7-11-12-111116	Soil		11-Nov-2016 13:45	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-24	GP-11-8-2-3-111116	Soil		11-Nov-2016 12:50	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-25	GP-11-8-8-9-111116	Soil		11-Nov-2016 13:00	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-26	GP-11-8-10-11-111116	Soil		11-Nov-2016 13:10	15-Nov-2016 08:45	<input type="checkbox"/>
HS16110729-27	Trip Blank - 082916-94	Water		11-Nov-2016 00:00	15-Nov-2016 08:45	<input type="checkbox"/>

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16110729

CASE NARRATIVE

Work Order Comments

- Page 3 of the COC COC ID: 147531 (samples -19 to -26) have the ending of the sample id "-111116" omitted. The lab added this to the sample IDs for reporting purpose. Sample GP-11-2-8-9-111116 on the chain of custody was labeled (16oz jar only) as GP-11-2-3-4-111116. The lab identified this sample by the collection date and time and reported this sample as per the chain of custody. The Trip Blank samples are marked on the chain of custody for all analyses. The laboratory analyzed these samples for Volatile Organics 8260 only.

Work Order Comments

- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.
The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

GC Semivolatiles by Method SW8015M**Batch ID: 109920**

- Sample ID: **HS16110620-06MSD**
- MSD is for an unrelated sample

Batch ID: 110014

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GC Volatiles by Method SW8015**Batch ID: R284970,R284984**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260**Batch ID: R285031**

- Sample ID: **GP-11-1-5-6-111116 (HS16110729-02)**
- Surrogate failure due to sample matrix.

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R284973

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R285130

- Sample ID: **GP-11-3-2-3-111116 (HS16110729-07MS)**
- MS/MSD failed QC limits

- Sample ID: **GP-11-6-4-5-111116 (HS16110729-20)**
Sample ID: **GP-11-7-4-5-111116 (HS16110729-22)**
- Surrogate failure due to sample matrix.

Metals by Method La29B-6020**Batch ID: 110325,110326**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method Calculation**Batch ID: R285815**

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16110729

CASE NARRATIVE

Metals by Method Calculation**Batch ID: R285815**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method La29B SAR**Batch ID: 110325A,110326A**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW7471A**Batch ID: 110269,110270**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020**Batch ID: 110093**

Sample ID: **GP-11-7-11-12-111116 (HS16110729-23)**

Sample ID: **GP-11-8-2-3-111116 (HS16110729-24)**

- Boron ran at a 5X dilution due to internal standard failure at a 1X.

Sample ID: **GP-11-8-10-11-111116 (HS16110729-26)**

- Boron ran at a 5X due to internal standard failure at a 1X.

Sample ID: **GP-11-8-10-11-111116 (HS16110729-26)**

- Sample ran at a 5X dilution due to internal standard failure.

Sample ID: **GP-11-8-10-11-111116 (HS16110729-26BS)**

- The PDS recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount for Barium.

Sample ID: **GP-11-8-10-11-111116 (HS16110729-26MS)**

- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Barium

Sample ID: **GP-11-8-10-11-111116 (HS16110729-26MSD)**

- Boron failed on the MSD but passed on the MS and PDS.

Sample ID: **GP-11-8-10-11-111116 (HS16110729-26MSD)**

- Due to non-homogeneity of the soil sample matrix the MSD recoveries were outside the control limits for Arsenic, Chromium, Copper, Lead, Nickel and Zinc.

Batch ID: 110049

Sample ID: **GP-11-5-7-8-111116 (HS16110729-15)**

- Boron ran at a 5X dilution due to internal standard failure at a 1X.

Sample ID: **HS16110923-02MS**

- MS/MSD and DUPs are for an unrelated sample

WetChemistry by Method LaDNR-29B EC**Batch ID: R285812,R285813**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9045B**Batch ID: R285671,R285674**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16110729

CASE NARRATIVE

WetChemistry by Method LaDNR-29B SP

Batch ID: R285798,R285801

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW3550

Batch ID: R285169,R285282

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW7196

Batch ID: 110272,110286

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-1-1-2-111116
 Collection Date: 11-Nov-2016 08:30

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-01
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	18-Nov-2016 03:23
Ethylbenzene	ND		5.0	ug/Kg	1	18-Nov-2016 03:23
m,p-Xylene	ND		10	ug/Kg	1	18-Nov-2016 03:23
o-Xylene	ND		5.0	ug/Kg	1	18-Nov-2016 03:23
Toluene	ND		5.0	ug/Kg	1	18-Nov-2016 03:23
Xylenes, Total	ND		10	ug/Kg	1	18-Nov-2016 03:23
Surr: 1,2-Dichloroethane-d4	108		70-128	%REC	1	18-Nov-2016 03:23
Surr: 4-Bromofluorobenzene	103		73-126	%REC	1	18-Nov-2016 03:23
Surr: Dibromofluoromethane	102		71-128	%REC	1	18-Nov-2016 03:23
Surr: Toluene-d8	101		73-127	%REC	1	18-Nov-2016 03:23
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Nov-2016 17:52
Surr: 4-Bromofluorobenzene	85.3		70-130	%REC	1	16-Nov-2016 17:52
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 16-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	22-Nov-2016 22:50
Surr: 2-Fluorobiphenyl	93.9		60-135	%REC	1	22-Nov-2016 22:50
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	6.81		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	0.896		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	27.6		5.00	mg/L	10	01-Dec-2016 12:51
Magnesium	13.6		5.00	mg/L	10	01-Dec-2016 12:51
Sodium	23.0		5.00	mg/L	10	01-Dec-2016 12:51
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	2.64		0.472	mg/Kg	1	22-Nov-2016 19:15
Barium	185		2.36	mg/Kg	5	23-Nov-2016 13:06
Boron	5.86		2.36	mg/Kg	1	22-Nov-2016 19:15
Cadmium	ND		0.472	mg/Kg	1	22-Nov-2016 19:15
Chromium	6.81		0.472	mg/Kg	1	22-Nov-2016 19:15
Copper	4.95		0.189	mg/Kg	1	22-Nov-2016 19:15
Lead	5.18		0.472	mg/Kg	1	22-Nov-2016 19:15
Nickel	7.72		0.472	mg/Kg	1	22-Nov-2016 19:15
Selenium	ND		0.472	mg/Kg	1	22-Nov-2016 19:15
Silver	ND		0.472	mg/Kg	1	22-Nov-2016 19:15
Zinc	19.6		0.472	mg/Kg	1	22-Nov-2016 19:15
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	15.8		3.41	ug/Kg	1	30-Nov-2016 15:47

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-1-1-2-111116
 Collection Date: 11-Nov-2016 08:30

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-01
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	0.651		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	0.355		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.545		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.545		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	8.10		0.0100	wt%	1	18-Nov-2016 11:41
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.86	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.4	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-1-5-6-111116
 Collection Date: 11-Nov-2016 08:45

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-02
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	18-Nov-2016 03:46
Ethylbenzene	ND		4.8	ug/Kg	1	18-Nov-2016 03:46
m,p-Xylene	13		9.7	ug/Kg	1	18-Nov-2016 03:46
o-Xylene	ND		4.8	ug/Kg	1	18-Nov-2016 03:46
Toluene	19		4.8	ug/Kg	1	18-Nov-2016 03:46
Xylenes, Total	16		9.7	ug/Kg	1	18-Nov-2016 03:46
Surr: 1,2-Dichloroethane-d4	94.1		70-128	%REC	1	18-Nov-2016 03:46
Surr: 4-Bromofluorobenzene	97.6		73-126	%REC	1	18-Nov-2016 03:46
Surr: Dibromofluoromethane	53.0	S	71-128	%REC	1	18-Nov-2016 03:46
Surr: Toluene-d8	104		73-127	%REC	1	18-Nov-2016 03:46
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	0.65		0.050	mg/Kg	1	16-Nov-2016 18:40
Surr: 4-Bromofluorobenzene	90.6		70-130	%REC	1	16-Nov-2016 18:40
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 16-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	24		1.7	mg/Kg	1	22-Nov-2016 23:15
Surr: 2-Fluorobiphenyl	63.3		60-135	%REC	1	22-Nov-2016 23:15
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	12.5		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	126		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	2,840		250	mg/L	500	01-Dec-2016 14:38
Magnesium	ND		5.00	mg/L	10	01-Dec-2016 12:54
Sodium	24,400		250	mg/L	500	01-Dec-2016 14:38
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	4.19		0.483	mg/Kg	1	22-Nov-2016 19:19
Barium	117		0.483	mg/Kg	1	22-Nov-2016 19:19
Boron	16.6		2.41	mg/Kg	1	22-Nov-2016 19:19
Cadmium	ND		0.483	mg/Kg	1	22-Nov-2016 19:19
Chromium	12.5		0.483	mg/Kg	1	22-Nov-2016 19:19
Copper	7.70		0.193	mg/Kg	1	22-Nov-2016 19:19
Lead	5.70		0.483	mg/Kg	1	22-Nov-2016 19:19
Nickel	11.2		0.483	mg/Kg	1	22-Nov-2016 19:19
Selenium	1.59		0.483	mg/Kg	1	22-Nov-2016 19:19
Silver	ND		0.483	mg/Kg	1	22-Nov-2016 19:19
Zinc	666		4.83	mg/Kg	10	23-Nov-2016 13:10
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	12.1		3.50	ug/Kg	1	30-Nov-2016 15:49

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-1-5-6-111116
 Collection Date: 11-Nov-2016 08:45

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-02
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	279		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	157		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.563		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.563		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	22.0		0.0100	wt%	1	18-Nov-2016 11:41
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	12.0	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.4	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-1-9-10-111116
 Collection Date: 11-Nov-2016 09:00

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-03
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.9	ug/Kg	1	18-Nov-2016 04:09
Ethylbenzene	ND		4.9	ug/Kg	1	18-Nov-2016 04:09
m,p-Xylene	ND		9.8	ug/Kg	1	18-Nov-2016 04:09
o-Xylene	ND		4.9	ug/Kg	1	18-Nov-2016 04:09
Toluene	ND		4.9	ug/Kg	1	18-Nov-2016 04:09
Xylenes, Total	ND		9.8	ug/Kg	1	18-Nov-2016 04:09
Surr: 1,2-Dichloroethane-d4	113		70-128	%REC	1	18-Nov-2016 04:09
Surr: 4-Bromofluorobenzene	105		73-126	%REC	1	18-Nov-2016 04:09
Surr: Dibromofluoromethane	110		71-128	%REC	1	18-Nov-2016 04:09
Surr: Toluene-d8	104		73-127	%REC	1	18-Nov-2016 04:09
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Nov-2016 18:56
Surr: 4-Bromofluorobenzene	89.2		70-130	%REC	1	16-Nov-2016 18:56
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 16-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	2.4		1.7	mg/Kg	1	18-Nov-2016 23:39
Surr: 2-Fluorobiphenyl	68.6		60-135	%REC	1	18-Nov-2016 23:39
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	86.5		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	722		5.00	mg/L	10	01-Dec-2016 12:57
Magnesium	165		5.00	mg/L	10	01-Dec-2016 12:57
Sodium	9,900		50.0	mg/L	100	01-Dec-2016 14:41
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	2.48		0.468	mg/Kg	1	22-Nov-2016 19:24
Barium	106		0.468	mg/Kg	1	22-Nov-2016 19:24
Boron	3.91		2.34	mg/Kg	1	22-Nov-2016 19:24
Cadmium	ND		0.468	mg/Kg	1	22-Nov-2016 19:24
Chromium	4.29		0.468	mg/Kg	1	22-Nov-2016 19:24
Copper	3.60		0.187	mg/Kg	1	22-Nov-2016 19:24
Lead	3.94		0.468	mg/Kg	1	22-Nov-2016 19:24
Nickel	5.13		0.468	mg/Kg	1	22-Nov-2016 19:24
Selenium	ND		0.468	mg/Kg	1	22-Nov-2016 19:24
Silver	ND		0.468	mg/Kg	1	22-Nov-2016 19:24
Zinc	15.2		0.468	mg/Kg	1	22-Nov-2016 19:24
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	13.6		3.50	ug/Kg	1	30-Nov-2016 15:51

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-1-9-10-111116
 Collection Date: 11-Nov-2016 09:00

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-03
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	145		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	61.1		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.420		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.420		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	12.3		0.0100	wt%	1	18-Nov-2016 11:41
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.27	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.4	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-2-1-2-111116
 Collection Date: 11-Nov-2016 09:20

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-04
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	18-Nov-2016 04:32
Ethylbenzene	ND		5.0	ug/Kg	1	18-Nov-2016 04:32
m,p-Xylene	ND		10	ug/Kg	1	18-Nov-2016 04:32
o-Xylene	ND		5.0	ug/Kg	1	18-Nov-2016 04:32
Toluene	ND		5.0	ug/Kg	1	18-Nov-2016 04:32
Xylenes, Total	ND		10	ug/Kg	1	18-Nov-2016 04:32
Surr: 1,2-Dichloroethane-d4	94.7		70-128	%REC	1	18-Nov-2016 04:32
Surr: 4-Bromofluorobenzene	98.9		73-126	%REC	1	18-Nov-2016 04:32
Surr: Dibromofluoromethane	94.9		71-128	%REC	1	18-Nov-2016 04:32
Surr: Toluene-d8	102		73-127	%REC	1	18-Nov-2016 04:32
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Nov-2016 19:28
Surr: 4-Bromofluorobenzene	83.3		70-130	%REC	1	16-Nov-2016 19:28
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 16-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	2.6		1.7	mg/Kg	1	18-Nov-2016 00:03
Surr: 2-Fluorobiphenyl	84.8		60-135	%REC	1	18-Nov-2016 00:03
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	7.57		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	1.47		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	33.1		5.00	mg/L	10	01-Dec-2016 13:00
Magnesium	12.8		5.00	mg/L	10	01-Dec-2016 13:00
Sodium	39.3		5.00	mg/L	10	01-Dec-2016 13:00
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	2.93		0.463	mg/Kg	1	22-Nov-2016 19:28
Barium	179		2.32	mg/Kg	5	23-Nov-2016 13:15
Boron	5.12		2.32	mg/Kg	1	22-Nov-2016 19:28
Cadmium	ND		0.463	mg/Kg	1	22-Nov-2016 19:28
Chromium	7.57		0.463	mg/Kg	1	22-Nov-2016 19:28
Copper	6.04		0.185	mg/Kg	1	22-Nov-2016 19:28
Lead	6.25		0.463	mg/Kg	1	22-Nov-2016 19:28
Nickel	8.35		0.463	mg/Kg	1	22-Nov-2016 19:28
Selenium	0.521		0.463	mg/Kg	1	22-Nov-2016 19:28
Silver	ND		0.463	mg/Kg	1	22-Nov-2016 19:28
Zinc	22.4		0.463	mg/Kg	1	22-Nov-2016 19:28
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	12.8		3.58	ug/Kg	1	30-Nov-2016 16:01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-2-1-2-111116
 Collection Date: 11-Nov-2016 09:20

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-04
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	0.764		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	0.399		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.523		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.523		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	8.18		0.0100	wt%	1	18-Nov-2016 11:41
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.89	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.4	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-2-3-4-111116
 Collection Date: 11-Nov-2016 09:40

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-05
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	18-Nov-2016 04:55
Ethylbenzene	ND		4.8	ug/Kg	1	18-Nov-2016 04:55
m,p-Xylene	ND		9.5	ug/Kg	1	18-Nov-2016 04:55
o-Xylene	ND		4.8	ug/Kg	1	18-Nov-2016 04:55
Toluene	ND		4.8	ug/Kg	1	18-Nov-2016 04:55
Xylenes, Total	ND		9.5	ug/Kg	1	18-Nov-2016 04:55
Surr: 1,2-Dichloroethane-d4	110		70-128	%REC	1	18-Nov-2016 04:55
Surr: 4-Bromofluorobenzene	103		73-126	%REC	1	18-Nov-2016 04:55
Surr: Dibromofluoromethane	104		71-128	%REC	1	18-Nov-2016 04:55
Surr: Toluene-d8	101		73-127	%REC	1	18-Nov-2016 04:55
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Nov-2016 19:44
Surr: 4-Bromofluorobenzene	88.7		70-130	%REC	1	16-Nov-2016 19:44
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 16-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	2.4		1.7	mg/Kg	1	18-Nov-2016 00:27
Surr: 2-Fluorobiphenyl	67.5		60-135	%REC	1	18-Nov-2016 00:27
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	7.70		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	0.466		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	66.8		5.00	mg/L	10	01-Dec-2016 13:03
Magnesium	32.1		5.00	mg/L	10	01-Dec-2016 13:03
Sodium	18.5		5.00	mg/L	10	01-Dec-2016 13:03
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	2.43		0.471	mg/Kg	1	22-Nov-2016 19:33
Barium	128		0.471	mg/Kg	1	22-Nov-2016 19:33
Boron	3.11		2.35	mg/Kg	1	22-Nov-2016 19:33
Cadmium	ND		0.471	mg/Kg	1	22-Nov-2016 19:33
Chromium	7.70		0.471	mg/Kg	1	22-Nov-2016 19:33
Copper	6.36		0.188	mg/Kg	1	22-Nov-2016 19:33
Lead	6.41		0.471	mg/Kg	1	22-Nov-2016 19:33
Nickel	8.81		0.471	mg/Kg	1	22-Nov-2016 19:33
Selenium	0.476		0.471	mg/Kg	1	22-Nov-2016 19:33
Silver	ND		0.471	mg/Kg	1	22-Nov-2016 19:33
Zinc	22.8		0.471	mg/Kg	1	22-Nov-2016 19:33
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	17.3		3.44	ug/Kg	1	30-Nov-2016 16:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-2-3-4-111116
 Collection Date: 11-Nov-2016 09:40

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-05
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	1.60		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	0.825		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.514		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.514		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	8.49		0.0100	wt%	1	18-Nov-2016 11:41
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		1.99	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.29	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.3	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-2-8-9-111116
 Collection Date: 11-Nov-2016 09:50

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-06
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.7	ug/Kg	1	18-Nov-2016 05:19
Ethylbenzene	ND		4.7	ug/Kg	1	18-Nov-2016 05:19
m,p-Xylene	ND		9.4	ug/Kg	1	18-Nov-2016 05:19
o-Xylene	ND		4.7	ug/Kg	1	18-Nov-2016 05:19
Toluene	ND		4.7	ug/Kg	1	18-Nov-2016 05:19
Xylenes, Total	ND		9.4	ug/Kg	1	18-Nov-2016 05:19
Surr: 1,2-Dichloroethane-d4	104		70-128	%REC	1	18-Nov-2016 05:19
Surr: 4-Bromofluorobenzene	101		73-126	%REC	1	18-Nov-2016 05:19
Surr: Dibromofluoromethane	103		71-128	%REC	1	18-Nov-2016 05:19
Surr: Toluene-d8	103		73-127	%REC	1	18-Nov-2016 05:19
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Nov-2016 20:00
Surr: 4-Bromofluorobenzene	90.6		70-130	%REC	1	16-Nov-2016 20:00
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 16-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	18-Nov-2016 00:52
Surr: 2-Fluorobiphenyl	62.5		60-135	%REC	1	18-Nov-2016 00:52
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	5.37		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	6.88		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	185		5.00	mg/L	10	01-Dec-2016 13:06
Magnesium	180		5.00	mg/L	10	01-Dec-2016 13:06
Sodium	548		5.00	mg/L	10	01-Dec-2016 13:06
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	2.41		0.466	mg/Kg	1	22-Nov-2016 19:37
Barium	147		2.33	mg/Kg	5	23-Nov-2016 13:19
Boron	4.02		2.33	mg/Kg	1	22-Nov-2016 19:37
Cadmium	ND		0.466	mg/Kg	1	22-Nov-2016 19:37
Chromium	5.37		0.466	mg/Kg	1	22-Nov-2016 19:37
Copper	5.98		0.186	mg/Kg	1	22-Nov-2016 19:37
Lead	5.76		0.466	mg/Kg	1	22-Nov-2016 19:37
Nickel	7.24		0.466	mg/Kg	1	22-Nov-2016 19:37
Selenium	ND		0.466	mg/Kg	1	22-Nov-2016 19:37
Silver	ND		0.466	mg/Kg	1	22-Nov-2016 19:37
Zinc	19.3		0.466	mg/Kg	1	22-Nov-2016 19:37
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	11.0		3.54	ug/Kg	1	30-Nov-2016 16:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-2-8-9-111116
 Collection Date: 11-Nov-2016 09:50

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-06
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	13.0		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	6.21		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.479		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.479		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	13.7		0.0100	wt%	1	18-Nov-2016 11:41
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.15	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.3	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-3-2-3-111116
 Collection Date: 11-Nov-2016 10:00

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-07
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		5.1	ug/Kg	1	18-Nov-2016 21:35
Ethylbenzene	ND		5.1	ug/Kg	1	18-Nov-2016 21:35
m,p-Xylene	ND		10	ug/Kg	1	18-Nov-2016 21:35
o-Xylene	ND		5.1	ug/Kg	1	18-Nov-2016 21:35
Toluene	ND		5.1	ug/Kg	1	18-Nov-2016 21:35
Xylenes, Total	ND		10	ug/Kg	1	18-Nov-2016 21:35
Surr: 1,2-Dichloroethane-d4	89.8		70-128	%REC	1	18-Nov-2016 21:35
Surr: 4-Bromofluorobenzene	95.6		73-126	%REC	1	18-Nov-2016 21:35
Surr: Dibromofluoromethane	89.5		71-128	%REC	1	18-Nov-2016 21:35
Surr: Toluene-d8	101		73-127	%REC	1	18-Nov-2016 21:35
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Nov-2016 20:16
Surr: 4-Bromofluorobenzene	87.0		70-130	%REC	1	16-Nov-2016 20:16
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 16-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	19-Nov-2016 01:16
Surr: 2-Fluorobiphenyl	73.8		60-135	%REC	1	19-Nov-2016 01:16
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	7.93		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	0.842		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	28.1		5.00	mg/L	10	01-Dec-2016 13:15
Magnesium	8.39		5.00	mg/L	10	01-Dec-2016 13:15
Sodium	19.8		5.00	mg/L	10	01-Dec-2016 13:15
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	2.79		0.457	mg/Kg	1	22-Nov-2016 19:42
Barium	162		0.457	mg/Kg	1	22-Nov-2016 19:42
Boron	3.66		2.28	mg/Kg	1	22-Nov-2016 19:42
Cadmium	ND		0.457	mg/Kg	1	22-Nov-2016 19:42
Chromium	7.93		0.457	mg/Kg	1	22-Nov-2016 19:42
Copper	7.25		0.183	mg/Kg	1	22-Nov-2016 19:42
Lead	6.77		0.457	mg/Kg	1	22-Nov-2016 19:42
Nickel	8.40		0.457	mg/Kg	1	22-Nov-2016 19:42
Selenium	0.474		0.457	mg/Kg	1	22-Nov-2016 19:42
Silver	ND		0.457	mg/Kg	1	22-Nov-2016 19:42
Zinc	26.2		0.457	mg/Kg	1	22-Nov-2016 19:42
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	13.8		3.48	ug/Kg	1	30-Nov-2016 16:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-3-2-3-111116
 Collection Date: 11-Nov-2016 10:00

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-07
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	0.595		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	0.288		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.483		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.483		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	7.10		0.0100	wt%	1	18-Nov-2016 11:41
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.73	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.3	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-3-8-9-111116
 Collection Date: 11-Nov-2016 10:15

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-08
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	18-Nov-2016 21:58
Ethylbenzene	ND		4.8	ug/Kg	1	18-Nov-2016 21:58
m,p-Xylene	ND		9.6	ug/Kg	1	18-Nov-2016 21:58
o-Xylene	ND		4.8	ug/Kg	1	18-Nov-2016 21:58
Toluene	ND		4.8	ug/Kg	1	18-Nov-2016 21:58
Xylenes, Total	ND		9.6	ug/Kg	1	18-Nov-2016 21:58
Surr: 1,2-Dichloroethane-d4	91.7		70-128	%REC	1	18-Nov-2016 21:58
Surr: 4-Bromofluorobenzene	99.8		73-126	%REC	1	18-Nov-2016 21:58
Surr: Dibromofluoromethane	93.6		71-128	%REC	1	18-Nov-2016 21:58
Surr: Toluene-d8	105		73-127	%REC	1	18-Nov-2016 21:58
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Nov-2016 20:32
Surr: 4-Bromofluorobenzene	84.0		70-130	%REC	1	16-Nov-2016 20:32
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 16-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	19-Nov-2016 01:41
Surr: 2-Fluorobiphenyl	62.3		60-135	%REC	1	19-Nov-2016 01:41
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	7.14		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	0.901		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	109		5.00	mg/L	10	01-Dec-2016 13:18
Magnesium	48.0		5.00	mg/L	10	01-Dec-2016 13:18
Sodium	44.9		5.00	mg/L	10	01-Dec-2016 13:18
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	3.23		0.465	mg/Kg	1	22-Nov-2016 19:55
Barium	172		2.33	mg/Kg	5	23-Nov-2016 13:24
Boron	5.18		2.33	mg/Kg	1	22-Nov-2016 19:55
Cadmium	ND		0.465	mg/Kg	1	22-Nov-2016 19:55
Chromium	7.14		0.465	mg/Kg	1	22-Nov-2016 19:55
Copper	5.24		0.186	mg/Kg	1	22-Nov-2016 19:55
Lead	5.67		0.465	mg/Kg	1	22-Nov-2016 19:55
Nickel	8.12		0.465	mg/Kg	1	22-Nov-2016 19:55
Selenium	0.516		0.465	mg/Kg	1	22-Nov-2016 19:55
Silver	ND		0.465	mg/Kg	1	22-Nov-2016 19:55
Zinc	22.4		0.465	mg/Kg	1	22-Nov-2016 19:55
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	11.7		3.43	ug/Kg	1	30-Nov-2016 16:14

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-3-8-9-111116
 Collection Date: 11-Nov-2016 10:15

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-08
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	2.63		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	1.44		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.545		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.545		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	11.8		0.0100	wt%	1	18-Nov-2016 11:41
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.44	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.3	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: Trip Blank - 100716-66
Collection Date: 11-Nov-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16110729
Lab ID:HS16110729-09
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP		
Benzene	ND		1.0	ug/L	1	16-Nov-2016 16:05
Ethylbenzene	ND		1.0	ug/L	1	16-Nov-2016 16:05
m,p-Xylene	ND		2.0	ug/L	1	16-Nov-2016 16:05
o-Xylene	ND		1.0	ug/L	1	16-Nov-2016 16:05
Toluene	ND		1.0	ug/L	1	16-Nov-2016 16:05
Xylenes, Total	ND		1.0	ug/L	1	16-Nov-2016 16:05
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>102</i>		<i>71-125</i>	<i>%REC</i>	<i>1</i>	<i>16-Nov-2016 16:05</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>96.7</i>		<i>70-125</i>	<i>%REC</i>	<i>1</i>	<i>16-Nov-2016 16:05</i>
<i>Surr: Dibromofluoromethane</i>	<i>108</i>		<i>74-125</i>	<i>%REC</i>	<i>1</i>	<i>16-Nov-2016 16:05</i>
<i>Surr: Toluene-d8</i>	<i>108</i>		<i>75-125</i>	<i>%REC</i>	<i>1</i>	<i>16-Nov-2016 16:05</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-3-12-13-111116
 Collection Date: 11-Nov-2016 10:30

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-10
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	18-Nov-2016 22:21
Ethylbenzene	ND		4.8	ug/Kg	1	18-Nov-2016 22:21
m,p-Xylene	ND		9.6	ug/Kg	1	18-Nov-2016 22:21
o-Xylene	ND		4.8	ug/Kg	1	18-Nov-2016 22:21
Toluene	ND		4.8	ug/Kg	1	18-Nov-2016 22:21
Xylenes, Total	ND		9.6	ug/Kg	1	18-Nov-2016 22:21
Surr: 1,2-Dichloroethane-d4	99.3		70-128	%REC	1	18-Nov-2016 22:21
Surr: 4-Bromofluorobenzene	101		73-126	%REC	1	18-Nov-2016 22:21
Surr: Dibromofluoromethane	101		71-128	%REC	1	18-Nov-2016 22:21
Surr: Toluene-d8	104		73-127	%REC	1	18-Nov-2016 22:21
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Nov-2016 20:48
Surr: 4-Bromofluorobenzene	84.6		70-130	%REC	1	16-Nov-2016 20:48
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 16-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	19-Nov-2016 02:05
Surr: 2-Fluorobiphenyl	61.0		60-135	%REC	1	19-Nov-2016 02:05
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	1.44		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	71.0		5.00	mg/L	10	01-Dec-2016 13:21
Magnesium	44.1		5.00	mg/L	10	01-Dec-2016 13:21
Sodium	62.8		5.00	mg/L	10	01-Dec-2016 13:21
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	3.79		0.474	mg/Kg	1	22-Nov-2016 20:00
Barium	120		0.474	mg/Kg	1	22-Nov-2016 20:00
Boron	2.82		2.37	mg/Kg	1	22-Nov-2016 20:00
Cadmium	ND		0.474	mg/Kg	1	22-Nov-2016 20:00
Chromium	3.32		0.474	mg/Kg	1	22-Nov-2016 20:00
Copper	3.23		0.190	mg/Kg	1	22-Nov-2016 20:00
Lead	3.49		0.474	mg/Kg	1	22-Nov-2016 20:00
Nickel	5.00		0.474	mg/Kg	1	22-Nov-2016 20:00
Selenium	ND		0.474	mg/Kg	1	22-Nov-2016 20:00
Silver	ND		0.474	mg/Kg	1	22-Nov-2016 20:00
Zinc	10.9		0.474	mg/Kg	1	22-Nov-2016 20:00
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	11.6		3.37	ug/Kg	1	30-Nov-2016 16:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-3-12-13-111116
 Collection Date: 11-Nov-2016 10:30

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-10
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	2.97		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	1.26		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.425		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.425		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	12.0		0.0100	wt%	1	18-Nov-2016 11:41
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.43	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.5	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-4-1-2-111116
 Collection Date: 11-Nov-2016 11:00

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-11
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.9	ug/Kg	1	18-Nov-2016 23:31
Ethylbenzene	ND		4.9	ug/Kg	1	18-Nov-2016 23:31
m,p-Xylene	ND		9.8	ug/Kg	1	18-Nov-2016 23:31
o-Xylene	ND		4.9	ug/Kg	1	18-Nov-2016 23:31
Toluene	ND		4.9	ug/Kg	1	18-Nov-2016 23:31
Xylenes, Total	ND		9.8	ug/Kg	1	18-Nov-2016 23:31
Surr: 1,2-Dichloroethane-d4	89.9		70-128	%REC	1	18-Nov-2016 23:31
Surr: 4-Bromofluorobenzene	98.0		73-126	%REC	1	18-Nov-2016 23:31
Surr: Dibromofluoromethane	91.7		71-128	%REC	1	18-Nov-2016 23:31
Surr: Toluene-d8	102		73-127	%REC	1	18-Nov-2016 23:31
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Nov-2016 21:04
Surr: 4-Bromofluorobenzene	84.3		70-130	%REC	1	16-Nov-2016 21:04
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 16-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	19-Nov-2016 02:30
Surr: 2-Fluorobiphenyl	63.3		60-135	%REC	1	19-Nov-2016 02:30
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	7.33		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	3.74		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	239		5.00	mg/L	10	01-Dec-2016 13:24
Magnesium	46.4		5.00	mg/L	10	01-Dec-2016 13:24
Sodium	241		5.00	mg/L	10	01-Dec-2016 13:24
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	2.82		0.459	mg/Kg	1	22-Nov-2016 20:04
Barium	162		0.459	mg/Kg	1	22-Nov-2016 20:04
Boron	3.02		2.29	mg/Kg	1	22-Nov-2016 20:04
Cadmium	ND		0.459	mg/Kg	1	22-Nov-2016 20:04
Chromium	7.33		0.459	mg/Kg	1	22-Nov-2016 20:04
Copper	6.72		0.183	mg/Kg	1	22-Nov-2016 20:04
Lead	6.51		0.459	mg/Kg	1	22-Nov-2016 20:04
Nickel	7.81		0.459	mg/Kg	1	22-Nov-2016 20:04
Selenium	ND		0.459	mg/Kg	1	22-Nov-2016 20:04
Silver	ND		0.459	mg/Kg	1	22-Nov-2016 20:04
Zinc	22.4		0.459	mg/Kg	1	22-Nov-2016 20:04
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	12.7		3.49	ug/Kg	1	30-Nov-2016 16:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-4-1-2-111116
 Collection Date: 11-Nov-2016 11:00

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-11
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	7.35		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	3.65		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.496		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.496		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	8.94		0.0100	wt%	1	18-Nov-2016 11:41
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	7.41	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.4	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-4-10-11-111116
 Collection Date: 11-Nov-2016 11:20

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-12
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		5.1	ug/Kg	1	18-Nov-2016 23:54
Ethylbenzene	ND		5.1	ug/Kg	1	18-Nov-2016 23:54
m,p-Xylene	ND		10	ug/Kg	1	18-Nov-2016 23:54
o-Xylene	ND		5.1	ug/Kg	1	18-Nov-2016 23:54
Toluene	ND		5.1	ug/Kg	1	18-Nov-2016 23:54
Xylenes, Total	ND		10	ug/Kg	1	18-Nov-2016 23:54
Surr: 1,2-Dichloroethane-d4	86.9		70-128	%REC	1	18-Nov-2016 23:54
Surr: 4-Bromofluorobenzene	99.2		73-126	%REC	1	18-Nov-2016 23:54
Surr: Dibromofluoromethane	87.6		71-128	%REC	1	18-Nov-2016 23:54
Surr: Toluene-d8	105		73-127	%REC	1	18-Nov-2016 23:54
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Nov-2016 21:20
Surr: 4-Bromofluorobenzene	85.5		70-130	%REC	1	16-Nov-2016 21:20
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 16-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	2.1		1.7	mg/Kg	1	19-Nov-2016 02:54
Surr: 2-Fluorobiphenyl	71.3		60-135	%REC	1	19-Nov-2016 02:54
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	6.28		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	5.28		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	859		4.99	mg/L	10	01-Dec-2016 13:27
Magnesium	324		4.99	mg/L	10	01-Dec-2016 13:27
Sodium	715		4.99	mg/L	10	01-Dec-2016 13:27
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	2.52		0.475	mg/Kg	1	22-Nov-2016 20:09
Barium	338		2.37	mg/Kg	5	23-Nov-2016 13:28
Boron	5.86		2.37	mg/Kg	1	22-Nov-2016 20:09
Cadmium	ND		0.475	mg/Kg	1	22-Nov-2016 20:09
Chromium	6.28		0.475	mg/Kg	1	22-Nov-2016 20:09
Copper	3.98		0.190	mg/Kg	1	22-Nov-2016 20:09
Lead	3.93		0.475	mg/Kg	1	22-Nov-2016 20:09
Nickel	6.51		0.475	mg/Kg	1	22-Nov-2016 20:09
Selenium	ND		0.475	mg/Kg	1	22-Nov-2016 20:09
Silver	ND		0.475	mg/Kg	1	22-Nov-2016 20:09
Zinc	16.6		0.475	mg/Kg	1	22-Nov-2016 20:09
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	25.0		3.56	ug/Kg	1	30-Nov-2016 16:19

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-4-10-11-111116
 Collection Date: 11-Nov-2016 11:20

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-12
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	27.3		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	13.5		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.495		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.495		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	16.4		0.0100	wt%	1	18-Nov-2016 11:41
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		1.99	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.12	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.4	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-4-11-12-111116
 Collection Date: 11-Nov-2016 11:30

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-13
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.9	ug/Kg	1	19-Nov-2016 00:17
Ethylbenzene	ND		4.9	ug/Kg	1	19-Nov-2016 00:17
m,p-Xylene	ND		9.8	ug/Kg	1	19-Nov-2016 00:17
o-Xylene	ND		4.9	ug/Kg	1	19-Nov-2016 00:17
Toluene	ND		4.9	ug/Kg	1	19-Nov-2016 00:17
Xylenes, Total	ND		9.8	ug/Kg	1	19-Nov-2016 00:17
Surr: 1,2-Dichloroethane-d4	95.9		70-128	%REC	1	19-Nov-2016 00:17
Surr: 4-Bromofluorobenzene	99.6		73-126	%REC	1	19-Nov-2016 00:17
Surr: Dibromofluoromethane	99.8		71-128	%REC	1	19-Nov-2016 00:17
Surr: Toluene-d8	102		73-127	%REC	1	19-Nov-2016 00:17
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Nov-2016 21:36
Surr: 4-Bromofluorobenzene	85.8		70-130	%REC	1	16-Nov-2016 21:36
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 16-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	19-Nov-2016 03:19
Surr: 2-Fluorobiphenyl	74.1		60-135	%REC	1	19-Nov-2016 03:19
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	2.88		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	79.1		5.00	mg/L	10	01-Dec-2016 13:30
Magnesium	69.8		5.00	mg/L	10	01-Dec-2016 13:30
Sodium	146		5.00	mg/L	10	01-Dec-2016 13:30
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	2.33		0.474	mg/Kg	1	22-Nov-2016 20:13
Barium	198		2.37	mg/Kg	5	23-Nov-2016 13:44
Boron	ND		11.8	mg/Kg	5	23-Nov-2016 13:44
Cadmium	ND		0.474	mg/Kg	1	22-Nov-2016 20:13
Chromium	2.23		0.474	mg/Kg	1	22-Nov-2016 20:13
Copper	3.63		0.190	mg/Kg	1	22-Nov-2016 20:13
Lead	2.02		0.474	mg/Kg	1	22-Nov-2016 20:13
Nickel	2.79		0.474	mg/Kg	1	22-Nov-2016 20:13
Selenium	ND		0.474	mg/Kg	1	22-Nov-2016 20:13
Silver	ND		0.474	mg/Kg	1	22-Nov-2016 20:13
Zinc	9.18		0.474	mg/Kg	1	22-Nov-2016 20:13
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	12.4		3.57	ug/Kg	1	30-Nov-2016 16:24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-4-11-12-111116
 Collection Date: 11-Nov-2016 11:30

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-13
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	4.83		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	2.09		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.433		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.433		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	17.0		0.0100	wt%	1	18-Nov-2016 11:41
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.62	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.4	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-5-2-3-111116
 Collection Date: 11-Nov-2016 15:00

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-14
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	19-Nov-2016 00:40
Ethylbenzene	ND		4.8	ug/Kg	1	19-Nov-2016 00:40
m,p-Xylene	ND		9.7	ug/Kg	1	19-Nov-2016 00:40
o-Xylene	ND		4.8	ug/Kg	1	19-Nov-2016 00:40
Toluene	ND		4.8	ug/Kg	1	19-Nov-2016 00:40
Xylenes, Total	ND		9.7	ug/Kg	1	19-Nov-2016 00:40
Surr: 1,2-Dichloroethane-d4	89.1		70-128	%REC	1	19-Nov-2016 00:40
Surr: 4-Bromofluorobenzene	99.1		73-126	%REC	1	19-Nov-2016 00:40
Surr: Dibromofluoromethane	91.8		71-128	%REC	1	19-Nov-2016 00:40
Surr: Toluene-d8	107		73-127	%REC	1	19-Nov-2016 00:40
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Nov-2016 21:52
Surr: 4-Bromofluorobenzene	87.0		70-130	%REC	1	16-Nov-2016 21:52
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 16-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	19-Nov-2016 03:43
Surr: 2-Fluorobiphenyl	65.2		60-135	%REC	1	19-Nov-2016 03:43
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	6.94		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	35.7		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	466		4.99	mg/L	10	01-Dec-2016 13:33
Magnesium	57.6		4.99	mg/L	10	01-Dec-2016 13:33
Sodium	3,070		49.9	mg/L	100	01-Dec-2016 14:44
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	2.87		0.467	mg/Kg	1	22-Nov-2016 20:18
Barium	473		4.67	mg/Kg	10	23-Nov-2016 14:44
Boron	5.86		2.34	mg/Kg	1	22-Nov-2016 20:18
Cadmium	ND		0.467	mg/Kg	1	22-Nov-2016 20:18
Chromium	6.94		0.467	mg/Kg	1	22-Nov-2016 20:18
Copper	5.55		0.187	mg/Kg	1	22-Nov-2016 20:18
Lead	5.43		0.467	mg/Kg	1	22-Nov-2016 20:18
Nickel	7.08		0.467	mg/Kg	1	22-Nov-2016 20:18
Selenium	ND		0.467	mg/Kg	1	22-Nov-2016 20:18
Silver	ND		0.467	mg/Kg	1	22-Nov-2016 20:18
Zinc	20.2		0.467	mg/Kg	1	22-Nov-2016 20:18
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	10.8		3.51	ug/Kg	1	30-Nov-2016 16:26

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-5-2-3-111116
 Collection Date: 11-Nov-2016 15:00

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-14
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	45.3		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	21.6		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.478		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.478		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	12.5		0.0100	wt%	1	18-Nov-2016 11:41
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		1.99	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.15	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.3	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-5-7-8-111116
 Collection Date: 11-Nov-2016 15:30

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-15
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	19-Nov-2016 01:03
Ethylbenzene	ND		5.0	ug/Kg	1	19-Nov-2016 01:03
m,p-Xylene	ND		10	ug/Kg	1	19-Nov-2016 01:03
o-Xylene	ND		5.0	ug/Kg	1	19-Nov-2016 01:03
Toluene	ND		5.0	ug/Kg	1	19-Nov-2016 01:03
Xylenes, Total	ND		10	ug/Kg	1	19-Nov-2016 01:03
Surr: 1,2-Dichloroethane-d4	89.6		70-128	%REC	1	19-Nov-2016 01:03
Surr: 4-Bromofluorobenzene	98.0		73-126	%REC	1	19-Nov-2016 01:03
Surr: Dibromofluoromethane	92.9		71-128	%REC	1	19-Nov-2016 01:03
Surr: Toluene-d8	105		73-127	%REC	1	19-Nov-2016 01:03
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Nov-2016 22:24
Surr: 4-Bromofluorobenzene	84.1		70-130	%REC	1	16-Nov-2016 22:24
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 16-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	1.8		1.7	mg/Kg	1	19-Nov-2016 04:07
Surr: 2-Fluorobiphenyl	62.1		60-135	%REC	1	19-Nov-2016 04:07
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	5.34		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	103		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	769		5.00	mg/L	10	01-Dec-2016 13:36
Magnesium	145		5.00	mg/L	10	01-Dec-2016 13:36
Sodium	11,900		50.0	mg/L	100	01-Dec-2016 14:47
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	2.74		0.481	mg/Kg	1	22-Nov-2016 20:22
Barium	185		2.40	mg/Kg	5	23-Nov-2016 15:01
Boron	ND		12.0	mg/Kg	5	23-Nov-2016 15:01
Cadmium	ND		0.481	mg/Kg	1	22-Nov-2016 20:22
Chromium	5.34		0.481	mg/Kg	1	22-Nov-2016 20:22
Copper	4.20		0.192	mg/Kg	1	22-Nov-2016 20:22
Lead	3.81		0.481	mg/Kg	1	22-Nov-2016 20:22
Nickel	6.08		0.481	mg/Kg	1	22-Nov-2016 20:22
Selenium	ND		0.481	mg/Kg	1	22-Nov-2016 20:22
Silver	ND		0.481	mg/Kg	1	22-Nov-2016 20:22
Zinc	14.9		0.481	mg/Kg	1	22-Nov-2016 20:22
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	8.88		3.38	ug/Kg	1	30-Nov-2016 16:27

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-5-7-8-111116
 Collection Date: 11-Nov-2016 15:30

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-15
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	141		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	74.3		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.526		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.526		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	14.9		0.0100	wt%	1	21-Nov-2016 12:39
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.37	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.3	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-5-9-10-111116
 Collection Date: 11-Nov-2016 15:45

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-16
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.9	ug/Kg	1	19-Nov-2016 01:26
Ethylbenzene	ND		4.9	ug/Kg	1	19-Nov-2016 01:26
m,p-Xylene	ND		9.8	ug/Kg	1	19-Nov-2016 01:26
o-Xylene	ND		4.9	ug/Kg	1	19-Nov-2016 01:26
Toluene	ND		4.9	ug/Kg	1	19-Nov-2016 01:26
Xylenes, Total	ND		9.8	ug/Kg	1	19-Nov-2016 01:26
Surr: 1,2-Dichloroethane-d4	85.5		70-128	%REC	1	19-Nov-2016 01:26
Surr: 4-Bromofluorobenzene	98.4		73-126	%REC	1	19-Nov-2016 01:26
Surr: Dibromofluoromethane	91.0		71-128	%REC	1	19-Nov-2016 01:26
Surr: Toluene-d8	105		73-127	%REC	1	19-Nov-2016 01:26
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Nov-2016 22:40
Surr: 4-Bromofluorobenzene	88.5		70-130	%REC	1	16-Nov-2016 22:40
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 18-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	29-Nov-2016 08:40
Surr: 2-Fluorobiphenyl	91.3		60-135	%REC	1	29-Nov-2016 08:40
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	5.11		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	39.1		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	2,120		49.9	mg/L	100	01-Dec-2016 14:53
Magnesium	398		4.99	mg/L	10	01-Dec-2016 13:42
Sodium	7,480		49.9	mg/L	100	01-Dec-2016 14:53
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	2.66		0.470	mg/Kg	1	22-Nov-2016 20:26
Barium	0.787		0.470	mg/Kg	1	22-Nov-2016 20:26
Boron	ND		2.35	mg/Kg	1	22-Nov-2016 20:26
Cadmium	ND		0.470	mg/Kg	1	22-Nov-2016 20:26
Chromium	5.11		0.470	mg/Kg	1	22-Nov-2016 20:26
Copper	3.60		0.188	mg/Kg	1	22-Nov-2016 20:26
Lead	ND		0.470	mg/Kg	1	22-Nov-2016 20:26
Nickel	5.51		0.470	mg/Kg	1	22-Nov-2016 20:26
Selenium	ND		0.470	mg/Kg	1	22-Nov-2016 20:26
Silver	ND		0.470	mg/Kg	1	22-Nov-2016 20:26
Zinc	14.3		0.470	mg/Kg	1	22-Nov-2016 20:26
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	20.0		3.49	ug/Kg	1	30-Nov-2016 16:29

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-5-9-10-111116
 Collection Date: 11-Nov-2016 15:45

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-16
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	119		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	61.1		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.514		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.514		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	16.8		0.0100	wt%	1	21-Nov-2016 12:39
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.07	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.1	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-6-2-3-111116
 Collection Date: 11-Nov-2016 14:00

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-17
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		5.1	ug/Kg	1	19-Nov-2016 01:49
Ethylbenzene	ND		5.1	ug/Kg	1	19-Nov-2016 01:49
m,p-Xylene	ND		10	ug/Kg	1	19-Nov-2016 01:49
o-Xylene	ND		5.1	ug/Kg	1	19-Nov-2016 01:49
Toluene	ND		5.1	ug/Kg	1	19-Nov-2016 01:49
Xylenes, Total	ND		10	ug/Kg	1	19-Nov-2016 01:49
Surr: 1,2-Dichloroethane-d4	102		70-128	%REC	1	19-Nov-2016 01:49
Surr: 4-Bromofluorobenzene	100		73-126	%REC	1	19-Nov-2016 01:49
Surr: Dibromofluoromethane	99.2		71-128	%REC	1	19-Nov-2016 01:49
Surr: Toluene-d8	101		73-127	%REC	1	19-Nov-2016 01:49
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Nov-2016 22:56
Surr: 4-Bromofluorobenzene	88.8		70-130	%REC	1	16-Nov-2016 22:56
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 18-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	29-Nov-2016 09:54
Surr: 2-Fluorobiphenyl	119		60-135	%REC	1	29-Nov-2016 09:54
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	13.4		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	17.5		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	909		5.00	mg/L	10	01-Dec-2016 13:51
Magnesium	ND		5.00	mg/L	10	01-Dec-2016 13:51
Sodium	1,920		50.0	mg/L	100	01-Dec-2016 15:02
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	2.76		0.472	mg/Kg	1	22-Nov-2016 20:30
Barium	161		0.472	mg/Kg	1	22-Nov-2016 20:30
Boron	9.01		2.36	mg/Kg	1	23-Nov-2016 15:06
Cadmium	ND		0.472	mg/Kg	1	22-Nov-2016 20:30
Chromium	13.4		0.472	mg/Kg	1	22-Nov-2016 20:30
Copper	7.24		0.189	mg/Kg	1	22-Nov-2016 20:30
Lead	7.15		0.472	mg/Kg	1	22-Nov-2016 20:30
Nickel	7.20		0.472	mg/Kg	1	22-Nov-2016 20:30
Selenium	ND		0.472	mg/Kg	1	22-Nov-2016 20:30
Silver	ND		0.472	mg/Kg	1	22-Nov-2016 20:30
Zinc	32.7		0.472	mg/Kg	1	22-Nov-2016 20:30
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	8.44		3.39	ug/Kg	1	30-Nov-2016 16:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-6-2-3-111116
 Collection Date: 11-Nov-2016 14:00

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-17
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	25.6		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	16.6		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.648		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.648		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	21.9		0.0100	wt%	1	21-Nov-2016 12:39
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	9.94	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.2	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: Trip Blank - 082916-95
Collection Date: 11-Nov-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16110729
Lab ID:HS16110729-18
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP		
Benzene	ND		1.0	ug/L	1	16-Nov-2016 16:30
Ethylbenzene	ND		1.0	ug/L	1	16-Nov-2016 16:30
m,p-Xylene	ND		2.0	ug/L	1	16-Nov-2016 16:30
o-Xylene	ND		1.0	ug/L	1	16-Nov-2016 16:30
Toluene	ND		1.0	ug/L	1	16-Nov-2016 16:30
Xylenes, Total	ND		1.0	ug/L	1	16-Nov-2016 16:30
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>102</i>		<i>71-125</i>	<i>%REC</i>	<i>1</i>	<i>16-Nov-2016 16:30</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>94.7</i>		<i>70-125</i>	<i>%REC</i>	<i>1</i>	<i>16-Nov-2016 16:30</i>
<i>Surr: Dibromofluoromethane</i>	<i>105</i>		<i>74-125</i>	<i>%REC</i>	<i>1</i>	<i>16-Nov-2016 16:30</i>
<i>Surr: Toluene-d8</i>	<i>109</i>		<i>75-125</i>	<i>%REC</i>	<i>1</i>	<i>16-Nov-2016 16:30</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-6-8-9-111116
 Collection Date: 11-Nov-2016 14:30

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-19
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	19-Nov-2016 02:13
Ethylbenzene	ND		4.8	ug/Kg	1	19-Nov-2016 02:13
m,p-Xylene	ND		9.6	ug/Kg	1	19-Nov-2016 02:13
o-Xylene	ND		4.8	ug/Kg	1	19-Nov-2016 02:13
Toluene	ND		4.8	ug/Kg	1	19-Nov-2016 02:13
Xylenes, Total	ND		9.6	ug/Kg	1	19-Nov-2016 02:13
Surr: 1,2-Dichloroethane-d4	87.7		70-128	%REC	1	19-Nov-2016 02:13
Surr: 4-Bromofluorobenzene	98.6		73-126	%REC	1	19-Nov-2016 02:13
Surr: Dibromofluoromethane	85.3		71-128	%REC	1	19-Nov-2016 02:13
Surr: Toluene-d8	108		73-127	%REC	1	19-Nov-2016 02:13
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Nov-2016 23:12
Surr: 4-Bromofluorobenzene	89.4		70-130	%REC	1	16-Nov-2016 23:12
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 18-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	2.7		1.7	mg/Kg	1	29-Nov-2016 10:19
Surr: 2-Fluorobiphenyl	91.9		60-135	%REC	1	29-Nov-2016 10:19
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	12.4		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	318		5.00	mg/L	10	01-Dec-2016 13:54
Magnesium	ND		5.00	mg/L	10	01-Dec-2016 13:54
Sodium	809		5.00	mg/L	10	01-Dec-2016 13:54
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	4.88		0.482	mg/Kg	1	22-Nov-2016 20:44
Barium	179		2.41	mg/Kg	5	23-Nov-2016 15:10
Boron	3.61		2.41	mg/Kg	1	22-Nov-2016 20:44
Cadmium	ND		0.482	mg/Kg	1	22-Nov-2016 20:44
Chromium	4.08		0.482	mg/Kg	1	22-Nov-2016 20:44
Copper	3.18		0.193	mg/Kg	1	22-Nov-2016 20:44
Lead	4.20		0.482	mg/Kg	1	22-Nov-2016 20:44
Nickel	3.33		0.482	mg/Kg	1	22-Nov-2016 20:44
Selenium	ND		0.482	mg/Kg	1	22-Nov-2016 20:44
Silver	ND		0.482	mg/Kg	1	22-Nov-2016 20:44
Zinc	20.2		0.482	mg/Kg	1	22-Nov-2016 20:44
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	17.1		3.52	ug/Kg	1	30-Nov-2016 16:32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-6-8-9-111116
 Collection Date: 11-Nov-2016 14:30

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-19
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	14.3		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	6.29		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.440		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.440		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	15.5		0.0100	wt%	1	21-Nov-2016 12:39
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	9.44	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.2	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-6-4-5-111116
 Collection Date: 11-Nov-2016 14:15

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-20
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.9	ug/Kg	1	19-Nov-2016 02:36
Ethylbenzene	ND		4.9	ug/Kg	1	19-Nov-2016 02:36
m,p-Xylene	ND		9.8	ug/Kg	1	19-Nov-2016 02:36
o-Xylene	ND		4.9	ug/Kg	1	19-Nov-2016 02:36
Toluene	ND		4.9	ug/Kg	1	19-Nov-2016 02:36
Xylenes, Total	ND		9.8	ug/Kg	1	19-Nov-2016 02:36
Surr: 1,2-Dichloroethane-d4	83.0		70-128	%REC	1	19-Nov-2016 02:36
Surr: 4-Bromofluorobenzene	96.1		73-126	%REC	1	19-Nov-2016 02:36
Surr: Dibromofluoromethane	57.7	S	71-128	%REC	1	19-Nov-2016 02:36
Surr: Toluene-d8	102		73-127	%REC	1	19-Nov-2016 02:36
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	0.11		0.050	mg/Kg	1	16-Nov-2016 23:28
Surr: 4-Bromofluorobenzene	88.0		70-130	%REC	1	16-Nov-2016 23:28
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 18-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	47		1.7	mg/Kg	1	29-Nov-2016 10:43
Surr: 2-Fluorobiphenyl	121		60-135	%REC	1	29-Nov-2016 10:43
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	16.5		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	60.5		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	425		5.00	mg/L	10	01-Dec-2016 13:56
Magnesium	ND		5.00	mg/L	10	01-Dec-2016 13:56
Sodium	4,540		50.0	mg/L	100	01-Dec-2016 15:05
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 21-Nov-2016 Analyst: JDE		
Arsenic	2.39		0.475	mg/Kg	1	22-Nov-2016 20:48
Barium	105		0.475	mg/Kg	1	22-Nov-2016 20:48
Boron	10.6		2.38	mg/Kg	1	23-Nov-2016 14:48
Cadmium	ND		0.475	mg/Kg	1	22-Nov-2016 20:48
Chromium	16.5		0.475	mg/Kg	1	22-Nov-2016 20:48
Copper	6.59		0.190	mg/Kg	1	22-Nov-2016 20:48
Lead	5.48		0.475	mg/Kg	1	22-Nov-2016 20:48
Nickel	5.46		0.475	mg/Kg	1	22-Nov-2016 20:48
Selenium	ND		0.475	mg/Kg	1	22-Nov-2016 20:48
Silver	ND		0.475	mg/Kg	1	22-Nov-2016 20:48
Zinc	39.1		0.475	mg/Kg	1	22-Nov-2016 20:48
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	5.72		3.57	ug/Kg	1	30-Nov-2016 16:34

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-6-4-5-111116
 Collection Date: 11-Nov-2016 14:15

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-20
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	31.3		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	30.6		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.977		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.977		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	41.7		0.0100	wt%	1	21-Nov-2016 12:39
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	11.9	H	0.100	pH Units	1	29-Nov-2016 17:15
Temp Deg C @pH	22.2	H	0	°C	1	29-Nov-2016 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-7-2-3-111116
 Collection Date: 11-Nov-2016 13:15

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-21
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	19-Nov-2016 02:59
Ethylbenzene	ND		5.0	ug/Kg	1	19-Nov-2016 02:59
m,p-Xylene	ND		10	ug/Kg	1	19-Nov-2016 02:59
o-Xylene	ND		5.0	ug/Kg	1	19-Nov-2016 02:59
Toluene	ND		5.0	ug/Kg	1	19-Nov-2016 02:59
Xylenes, Total	ND		10	ug/Kg	1	19-Nov-2016 02:59
Surr: 1,2-Dichloroethane-d4	85.2		70-128	%REC	1	19-Nov-2016 02:59
Surr: 4-Bromofluorobenzene	99.8		73-126	%REC	1	19-Nov-2016 02:59
Surr: Dibromofluoromethane	87.2		71-128	%REC	1	19-Nov-2016 02:59
Surr: Toluene-d8	105		73-127	%REC	1	19-Nov-2016 02:59
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Nov-2016 01:21
Surr: 4-Bromofluorobenzene	86.4		70-130	%REC	1	17-Nov-2016 01:21
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 18-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	16		1.7	mg/Kg	1	29-Nov-2016 11:08
Surr: 2-Fluorobiphenyl	98.2		60-135	%REC	1	29-Nov-2016 11:08
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	10.0		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	17.8		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	606		5.00	mg/L	10	01-Dec-2016 13:59
Magnesium	55.0		5.00	mg/L	10	01-Dec-2016 13:59
Sodium	1,710		5.00	mg/L	10	01-Dec-2016 13:59
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 22-Nov-2016 Analyst: JDE		
Arsenic	3.00		0.480	mg/Kg	1	22-Nov-2016 21:45
Barium	141		0.480	mg/Kg	1	22-Nov-2016 21:45
Boron	6.65		2.40	mg/Kg	1	23-Nov-2016 15:37
Cadmium	ND		0.480	mg/Kg	1	22-Nov-2016 21:45
Chromium	10.0		0.480	mg/Kg	1	22-Nov-2016 21:45
Copper	6.53		0.192	mg/Kg	1	22-Nov-2016 21:45
Lead	5.82		0.480	mg/Kg	1	22-Nov-2016 21:45
Nickel	7.74		0.480	mg/Kg	1	22-Nov-2016 21:45
Selenium	ND		0.480	mg/Kg	1	22-Nov-2016 21:45
Silver	ND		0.480	mg/Kg	1	22-Nov-2016 21:45
Zinc	29.4		0.480	mg/Kg	1	22-Nov-2016 21:45
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	13.4		3.47	ug/Kg	1	30-Nov-2016 16:36

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-7-2-3-111116
 Collection Date: 11-Nov-2016 13:15

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-21
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	26.0		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	14.1		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.542		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.542		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	16.3		0.0100	wt%	1	21-Nov-2016 12:39
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.26	H	0.100	pH Units	1	29-Nov-2016 18:00
Temp Deg C @pH	22.3	H	0	°C	1	29-Nov-2016 18:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-7-4-5-111116
 Collection Date: 11-Nov-2016 13:20

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-22
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	19-Nov-2016 03:22
Ethylbenzene	ND		5.0	ug/Kg	1	19-Nov-2016 03:22
m,p-Xylene	ND		9.9	ug/Kg	1	19-Nov-2016 03:22
o-Xylene	ND		5.0	ug/Kg	1	19-Nov-2016 03:22
Toluene	ND		5.0	ug/Kg	1	19-Nov-2016 03:22
Xylenes, Total	ND		9.9	ug/Kg	1	19-Nov-2016 03:22
Surr: 1,2-Dichloroethane-d4	86.7		70-128	%REC	1	19-Nov-2016 03:22
Surr: 4-Bromofluorobenzene	96.7		73-126	%REC	1	19-Nov-2016 03:22
Surr: Dibromofluoromethane	35.1	S	71-128	%REC	1	19-Nov-2016 03:22
Surr: Toluene-d8	104		73-127	%REC	1	19-Nov-2016 03:22
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	0.19		0.050	mg/Kg	1	17-Nov-2016 02:09
Surr: 4-Bromofluorobenzene	90.0		70-130	%REC	1	17-Nov-2016 02:09
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 18-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	24		1.7	mg/Kg	1	29-Nov-2016 11:32
Surr: 2-Fluorobiphenyl	113		60-135	%REC	1	29-Nov-2016 11:32
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	8.74		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	90.6		0.0100	meq/meq	1	01-Dec-2016 13:41
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	978		5.00	mg/L	10	01-Dec-2016 14:02
Magnesium	ND		5.00	mg/L	10	01-Dec-2016 14:02
Sodium	10,300		50.0	mg/L	100	01-Dec-2016 15:08
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 22-Nov-2016 Analyst: JDE		
Arsenic	4.12		0.469	mg/Kg	1	22-Nov-2016 21:50
Barium	81.7		0.469	mg/Kg	1	22-Nov-2016 21:50
Boron	21.0		2.34	mg/Kg	1	23-Nov-2016 15:41
Cadmium	ND		0.469	mg/Kg	1	22-Nov-2016 21:50
Chromium	8.74		0.469	mg/Kg	1	22-Nov-2016 21:50
Copper	6.55		0.188	mg/Kg	1	22-Nov-2016 21:50
Lead	5.47		0.469	mg/Kg	1	22-Nov-2016 21:50
Nickel	5.98		0.469	mg/Kg	1	22-Nov-2016 21:50
Selenium	ND		0.469	mg/Kg	1	22-Nov-2016 21:50
Silver	ND		0.469	mg/Kg	1	22-Nov-2016 21:50
Zinc	22.7		0.469	mg/Kg	1	22-Nov-2016 21:50
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	4.46		3.37	ug/Kg	1	30-Nov-2016 16:38

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-7-4-5-111116
 Collection Date: 11-Nov-2016 13:20

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-22
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	92.3		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Electrical Conductivity, 1:1 aqueous	78.2		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:48
Saturation % as decimal	0.847		0	mmhos/cm @25°C	1	01-Dec-2016 16:48
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.847		0.100	SP as fraction	1	01-Dec-2016 10:05
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	35.5		0.0100	wt%	1	21-Nov-2016 12:39
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 29-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	12.4	H	0.100	pH Units	1	29-Nov-2016 18:00
Temp Deg C @pH	22.2	H	0	°C	1	29-Nov-2016 18:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-7-11-12-111116
 Collection Date: 11-Nov-2016 13:45

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-23
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	19-Nov-2016 03:45
Ethylbenzene	ND		5.0	ug/Kg	1	19-Nov-2016 03:45
m,p-Xylene	ND		9.9	ug/Kg	1	19-Nov-2016 03:45
o-Xylene	ND		5.0	ug/Kg	1	19-Nov-2016 03:45
Toluene	ND		5.0	ug/Kg	1	19-Nov-2016 03:45
Xylenes, Total	ND		9.9	ug/Kg	1	19-Nov-2016 03:45
Surr: 1,2-Dichloroethane-d4	85.3		70-128	%REC	1	19-Nov-2016 03:45
Surr: 4-Bromofluorobenzene	97.9		73-126	%REC	1	19-Nov-2016 03:45
Surr: Dibromofluoromethane	89.1		71-128	%REC	1	19-Nov-2016 03:45
Surr: Toluene-d8	104		73-127	%REC	1	19-Nov-2016 03:45
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Nov-2016 02:25
Surr: 4-Bromofluorobenzene	88.3		70-130	%REC	1	17-Nov-2016 02:25
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 18-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	29-Nov-2016 11:57
Surr: 2-Fluorobiphenyl	81.6		60-135	%REC	1	29-Nov-2016 11:57
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	9.56		0.0100	meq/meq	1	01-Dec-2016 13:44
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	779		5.00	mg/L	10	01-Dec-2016 14:14
Magnesium	71.8		5.00	mg/L	10	01-Dec-2016 14:14
Sodium	1,040		5.00	mg/L	10	01-Dec-2016 14:14
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 22-Nov-2016 Analyst: JDE		
Arsenic	3.05		0.471	mg/Kg	1	22-Nov-2016 21:54
Barium	188		2.35	mg/Kg	5	23-Nov-2016 15:50
Boron	ND		11.8	mg/Kg	5	23-Nov-2016 15:50
Cadmium	ND		0.471	mg/Kg	1	22-Nov-2016 21:54
Chromium	2.65		0.471	mg/Kg	1	22-Nov-2016 21:54
Copper	2.10		0.188	mg/Kg	1	22-Nov-2016 21:54
Lead	2.76		0.471	mg/Kg	1	22-Nov-2016 21:54
Nickel	3.57		0.471	mg/Kg	1	22-Nov-2016 21:54
Selenium	ND		0.471	mg/Kg	1	22-Nov-2016 21:54
Silver	ND		0.471	mg/Kg	1	22-Nov-2016 21:54
Zinc	10.6		0.471	mg/Kg	1	22-Nov-2016 21:54
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	9.49		3.61	ug/Kg	1	30-Nov-2016 16:50

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-7-11-12-111116
 Collection Date: 11-Nov-2016 13:45

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-23
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	32.4		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:49
Electrical Conductivity, 1:1 aqueous	11.8		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:49
Saturation % as decimal	0.365		0	mmhos/cm @25°C	1	01-Dec-2016 16:49
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.365		0.100	SP as fraction	1	01-Dec-2016 10:25
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	11.6		0.0100	wt%	1	21-Nov-2016 12:39
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 30-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 17:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.26	H	0.100	pH Units	1	29-Nov-2016 18:00
Temp Deg C @pH	22.2	H	0	°C	1	29-Nov-2016 18:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-8-2-3-111116
 Collection Date: 11-Nov-2016 12:50

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-24
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	19-Nov-2016 04:08
Ethylbenzene	ND		4.8	ug/Kg	1	19-Nov-2016 04:08
m,p-Xylene	ND		9.7	ug/Kg	1	19-Nov-2016 04:08
o-Xylene	ND		4.8	ug/Kg	1	19-Nov-2016 04:08
Toluene	ND		4.8	ug/Kg	1	19-Nov-2016 04:08
Xylenes, Total	ND		9.7	ug/Kg	1	19-Nov-2016 04:08
Surr: 1,2-Dichloroethane-d4	87.1		70-128	%REC	1	19-Nov-2016 04:08
Surr: 4-Bromofluorobenzene	96.3		73-126	%REC	1	19-Nov-2016 04:08
Surr: Dibromofluoromethane	90.6		71-128	%REC	1	19-Nov-2016 04:08
Surr: Toluene-d8	104		73-127	%REC	1	19-Nov-2016 04:08
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Nov-2016 02:41
Surr: 4-Bromofluorobenzene	89.8		70-130	%REC	1	17-Nov-2016 02:41
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 18-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	29-Nov-2016 12:21
Surr: 2-Fluorobiphenyl	112		60-135	%REC	1	29-Nov-2016 12:21
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	7.79		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	19.7		0.0100	meq/meq	1	01-Dec-2016 13:44
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	443		5.00	mg/L	10	01-Dec-2016 14:26
Magnesium	82.2		5.00	mg/L	10	01-Dec-2016 14:26
Sodium	1,720		5.00	mg/L	10	01-Dec-2016 14:26
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 22-Nov-2016 Analyst: JDE		
Arsenic	2.89		0.467	mg/Kg	1	22-Nov-2016 21:59
Barium	175		2.34	mg/Kg	5	23-Nov-2016 15:55
Boron	ND		11.7	mg/Kg	5	23-Nov-2016 15:55
Cadmium	ND		0.467	mg/Kg	1	22-Nov-2016 21:59
Chromium	7.79		0.467	mg/Kg	1	22-Nov-2016 21:59
Copper	6.10		0.187	mg/Kg	1	22-Nov-2016 21:59
Lead	6.44		0.467	mg/Kg	1	22-Nov-2016 21:59
Nickel	7.98		0.467	mg/Kg	1	22-Nov-2016 21:59
Selenium	ND		0.467	mg/Kg	1	22-Nov-2016 21:59
Silver	ND		0.467	mg/Kg	1	22-Nov-2016 21:59
Zinc	24.4		0.467	mg/Kg	1	22-Nov-2016 21:59
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	12.0		3.38	ug/Kg	1	30-Nov-2016 16:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-8-2-3-111116
 Collection Date: 11-Nov-2016 12:50

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-24
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	24.5		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:49
Electrical Conductivity, 1:1 aqueous	12.5		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:49
Saturation % as decimal	0.509		0	mmhos/cm @25°C	1	01-Dec-2016 16:49
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.509		0.100	SP as fraction	1	01-Dec-2016 10:25
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	13.4		0.0100	wt%	1	21-Nov-2016 12:39
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 30-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 17:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.12	H	0.100	pH Units	1	29-Nov-2016 18:00
Temp Deg C @pH	22.2	H	0	°C	1	29-Nov-2016 18:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-8-8-9-111116
 Collection Date: 11-Nov-2016 13:00

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-25
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	19-Nov-2016 04:31
Ethylbenzene	ND		4.8	ug/Kg	1	19-Nov-2016 04:31
m,p-Xylene	ND		9.7	ug/Kg	1	19-Nov-2016 04:31
o-Xylene	ND		4.8	ug/Kg	1	19-Nov-2016 04:31
Toluene	ND		4.8	ug/Kg	1	19-Nov-2016 04:31
Xylenes, Total	ND		9.7	ug/Kg	1	19-Nov-2016 04:31
Surr: 1,2-Dichloroethane-d4	89.9		70-128	%REC	1	19-Nov-2016 04:31
Surr: 4-Bromofluorobenzene	98.7		73-126	%REC	1	19-Nov-2016 04:31
Surr: Dibromofluoromethane	91.5		71-128	%REC	1	19-Nov-2016 04:31
Surr: Toluene-d8	105		73-127	%REC	1	19-Nov-2016 04:31
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Nov-2016 02:57
Surr: 4-Bromofluorobenzene	90.4		70-130	%REC	1	17-Nov-2016 02:57
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 18-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	29-Nov-2016 12:45
Surr: 2-Fluorobiphenyl	62.8		60-135	%REC	1	29-Nov-2016 12:45
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	5.46		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	101		0.0100	meq/meq	1	01-Dec-2016 13:44
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	835		4.99	mg/L	10	01-Dec-2016 14:29
Magnesium	148		4.99	mg/L	10	01-Dec-2016 14:29
Sodium	12,100		49.9	mg/L	100	01-Dec-2016 15:11
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 22-Nov-2016 Analyst: JDE		
Arsenic	2.13		0.463	mg/Kg	1	22-Nov-2016 22:03
Barium	115		0.463	mg/Kg	1	22-Nov-2016 22:03
Boron	4.59		2.31	mg/Kg	1	23-Nov-2016 15:46
Cadmium	ND		0.463	mg/Kg	1	22-Nov-2016 22:03
Chromium	5.46		0.463	mg/Kg	1	22-Nov-2016 22:03
Copper	3.74		0.185	mg/Kg	1	22-Nov-2016 22:03
Lead	4.30		0.463	mg/Kg	1	22-Nov-2016 22:03
Nickel	6.32		0.463	mg/Kg	1	22-Nov-2016 22:03
Selenium	ND		0.463	mg/Kg	1	22-Nov-2016 22:03
Silver	ND		0.463	mg/Kg	1	22-Nov-2016 22:03
Zinc	16.4		0.463	mg/Kg	1	22-Nov-2016 22:03
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	12.2		3.57	ug/Kg	1	30-Nov-2016 16:57

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-8-8-9-111116
 Collection Date: 11-Nov-2016 13:00

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-25
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	142		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:49
Electrical Conductivity, 1:1 aqueous	78.4		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:49
Saturation % as decimal	0.552		0	mmhos/cm @25°C	1	01-Dec-2016 16:49
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.552		0.100	SP as fraction	1	01-Dec-2016 10:25
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	15.2		0.0100	wt%	1	21-Nov-2016 12:39
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 30-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 17:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	7.97	H	0.100	pH Units	1	29-Nov-2016 18:00
Temp Deg C @pH	22.2	H	0	°C	1	29-Nov-2016 18:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-8-10-11-111116
 Collection Date: 11-Nov-2016 13:10

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-26
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	19-Nov-2016 04:55
Ethylbenzene	ND		5.0	ug/Kg	1	19-Nov-2016 04:55
m,p-Xylene	ND		9.9	ug/Kg	1	19-Nov-2016 04:55
o-Xylene	ND		5.0	ug/Kg	1	19-Nov-2016 04:55
Toluene	ND		5.0	ug/Kg	1	19-Nov-2016 04:55
Xylenes, Total	ND		9.9	ug/Kg	1	19-Nov-2016 04:55
Surr: 1,2-Dichloroethane-d4	86.7		70-128	%REC	1	19-Nov-2016 04:55
Surr: 4-Bromofluorobenzene	99.0		73-126	%REC	1	19-Nov-2016 04:55
Surr: Dibromofluoromethane	89.6		71-128	%REC	1	19-Nov-2016 04:55
Surr: Toluene-d8	105		73-127	%REC	1	19-Nov-2016 04:55
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Nov-2016 03:29
Surr: 4-Bromofluorobenzene	81.0		70-130	%REC	1	17-Nov-2016 03:29
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 18-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	29-Nov-2016 13:10
Surr: 2-Fluorobiphenyl	115		60-135	%REC	1	29-Nov-2016 13:10
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	01-Dec-2016 16:51
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Sodium Adsorption Ratio	43.5		0.0100	meq/meq	1	01-Dec-2016 13:44
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 30-Nov-2016 Analyst: RPM		
Calcium	1,370		5.00	mg/L	10	01-Dec-2016 14:32
Magnesium	123		5.00	mg/L	10	01-Dec-2016 14:32
Sodium	6,270		50.0	mg/L	100	01-Dec-2016 15:14
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 22-Nov-2016 Analyst: JCJ		
Arsenic	3.29		2.30	mg/Kg	5	23-Nov-2016 19:28
Barium	588		2.30	mg/Kg	5	23-Nov-2016 19:28
Boron	ND		11.5	mg/Kg	5	26-Nov-2016 16:26
Cadmium	ND		2.30	mg/Kg	5	23-Nov-2016 19:28
Chromium	3.05		2.30	mg/Kg	5	23-Nov-2016 19:28
Copper	2.93		0.920	mg/Kg	5	23-Nov-2016 19:28
Lead	2.55		2.30	mg/Kg	5	23-Nov-2016 19:28
Nickel	3.52		2.30	mg/Kg	5	23-Nov-2016 19:28
Selenium	ND		2.30	mg/Kg	5	23-Nov-2016 19:28
Silver	ND		2.30	mg/Kg	5	23-Nov-2016 19:28
Zinc	10.6		2.30	mg/Kg	5	23-Nov-2016 19:28
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 29-Nov-2016 Analyst: JCJ		
Mercury	20.1		3.48	ug/Kg	1	30-Nov-2016 16:59

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-11-8-10-11-111116
 Collection Date: 11-Nov-2016 13:10

ANALYTICAL REPORT

WorkOrder:HS16110729
 Lab ID:HS16110729-26
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	112		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:49
Electrical Conductivity, 1:1 aqueous	45.4		0.0100	mmhos/cm @25°C	1	01-Dec-2016 16:49
Saturation % as decimal	0.405		0	mmhos/cm @25°C	1	01-Dec-2016 16:49
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.405		0.100	SP as fraction	1	01-Dec-2016 10:25
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	13.5		0.0100	wt%	1	21-Nov-2016 12:39
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 30-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	30-Nov-2016 17:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.11	H	0.100	pH Units	1	29-Nov-2016 18:00
Temp Deg C @pH	22.2	H	0	°C	1	29-Nov-2016 18:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: Trip Blank - 082916-94
Collection Date: 11-Nov-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16110729
Lab ID:HS16110729-27
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP		
Benzene	ND		1.0	ug/L	1	16-Nov-2016 16:55
Ethylbenzene	ND		1.0	ug/L	1	16-Nov-2016 16:55
m,p-Xylene	ND		2.0	ug/L	1	16-Nov-2016 16:55
o-Xylene	ND		1.0	ug/L	1	16-Nov-2016 16:55
Toluene	ND		1.0	ug/L	1	16-Nov-2016 16:55
Xylenes, Total	ND		1.0	ug/L	1	16-Nov-2016 16:55
Surr: 1,2-Dichloroethane-d4	99.8		71-125	%REC	1	16-Nov-2016 16:55
Surr: 4-Bromofluorobenzene	92.7		70-125	%REC	1	16-Nov-2016 16:55
Surr: Dibromofluoromethane	106		74-125	%REC	1	16-Nov-2016 16:55
Surr: Toluene-d8	109		75-125	%REC	1	16-Nov-2016 16:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

WEIGHT LOG

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

Batch ID: 1381 **Method:** GASOLINE RANGE ORGANICS BY SW8015C **Prep:**

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS16110729-01	1	5.05 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110729-02	1	5.05 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110729-03	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS16110729-04	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110729-05	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110729-06	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110729-07	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS16110729-08	1	5.04 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110729-10	1	5.02 (g)	5 (mL)	1	Bulk (5030B)
HS16110729-11	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS16110729-12	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110729-13	1	5.04 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110729-14	1	5.04 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110729-15	1	5 (g)	5 (mL)	1	Bulk (5030B)
HS16110729-16	1	5.04 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110729-17	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110729-19	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110729-20	1	5.05 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110729-21	1	5 (g)	5 (mL)	1	Bulk (5030B)
HS16110729-22	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110729-23	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS16110729-24	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS16110729-25	1	5.02 (g)	5 (mL)	1	Bulk (5030B)
HS16110729-26	1	5.02 (g)	5 (mL)	1	Bulk (5030B)

Batch ID: 1382 **Method:** VOLATILES BY SW8260C

SamplID	Container	Sample Wt/Vol	Final Volume	Weight Factor	Container Type
HS16110729-01	1	4.96 (g)	5 (mL)	1.01	Bulk (5030B)
HS16110729-02	1	5.149 (g)	5 (mL)	0.97	Bulk (5030B)
HS16110729-03	1	5.112 (g)	5 (mL)	0.98	Bulk (5030B)
HS16110729-04	1	4.949 (g)	5 (mL)	1.01	Bulk (5030B)
HS16110729-05	1	5.238 (g)	5 (mL)	0.95	Bulk (5030B)
HS16110729-06	1	5.332 (g)	5 (mL)	0.94	Bulk (5030B)
HS16110729-07	1	4.907 (g)	5 (mL)	1.02	Bulk (5030B)
HS16110729-08	1	5.204 (g)	5 (mL)	0.96	Bulk (5030B)
HS16110729-10	1	5.189 (g)	5 (mL)	0.96	Bulk (5030B)
HS16110729-11	1	5.104 (g)	5 (mL)	0.98	Bulk (5030B)
HS16110729-12	1	4.898 (g)	5 (mL)	1.02	Bulk (5030B)
HS16110729-13	1	5.118 (g)	5 (mL)	0.98	Bulk (5030B)
HS16110729-14	1	5.159 (g)	5 (mL)	0.97	Bulk (5030B)
HS16110729-15	1	4.932 (g)	5 (mL)	1.01	Bulk (5030B)
HS16110729-16	1	5.104 (g)	5 (mL)	0.98	Bulk (5030B)
HS16110729-17	1	4.913 (g)	5 (mL)	1.02	Bulk (5030B)
HS16110729-19	1	5.191 (g)	5 (mL)	0.96	Bulk (5030B)
HS16110729-20	1	5.124 (g)	5 (mL)	0.98	Bulk (5030B)
HS16110729-21	1	4.986 (g)	5 (mL)	1	Bulk (5030B)
HS16110729-22	1	5.033 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110729-23	1	5.057 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110729-24	1	5.158 (g)	5 (mL)	0.97	Bulk (5030B)
HS16110729-25	1	5.142 (g)	5 (mL)	0.97	Bulk (5030B)
HS16110729-26	1	5.031 (g)	5 (mL)	0.99	Bulk (5030B)

WEIGHT LOG

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

Batch ID: 109920 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110729-01	1	30.04	1 (mL)	0.03329
HS16110729-02	1	30.09	1 (mL)	0.03323
HS16110729-03	1	30.07	1 (mL)	0.03326
HS16110729-04	1	30.01	1 (mL)	0.03332
HS16110729-05	1	30.06	1 (mL)	0.03327
HS16110729-06	1	30.02	1 (mL)	0.03331
HS16110729-07	1	30.09	1 (mL)	0.03323
HS16110729-08	1	30.07	1 (mL)	0.03326
HS16110729-10	1	30.05	1 (mL)	0.03328
HS16110729-11	1	30.08	1 (mL)	0.03324
HS16110729-12	1	30.04	1 (mL)	0.03329
HS16110729-13	1	30.06	1 (mL)	0.03327
HS16110729-14	1	30.01	1 (mL)	0.03332
HS16110729-15	1	30.09	1 (mL)	0.03323

Batch ID: 110014 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110729-16	1	30.04	1 (mL)	0.03329
HS16110729-17	1	30.05	1 (mL)	0.03328
HS16110729-19	1	30.07	1 (mL)	0.03326
HS16110729-20	1	30.09	1 (mL)	0.03323
HS16110729-21	1	30.05	1 (mL)	0.03328
HS16110729-22	1	30.02	1 (mL)	0.03331
HS16110729-23	1	30.04	1 (mL)	0.03329
HS16110729-24	1	30.05	1 (mL)	0.03328
HS16110729-25	1	30.07	1 (mL)	0.03326
HS16110729-26	1	30.01	1 (mL)	0.03332

Batch ID: 110049 **Method:** METALS BY SW6020A **Prep:** 3050_I_LOW

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110729-01	1	0.5301	50 (mL)	94.32
HS16110729-02	1	0.5181	50 (mL)	96.51
HS16110729-03	1	0.5346	50 (mL)	93.53
HS16110729-04	1	0.5396	50 (mL)	92.66
HS16110729-05	1	0.5313	50 (mL)	94.11
HS16110729-06	1	0.5364	50 (mL)	93.21
HS16110729-07	1	0.5476	50 (mL)	91.31
HS16110729-08	1	0.5376	50 (mL)	93.01
HS16110729-10	1	0.5273	50 (mL)	94.82
HS16110729-11	1	0.5451	50 (mL)	91.73
HS16110729-12	1	0.5266	50 (mL)	94.95
HS16110729-13	1	0.5276	50 (mL)	94.77
HS16110729-14	1	0.5351	50 (mL)	93.44
HS16110729-15	1	0.5199	50 (mL)	96.17
HS16110729-16	1	0.5322	50 (mL)	93.95
HS16110729-17	1	0.5299	50 (mL)	94.36
HS16110729-19	1	0.5192	50 (mL)	96.3
HS16110729-20	1	0.5263	50 (mL)	95

WEIGHT LOG

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

Batch ID: 110093 **Method:** METALS BY SW6020A **Prep:** 3050_I_LOW

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110729-21	1	0.5207	50 (mL)	96.02
HS16110729-22	1	0.5331	50 (mL)	93.79
HS16110729-23	1	0.5311	50 (mL)	94.14
HS16110729-24	1	0.5351	50 (mL)	93.44
HS16110729-25	1	0.5403	50 (mL)	92.54
HS16110729-26	1	0.5433	50 (mL)	92.03

Batch ID: 110269 **Method:** MERCURY BY SW7471B **Prep:** HG_S_LOWPR

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110729-01	1	0.5842	40 (mL)	68.47
HS16110729-02	1	0.5701	40 (mL)	70.16
HS16110729-03	1	0.5695	40 (mL)	70.24
HS16110729-04	1	0.5577	40 (mL)	71.72
HS16110729-05	1	0.5805	40 (mL)	68.91
HS16110729-06	1	0.5633	40 (mL)	71.01
HS16110729-07	1	0.5741	40 (mL)	69.67
HS16110729-08	1	0.5817	40 (mL)	68.76
HS16110729-10	1	0.5927	40 (mL)	67.49
HS16110729-11	1	0.5713	40 (mL)	70.02
HS16110729-12	1	0.5605	40 (mL)	71.36
HS16110729-13	1	0.5583	40 (mL)	71.65
HS16110729-14	1	0.5684	40 (mL)	70.37
HS16110729-15	1	0.5904	40 (mL)	67.75
HS16110729-16	1	0.5709	40 (mL)	70.06
HS16110729-17	1	0.5877	40 (mL)	68.06
HS16110729-19	1	0.5671	40 (mL)	70.53
HS16110729-20	1	0.5591	40 (mL)	71.54
HS16110729-21	1	0.5747	40 (mL)	69.6
HS16110729-22	1	0.5923	40 (mL)	67.53

Batch ID: 110270 **Method:** MERCURY BY SW7471B **Prep:** HG_S_LOWPR

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110729-23	1	0.5524	40 (mL)	72.41
HS16110729-24	1	0.5899	40 (mL)	67.81
HS16110729-25	1	0.5593	40 (mL)	71.52
HS16110729-26	1	0.5737	40 (mL)	69.72

WEIGHT LOG

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

Batch ID: 110272 **Method:** HEXAVALENT CHROMIUM BY SW7196A **Prep:** CR6_S_PR3060A

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110729-01	1	2.5027	100 (mL)	39.96
HS16110729-02	1	2.5044	100 (mL)	39.93
HS16110729-03	1	2.5031	100 (mL)	39.95
HS16110729-04	1	2.5033	100 (mL)	39.95
HS16110729-05	1	2.5073	100 (mL)	39.88
HS16110729-06	1	2.5006	100 (mL)	39.99
HS16110729-07	1	2.5035	100 (mL)	39.94
HS16110729-08	1	2.5027	100 (mL)	39.96
HS16110729-10	1	2.5018	100 (mL)	39.97
HS16110729-11	1	2.5051	100 (mL)	39.92
HS16110729-12	1	2.5066	100 (mL)	39.89
HS16110729-13	1	2.503	100 (mL)	39.95
HS16110729-14	1	2.5064	100 (mL)	39.9
HS16110729-15	1	2.5053	100 (mL)	39.92
HS16110729-16	1	2.5001	100 (mL)	40
HS16110729-17	1	2.5015	100 (mL)	39.98
HS16110729-19	1	2.5032	100 (mL)	39.95
HS16110729-20	1	2.5008	100 (mL)	39.99
HS16110729-21	1	2.5009	100 (mL)	39.99
HS16110729-22	1	2.5003	100 (mL)	40

Batch ID: 110286 **Method:** HEXAVALENT CHROMIUM BY SW7196A **Prep:** CR6_S_PR3060A

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110729-23	1	2.5024	100 (mL)	39.96
HS16110729-24	1	2.5005	100 (mL)	39.99
HS16110729-25	1	2.5014	100 (mL)	39.98
HS16110729-26	1	2.5037	100 (mL)	39.94

WEIGHT LOG

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

Batch ID: 110325 **Method:** LA 29B - 1:1 SOLUBLE CATIONS FOR SAR **Prep:** LA29B SAR CATPR

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110729-01	1	75.0145	75 (mL)	0.9998
HS16110729-02	1	75.0055	75 (mL)	0.9999
HS16110729-03	1	75.0068	75 (mL)	0.9999
HS16110729-04	1	75.048	75 (mL)	0.9994
HS16110729-05	1	75.0164	75 (mL)	0.9998
HS16110729-06	1	75.035	75 (mL)	0.9995
HS16110729-07	1	75.0293	75 (mL)	0.9996
HS16110729-08	1	75.0088	75 (mL)	0.9999
HS16110729-10	1	75.037	75 (mL)	0.9995
HS16110729-11	1	75.0086	75 (mL)	0.9999
HS16110729-12	1	75.0916	75 (mL)	0.9988
HS16110729-13	1	75.0294	75 (mL)	0.9996
HS16110729-14	1	75.0765	75 (mL)	0.999
HS16110729-15	1	75.0173	75 (mL)	0.9998
HS16110729-16	1	75.0765	75 (mL)	0.999
HS16110729-17	1	75.0485	75 (mL)	0.9994
HS16110729-19	1	75.0612	75 (mL)	0.9992
HS16110729-20	1	75.0393	75 (mL)	0.9995
HS16110729-21	1	75.0541	75 (mL)	0.9993
HS16110729-22	1	75.04	75 (mL)	0.9995

Batch ID: 110326 **Method:** LA 29B - 1:1 SOLUBLE CATIONS FOR SAR **Prep:** LA29B SAR CATPR

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110729-23	1	75.046	75 (mL)	0.9994
HS16110729-24	1	75.0318	75 (mL)	0.9996
HS16110729-25	1	75.0884	75 (mL)	0.9988
HS16110729-26	1	75.0208	75 (mL)	0.9997

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 109920 Test Name : TPH DRO/ORO BY SW8015C Matrix: Soil						
HS16110729-01	GP-11-1-1-2-111116	11 Nov 2016 08:30		16 Nov 2016 13:42	22 Nov 2016 22:50	1
HS16110729-02	GP-11-1-5-6-111116	11 Nov 2016 08:45		16 Nov 2016 13:42	22 Nov 2016 23:15	1
HS16110729-03	GP-11-1-9-10-111116	11 Nov 2016 09:00		16 Nov 2016 13:42	18 Nov 2016 23:39	1
HS16110729-04	GP-11-2-1-2-111116	11 Nov 2016 09:20		16 Nov 2016 13:42	18 Nov 2016 00:03	1
HS16110729-05	GP-11-2-3-4-111116	11 Nov 2016 09:40		16 Nov 2016 13:42	18 Nov 2016 00:27	1
HS16110729-06	GP-11-2-8-9-111116	11 Nov 2016 09:50		16 Nov 2016 13:42	18 Nov 2016 00:52	1
HS16110729-07	GP-11-3-2-3-111116	11 Nov 2016 10:00		16 Nov 2016 13:42	19 Nov 2016 01:16	1
HS16110729-08	GP-11-3-8-9-111116	11 Nov 2016 10:15		16 Nov 2016 13:42	19 Nov 2016 01:41	1
HS16110729-10	GP-11-3-12-13-111116	11 Nov 2016 10:30		16 Nov 2016 13:42	19 Nov 2016 02:05	1
HS16110729-11	GP-11-4-1-2-111116	11 Nov 2016 11:00		16 Nov 2016 13:42	19 Nov 2016 02:30	1
HS16110729-12	GP-11-4-10-11-111116	11 Nov 2016 11:20		16 Nov 2016 13:42	19 Nov 2016 02:54	1
HS16110729-13	GP-11-4-11-12-111116	11 Nov 2016 11:30		16 Nov 2016 13:42	19 Nov 2016 03:19	1
HS16110729-14	GP-11-5-2-3-111116	11 Nov 2016 15:00		16 Nov 2016 13:42	19 Nov 2016 03:43	1
HS16110729-15	GP-11-5-7-8-111116	11 Nov 2016 15:30		16 Nov 2016 13:42	19 Nov 2016 04:07	1
Batch ID 110014 Test Name : TPH DRO/ORO BY SW8015C Matrix: Soil						
HS16110729-16	GP-11-5-9-10-111116	11 Nov 2016 15:45		18 Nov 2016 14:00	29 Nov 2016 08:40	1
HS16110729-17	GP-11-6-2-3-111116	11 Nov 2016 14:00		18 Nov 2016 14:00	29 Nov 2016 09:54	1
HS16110729-19	GP-11-6-8-9-111116	11 Nov 2016 14:30		18 Nov 2016 14:00	29 Nov 2016 10:19	1
HS16110729-20	GP-11-6-4-5-111116	11 Nov 2016 14:15		18 Nov 2016 14:00	29 Nov 2016 10:43	1
HS16110729-21	GP-11-7-2-3-111116	11 Nov 2016 13:15		18 Nov 2016 14:00	29 Nov 2016 11:08	1
HS16110729-22	GP-11-7-4-5-111116	11 Nov 2016 13:20		18 Nov 2016 14:00	29 Nov 2016 11:32	1
HS16110729-23	GP-11-7-11-12-111116	11 Nov 2016 13:45		18 Nov 2016 14:00	29 Nov 2016 11:57	1
HS16110729-24	GP-11-8-2-3-111116	11 Nov 2016 12:50		18 Nov 2016 14:00	29 Nov 2016 12:21	1
HS16110729-25	GP-11-8-8-9-111116	11 Nov 2016 13:00		18 Nov 2016 14:00	29 Nov 2016 12:45	1
HS16110729-26	GP-11-8-10-11-111116	11 Nov 2016 13:10		18 Nov 2016 14:00	29 Nov 2016 13:10	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 110049	Test Name : METALS BY SW6020A			Matrix: Soil		
HS16110729-01	GP-11-1-1-2-111116	11 Nov 2016 08:30		21 Nov 2016 14:51	23 Nov 2016 13:06	5
HS16110729-01	GP-11-1-1-2-111116	11 Nov 2016 08:30		21 Nov 2016 14:51	22 Nov 2016 19:15	1
HS16110729-02	GP-11-1-5-6-111116	11 Nov 2016 08:45		21 Nov 2016 14:51	23 Nov 2016 13:10	10
HS16110729-02	GP-11-1-5-6-111116	11 Nov 2016 08:45		21 Nov 2016 14:51	22 Nov 2016 19:19	1
HS16110729-03	GP-11-1-9-10-111116	11 Nov 2016 09:00		21 Nov 2016 14:51	22 Nov 2016 19:24	1
HS16110729-04	GP-11-2-1-2-111116	11 Nov 2016 09:20		21 Nov 2016 14:51	23 Nov 2016 13:15	5
HS16110729-04	GP-11-2-1-2-111116	11 Nov 2016 09:20		21 Nov 2016 14:51	22 Nov 2016 19:28	1
HS16110729-05	GP-11-2-3-4-111116	11 Nov 2016 09:40		21 Nov 2016 14:51	22 Nov 2016 19:33	1
HS16110729-06	GP-11-2-8-9-111116	11 Nov 2016 09:50		21 Nov 2016 14:51	23 Nov 2016 13:19	5
HS16110729-06	GP-11-2-8-9-111116	11 Nov 2016 09:50		21 Nov 2016 14:51	22 Nov 2016 19:37	1
HS16110729-07	GP-11-3-2-3-111116	11 Nov 2016 10:00		21 Nov 2016 14:51	22 Nov 2016 19:42	1
HS16110729-08	GP-11-3-8-9-111116	11 Nov 2016 10:15		21 Nov 2016 14:51	23 Nov 2016 13:24	5
HS16110729-08	GP-11-3-8-9-111116	11 Nov 2016 10:15		21 Nov 2016 14:51	22 Nov 2016 19:55	1
HS16110729-10	GP-11-3-12-13-111116	11 Nov 2016 10:30		21 Nov 2016 14:51	22 Nov 2016 20:00	1
HS16110729-11	GP-11-4-1-2-111116	11 Nov 2016 11:00		21 Nov 2016 14:51	22 Nov 2016 20:04	1
HS16110729-12	GP-11-4-10-11-111116	11 Nov 2016 11:20		21 Nov 2016 14:51	23 Nov 2016 13:28	5
HS16110729-12	GP-11-4-10-11-111116	11 Nov 2016 11:20		21 Nov 2016 14:51	22 Nov 2016 20:09	1
HS16110729-13	GP-11-4-11-12-111116	11 Nov 2016 11:30		21 Nov 2016 14:51	23 Nov 2016 13:44	5
HS16110729-13	GP-11-4-11-12-111116	11 Nov 2016 11:30		21 Nov 2016 14:51	22 Nov 2016 20:13	1
HS16110729-14	GP-11-5-2-3-111116	11 Nov 2016 15:00		21 Nov 2016 14:51	23 Nov 2016 14:44	10
HS16110729-14	GP-11-5-2-3-111116	11 Nov 2016 15:00		21 Nov 2016 14:51	22 Nov 2016 20:18	1
HS16110729-15	GP-11-5-7-8-111116	11 Nov 2016 15:30		21 Nov 2016 14:51	23 Nov 2016 15:01	5
HS16110729-15	GP-11-5-7-8-111116	11 Nov 2016 15:30		21 Nov 2016 14:51	22 Nov 2016 20:22	1
HS16110729-16	GP-11-5-9-10-111116	11 Nov 2016 15:45		21 Nov 2016 14:51	22 Nov 2016 20:26	1
HS16110729-17	GP-11-6-2-3-111116	11 Nov 2016 14:00		21 Nov 2016 14:51	23 Nov 2016 15:06	1
HS16110729-17	GP-11-6-2-3-111116	11 Nov 2016 14:00		21 Nov 2016 14:51	22 Nov 2016 20:30	1
HS16110729-19	GP-11-6-8-9-111116	11 Nov 2016 14:30		21 Nov 2016 14:51	23 Nov 2016 15:10	5
HS16110729-19	GP-11-6-8-9-111116	11 Nov 2016 14:30		21 Nov 2016 14:51	22 Nov 2016 20:44	1
HS16110729-20	GP-11-6-4-5-111116	11 Nov 2016 14:15		21 Nov 2016 14:51	23 Nov 2016 14:48	1
HS16110729-20	GP-11-6-4-5-111116	11 Nov 2016 14:15		21 Nov 2016 14:51	22 Nov 2016 20:48	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 110093 Test Name : METALS BY SW6020A Matrix: Soil						
HS16110729-21	GP-11-7-2-3-111116	11 Nov 2016 13:15		22 Nov 2016 11:49	23 Nov 2016 15:37	1
HS16110729-21	GP-11-7-2-3-111116	11 Nov 2016 13:15		22 Nov 2016 11:49	22 Nov 2016 21:45	1
HS16110729-22	GP-11-7-4-5-111116	11 Nov 2016 13:20		22 Nov 2016 11:49	23 Nov 2016 15:41	1
HS16110729-22	GP-11-7-4-5-111116	11 Nov 2016 13:20		22 Nov 2016 11:49	22 Nov 2016 21:50	1
HS16110729-23	GP-11-7-11-12-111116	11 Nov 2016 13:45		22 Nov 2016 11:49	23 Nov 2016 15:50	5
HS16110729-23	GP-11-7-11-12-111116	11 Nov 2016 13:45		22 Nov 2016 11:49	22 Nov 2016 21:54	1
HS16110729-24	GP-11-8-2-3-111116	11 Nov 2016 12:50		22 Nov 2016 11:49	23 Nov 2016 15:55	5
HS16110729-24	GP-11-8-2-3-111116	11 Nov 2016 12:50		22 Nov 2016 11:49	22 Nov 2016 21:59	1
HS16110729-25	GP-11-8-8-9-111116	11 Nov 2016 13:00		22 Nov 2016 11:49	23 Nov 2016 15:46	1
HS16110729-25	GP-11-8-8-9-111116	11 Nov 2016 13:00		22 Nov 2016 11:49	22 Nov 2016 22:03	1
HS16110729-26	GP-11-8-10-11-111116	11 Nov 2016 13:10		22 Nov 2016 11:49	26 Nov 2016 16:26	5
HS16110729-26	GP-11-8-10-11-111116	11 Nov 2016 13:10		22 Nov 2016 11:49	23 Nov 2016 19:28	5
Batch ID 110269 Test Name : MERCURY BY SW7471B Matrix: Soil						
HS16110729-01	GP-11-1-1-2-111116	11 Nov 2016 08:30		29 Nov 2016 16:42	30 Nov 2016 15:47	1
HS16110729-02	GP-11-1-5-6-111116	11 Nov 2016 08:45		29 Nov 2016 16:42	30 Nov 2016 15:49	1
HS16110729-03	GP-11-1-9-10-111116	11 Nov 2016 09:00		29 Nov 2016 16:42	30 Nov 2016 15:51	1
HS16110729-04	GP-11-2-1-2-111116	11 Nov 2016 09:20		29 Nov 2016 16:42	30 Nov 2016 16:01	1
HS16110729-05	GP-11-2-3-4-111116	11 Nov 2016 09:40		29 Nov 2016 16:42	30 Nov 2016 16:07	1
HS16110729-06	GP-11-2-8-9-111116	11 Nov 2016 09:50		29 Nov 2016 16:42	30 Nov 2016 16:08	1
HS16110729-07	GP-11-3-2-3-111116	11 Nov 2016 10:00		29 Nov 2016 16:42	30 Nov 2016 16:10	1
HS16110729-08	GP-11-3-8-9-111116	11 Nov 2016 10:15		29 Nov 2016 16:42	30 Nov 2016 16:14	1
HS16110729-10	GP-11-3-12-13-111116	11 Nov 2016 10:30		29 Nov 2016 16:42	30 Nov 2016 16:15	1
HS16110729-11	GP-11-4-1-2-111116	11 Nov 2016 11:00		29 Nov 2016 16:42	30 Nov 2016 16:17	1
HS16110729-12	GP-11-4-10-11-111116	11 Nov 2016 11:20		29 Nov 2016 16:42	30 Nov 2016 16:19	1
HS16110729-13	GP-11-4-11-12-111116	11 Nov 2016 11:30		29 Nov 2016 16:42	30 Nov 2016 16:24	1
HS16110729-14	GP-11-5-2-3-111116	11 Nov 2016 15:00		29 Nov 2016 16:42	30 Nov 2016 16:26	1
HS16110729-15	GP-11-5-7-8-111116	11 Nov 2016 15:30		29 Nov 2016 16:42	30 Nov 2016 16:27	1
HS16110729-16	GP-11-5-9-10-111116	11 Nov 2016 15:45		29 Nov 2016 16:42	30 Nov 2016 16:29	1
HS16110729-17	GP-11-6-2-3-111116	11 Nov 2016 14:00		29 Nov 2016 16:42	30 Nov 2016 16:31	1
HS16110729-19	GP-11-6-8-9-111116	11 Nov 2016 14:30		29 Nov 2016 16:42	30 Nov 2016 16:32	1
HS16110729-20	GP-11-6-4-5-111116	11 Nov 2016 14:15		29 Nov 2016 16:42	30 Nov 2016 16:34	1
HS16110729-21	GP-11-7-2-3-111116	11 Nov 2016 13:15		29 Nov 2016 16:42	30 Nov 2016 16:36	1
HS16110729-22	GP-11-7-4-5-111116	11 Nov 2016 13:20		29 Nov 2016 16:42	30 Nov 2016 16:38	1
Batch ID 110270 Test Name : MERCURY BY SW7471B Matrix: Soil						
HS16110729-23	GP-11-7-11-12-111116	11 Nov 2016 13:45		29 Nov 2016 16:48	30 Nov 2016 16:50	1
HS16110729-24	GP-11-8-2-3-111116	11 Nov 2016 12:50		29 Nov 2016 16:48	30 Nov 2016 16:55	1
HS16110729-25	GP-11-8-8-9-111116	11 Nov 2016 13:00		29 Nov 2016 16:48	30 Nov 2016 16:57	1
HS16110729-26	GP-11-8-10-11-111116	11 Nov 2016 13:10		29 Nov 2016 16:48	30 Nov 2016 16:59	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 110272	Test Name : HEXAVALENT CHROMIUM BY SW7196A			Matrix: Soil		
HS16110729-01	GP-11-1-1-2-111116	11 Nov 2016 08:30		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-02	GP-11-1-5-6-111116	11 Nov 2016 08:45		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-03	GP-11-1-9-10-111116	11 Nov 2016 09:00		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-04	GP-11-2-1-2-111116	11 Nov 2016 09:20		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-05	GP-11-2-3-4-111116	11 Nov 2016 09:40		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-06	GP-11-2-8-9-111116	11 Nov 2016 09:50		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-07	GP-11-3-2-3-111116	11 Nov 2016 10:00		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-08	GP-11-3-8-9-111116	11 Nov 2016 10:15		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-10	GP-11-3-12-13-111116	11 Nov 2016 10:30		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-11	GP-11-4-1-2-111116	11 Nov 2016 11:00		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-12	GP-11-4-10-11-111116	11 Nov 2016 11:20		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-13	GP-11-4-11-12-111116	11 Nov 2016 11:30		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-14	GP-11-5-2-3-111116	11 Nov 2016 15:00		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-15	GP-11-5-7-8-111116	11 Nov 2016 15:30		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-16	GP-11-5-9-10-111116	11 Nov 2016 15:45		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-17	GP-11-6-2-3-111116	11 Nov 2016 14:00		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-19	GP-11-6-8-9-111116	11 Nov 2016 14:30		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-20	GP-11-6-4-5-111116	11 Nov 2016 14:15		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-21	GP-11-7-2-3-111116	11 Nov 2016 13:15		29 Nov 2016 17:38	30 Nov 2016 15:00	1
HS16110729-22	GP-11-7-4-5-111116	11 Nov 2016 13:20		29 Nov 2016 17:38	30 Nov 2016 15:00	1
Batch ID 110286	Test Name : HEXAVALENT CHROMIUM BY SW7196A			Matrix: Soil		
HS16110729-23	GP-11-7-11-12-111116	11 Nov 2016 13:45		30 Nov 2016 10:16	30 Nov 2016 17:00	1
HS16110729-24	GP-11-8-2-3-111116	11 Nov 2016 12:50		30 Nov 2016 10:16	30 Nov 2016 17:00	1
HS16110729-25	GP-11-8-8-9-111116	11 Nov 2016 13:00		30 Nov 2016 10:16	30 Nov 2016 17:00	1
HS16110729-26	GP-11-8-10-11-111116	11 Nov 2016 13:10		30 Nov 2016 10:16	30 Nov 2016 17:00	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 110325	Test Name : LA 29B - 1:1 SOLUBLE CATIONS FOR SAR			Matrix: Soil		
HS16110729-01	GP-11-1-1-2-111116	11 Nov 2016 08:30		30 Nov 2016 15:00	01 Dec 2016 12:51	10
HS16110729-02	GP-11-1-5-6-111116	11 Nov 2016 08:45		30 Nov 2016 15:00	01 Dec 2016 14:38	500
HS16110729-02	GP-11-1-5-6-111116	11 Nov 2016 08:45		30 Nov 2016 15:00	01 Dec 2016 12:54	10
HS16110729-03	GP-11-1-9-10-111116	11 Nov 2016 09:00		30 Nov 2016 15:00	01 Dec 2016 14:41	100
HS16110729-03	GP-11-1-9-10-111116	11 Nov 2016 09:00		30 Nov 2016 15:00	01 Dec 2016 12:57	10
HS16110729-04	GP-11-2-1-2-111116	11 Nov 2016 09:20		30 Nov 2016 15:00	01 Dec 2016 13:00	10
HS16110729-05	GP-11-2-3-4-111116	11 Nov 2016 09:40		30 Nov 2016 15:00	01 Dec 2016 13:03	10
HS16110729-06	GP-11-2-8-9-111116	11 Nov 2016 09:50		30 Nov 2016 15:00	01 Dec 2016 13:06	10
HS16110729-07	GP-11-3-2-3-111116	11 Nov 2016 10:00		30 Nov 2016 15:00	01 Dec 2016 13:15	10
HS16110729-08	GP-11-3-8-9-111116	11 Nov 2016 10:15		30 Nov 2016 15:00	01 Dec 2016 13:18	10
HS16110729-10	GP-11-3-12-13-111116	11 Nov 2016 10:30		30 Nov 2016 15:00	01 Dec 2016 13:21	10
HS16110729-11	GP-11-4-1-2-111116	11 Nov 2016 11:00		30 Nov 2016 15:00	01 Dec 2016 13:24	10
HS16110729-12	GP-11-4-10-11-111116	11 Nov 2016 11:20		30 Nov 2016 15:00	01 Dec 2016 13:27	10
HS16110729-13	GP-11-4-11-12-111116	11 Nov 2016 11:30		30 Nov 2016 15:00	01 Dec 2016 13:30	10
HS16110729-14	GP-11-5-2-3-111116	11 Nov 2016 15:00		30 Nov 2016 15:00	01 Dec 2016 14:44	100
HS16110729-14	GP-11-5-2-3-111116	11 Nov 2016 15:00		30 Nov 2016 15:00	01 Dec 2016 13:33	10
HS16110729-15	GP-11-5-7-8-111116	11 Nov 2016 15:30		30 Nov 2016 15:00	01 Dec 2016 14:47	100
HS16110729-15	GP-11-5-7-8-111116	11 Nov 2016 15:30		30 Nov 2016 15:00	01 Dec 2016 13:36	10
HS16110729-16	GP-11-5-9-10-111116	11 Nov 2016 15:45		30 Nov 2016 15:00	01 Dec 2016 14:53	100
HS16110729-16	GP-11-5-9-10-111116	11 Nov 2016 15:45		30 Nov 2016 15:00	01 Dec 2016 13:42	10
HS16110729-17	GP-11-6-2-3-111116	11 Nov 2016 14:00		30 Nov 2016 15:00	01 Dec 2016 15:02	100
HS16110729-17	GP-11-6-2-3-111116	11 Nov 2016 14:00		30 Nov 2016 15:00	01 Dec 2016 13:51	10
HS16110729-19	GP-11-6-8-9-111116	11 Nov 2016 14:30		30 Nov 2016 15:00	01 Dec 2016 13:54	10
HS16110729-20	GP-11-6-4-5-111116	11 Nov 2016 14:15		30 Nov 2016 15:00	01 Dec 2016 15:05	100
HS16110729-20	GP-11-6-4-5-111116	11 Nov 2016 14:15		30 Nov 2016 15:00	01 Dec 2016 13:56	10
HS16110729-21	GP-11-7-2-3-111116	11 Nov 2016 13:15		30 Nov 2016 15:00	01 Dec 2016 13:59	10
HS16110729-22	GP-11-7-4-5-111116	11 Nov 2016 13:20		30 Nov 2016 15:00	01 Dec 2016 15:08	100
HS16110729-22	GP-11-7-4-5-111116	11 Nov 2016 13:20		30 Nov 2016 15:00	01 Dec 2016 14:02	10

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 110325A Test Name : LA29B SODIUM ADSORPTION RATIO Matrix: Soil						
HS16110729-01	GP-11-1-1-2-111116	11 Nov 2016 08:30		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-02	GP-11-1-5-6-111116	11 Nov 2016 08:45		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-03	GP-11-1-9-10-111116	11 Nov 2016 09:00		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-04	GP-11-2-1-2-111116	11 Nov 2016 09:20		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-05	GP-11-2-3-4-111116	11 Nov 2016 09:40		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-06	GP-11-2-8-9-111116	11 Nov 2016 09:50		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-07	GP-11-3-2-3-111116	11 Nov 2016 10:00		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-08	GP-11-3-8-9-111116	11 Nov 2016 10:15		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-10	GP-11-3-12-13-111116	11 Nov 2016 10:30		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-11	GP-11-4-1-2-111116	11 Nov 2016 11:00		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-12	GP-11-4-10-11-111116	11 Nov 2016 11:20		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-13	GP-11-4-11-12-111116	11 Nov 2016 11:30		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-14	GP-11-5-2-3-111116	11 Nov 2016 15:00		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-15	GP-11-5-7-8-111116	11 Nov 2016 15:30		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-16	GP-11-5-9-10-111116	11 Nov 2016 15:45		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-17	GP-11-6-2-3-111116	11 Nov 2016 14:00		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-19	GP-11-6-8-9-111116	11 Nov 2016 14:30		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-20	GP-11-6-4-5-111116	11 Nov 2016 14:15		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-21	GP-11-7-2-3-111116	11 Nov 2016 13:15		30 Nov 2016 15:00	01 Dec 2016 13:41	1
HS16110729-22	GP-11-7-4-5-111116	11 Nov 2016 13:20		30 Nov 2016 15:00	01 Dec 2016 13:41	1
Batch ID 110326 Test Name : LA 29B - 1:1 SOLUBLE CATIONS FOR SAR Matrix: Soil						
HS16110729-23	GP-11-7-11-12-111116	11 Nov 2016 13:45		30 Nov 2016 15:00	01 Dec 2016 14:14	10
HS16110729-24	GP-11-8-2-3-111116	11 Nov 2016 12:50		30 Nov 2016 15:00	01 Dec 2016 14:26	10
HS16110729-25	GP-11-8-8-9-111116	11 Nov 2016 13:00		30 Nov 2016 15:00	01 Dec 2016 15:11	100
HS16110729-25	GP-11-8-8-9-111116	11 Nov 2016 13:00		30 Nov 2016 15:00	01 Dec 2016 14:29	10
HS16110729-26	GP-11-8-10-11-111116	11 Nov 2016 13:10		30 Nov 2016 15:00	01 Dec 2016 15:14	100
HS16110729-26	GP-11-8-10-11-111116	11 Nov 2016 13:10		30 Nov 2016 15:00	01 Dec 2016 14:32	10
Batch ID 110326A Test Name : LA29B SODIUM ADSORPTION RATIO Matrix: Soil						
HS16110729-23	GP-11-7-11-12-111116	11 Nov 2016 13:45		30 Nov 2016 15:00	01 Dec 2016 13:44	1
HS16110729-24	GP-11-8-2-3-111116	11 Nov 2016 12:50		30 Nov 2016 15:00	01 Dec 2016 13:44	1
HS16110729-25	GP-11-8-8-9-111116	11 Nov 2016 13:00		30 Nov 2016 15:00	01 Dec 2016 13:44	1
HS16110729-26	GP-11-8-10-11-111116	11 Nov 2016 13:10		30 Nov 2016 15:00	01 Dec 2016 13:44	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R284970 Test Name : GASOLINE RANGE ORGANICS BY SW8015C Matrix: Soil						
HS16110729-01	GP-11-1-1-2-111116	11 Nov 2016 08:30			16 Nov 2016 17:52	1
HS16110729-02	GP-11-1-5-6-111116	11 Nov 2016 08:45			16 Nov 2016 18:40	1
HS16110729-03	GP-11-1-9-10-111116	11 Nov 2016 09:00			16 Nov 2016 18:56	1
HS16110729-04	GP-11-2-1-2-111116	11 Nov 2016 09:20			16 Nov 2016 19:28	1
HS16110729-05	GP-11-2-3-4-111116	11 Nov 2016 09:40			16 Nov 2016 19:44	1
HS16110729-06	GP-11-2-8-9-111116	11 Nov 2016 09:50			16 Nov 2016 20:00	1
HS16110729-07	GP-11-3-2-3-111116	11 Nov 2016 10:00			16 Nov 2016 20:16	1
HS16110729-08	GP-11-3-8-9-111116	11 Nov 2016 10:15			16 Nov 2016 20:32	1
HS16110729-10	GP-11-3-12-13-111116	11 Nov 2016 10:30			16 Nov 2016 20:48	1
HS16110729-11	GP-11-4-1-2-111116	11 Nov 2016 11:00			16 Nov 2016 21:04	1
HS16110729-12	GP-11-4-10-11-111116	11 Nov 2016 11:20			16 Nov 2016 21:20	1
HS16110729-13	GP-11-4-11-12-111116	11 Nov 2016 11:30			16 Nov 2016 21:36	1
HS16110729-14	GP-11-5-2-3-111116	11 Nov 2016 15:00			16 Nov 2016 21:52	1
HS16110729-15	GP-11-5-7-8-111116	11 Nov 2016 15:30			16 Nov 2016 22:24	1
HS16110729-16	GP-11-5-9-10-111116	11 Nov 2016 15:45			16 Nov 2016 22:40	1
HS16110729-17	GP-11-6-2-3-111116	11 Nov 2016 14:00			16 Nov 2016 22:56	1
HS16110729-19	GP-11-6-8-9-111116	11 Nov 2016 14:30			16 Nov 2016 23:12	1
HS16110729-20	GP-11-6-4-5-111116	11 Nov 2016 14:15			16 Nov 2016 23:28	1
Batch ID R284973 Test Name : LOW LEVEL VOLATILES BY SW8260C Matrix: Water						
HS16110729-09	Trip Blank - 100716-66	11 Nov 2016 00:00			16 Nov 2016 16:05	1
HS16110729-18	Trip Blank - 082916-95	11 Nov 2016 00:00			16 Nov 2016 16:30	1
HS16110729-27	Trip Blank - 082916-94	11 Nov 2016 00:00			16 Nov 2016 16:55	1
Batch ID R284984 Test Name : GASOLINE RANGE ORGANICS BY SW8015C Matrix: Soil						
HS16110729-21	GP-11-7-2-3-111116	11 Nov 2016 13:15			17 Nov 2016 01:21	1
HS16110729-22	GP-11-7-4-5-111116	11 Nov 2016 13:20			17 Nov 2016 02:09	1
HS16110729-23	GP-11-7-11-12-111116	11 Nov 2016 13:45			17 Nov 2016 02:25	1
HS16110729-24	GP-11-8-2-3-111116	11 Nov 2016 12:50			17 Nov 2016 02:41	1
HS16110729-25	GP-11-8-8-9-111116	11 Nov 2016 13:00			17 Nov 2016 02:57	1
HS16110729-26	GP-11-8-10-11-111116	11 Nov 2016 13:10			17 Nov 2016 03:29	1
Batch ID R285031 Test Name : VOLATILES BY SW8260C Matrix: Soil						
HS16110729-01	GP-11-1-1-2-111116	11 Nov 2016 08:30			18 Nov 2016 03:23	1
HS16110729-02	GP-11-1-5-6-111116	11 Nov 2016 08:45			18 Nov 2016 03:46	1
HS16110729-03	GP-11-1-9-10-111116	11 Nov 2016 09:00			18 Nov 2016 04:09	1
HS16110729-04	GP-11-2-1-2-111116	11 Nov 2016 09:20			18 Nov 2016 04:32	1
HS16110729-05	GP-11-2-3-4-111116	11 Nov 2016 09:40			18 Nov 2016 04:55	1
HS16110729-06	GP-11-2-8-9-111116	11 Nov 2016 09:50			18 Nov 2016 05:19	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID	R285130	Test Name : VOLATILES BY SW8260C			Matrix: Soil	
HS16110729-07	GP-11-3-2-3-111116	11 Nov 2016 10:00			18 Nov 2016 21:35	1
HS16110729-08	GP-11-3-8-9-111116	11 Nov 2016 10:15			18 Nov 2016 21:58	1
HS16110729-10	GP-11-3-12-13-111116	11 Nov 2016 10:30			18 Nov 2016 22:21	1
HS16110729-11	GP-11-4-1-2-111116	11 Nov 2016 11:00			18 Nov 2016 23:31	1
HS16110729-12	GP-11-4-10-11-111116	11 Nov 2016 11:20			18 Nov 2016 23:54	1
HS16110729-13	GP-11-4-11-12-111116	11 Nov 2016 11:30			19 Nov 2016 00:17	1
HS16110729-14	GP-11-5-2-3-111116	11 Nov 2016 15:00			19 Nov 2016 00:40	1
HS16110729-15	GP-11-5-7-8-111116	11 Nov 2016 15:30			19 Nov 2016 01:03	1
HS16110729-16	GP-11-5-9-10-111116	11 Nov 2016 15:45			19 Nov 2016 01:26	1
HS16110729-17	GP-11-6-2-3-111116	11 Nov 2016 14:00			19 Nov 2016 01:49	1
HS16110729-19	GP-11-6-8-9-111116	11 Nov 2016 14:30			19 Nov 2016 02:13	1
HS16110729-20	GP-11-6-4-5-111116	11 Nov 2016 14:15			19 Nov 2016 02:36	1
HS16110729-21	GP-11-7-2-3-111116	11 Nov 2016 13:15			19 Nov 2016 02:59	1
HS16110729-22	GP-11-7-4-5-111116	11 Nov 2016 13:20			19 Nov 2016 03:22	1
HS16110729-23	GP-11-7-11-12-111116	11 Nov 2016 13:45			19 Nov 2016 03:45	1
HS16110729-24	GP-11-8-2-3-111116	11 Nov 2016 12:50			19 Nov 2016 04:08	1
HS16110729-25	GP-11-8-8-9-111116	11 Nov 2016 13:00			19 Nov 2016 04:31	1
HS16110729-26	GP-11-8-10-11-111116	11 Nov 2016 13:10			19 Nov 2016 04:55	1
Batch ID	R285169	Test Name : MOISTURE			Matrix: Soil	
HS16110729-01	GP-11-1-1-2-111116	11 Nov 2016 08:30			18 Nov 2016 11:41	1
HS16110729-02	GP-11-1-5-6-111116	11 Nov 2016 08:45			18 Nov 2016 11:41	1
HS16110729-03	GP-11-1-9-10-111116	11 Nov 2016 09:00			18 Nov 2016 11:41	1
HS16110729-04	GP-11-2-1-2-111116	11 Nov 2016 09:20			18 Nov 2016 11:41	1
HS16110729-05	GP-11-2-3-4-111116	11 Nov 2016 09:40			18 Nov 2016 11:41	1
HS16110729-06	GP-11-2-8-9-111116	11 Nov 2016 09:50			18 Nov 2016 11:41	1
HS16110729-07	GP-11-3-2-3-111116	11 Nov 2016 10:00			18 Nov 2016 11:41	1
HS16110729-08	GP-11-3-8-9-111116	11 Nov 2016 10:15			18 Nov 2016 11:41	1
HS16110729-10	GP-11-3-12-13-111116	11 Nov 2016 10:30			18 Nov 2016 11:41	1
HS16110729-11	GP-11-4-1-2-111116	11 Nov 2016 11:00			18 Nov 2016 11:41	1
HS16110729-12	GP-11-4-10-11-111116	11 Nov 2016 11:20			18 Nov 2016 11:41	1
HS16110729-13	GP-11-4-11-12-111116	11 Nov 2016 11:30			18 Nov 2016 11:41	1
HS16110729-14	GP-11-5-2-3-111116	11 Nov 2016 15:00			18 Nov 2016 11:41	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R285282 Test Name : MOISTURE Matrix: Soil						
HS16110729-15	GP-11-5-7-8-111116	11 Nov 2016 15:30			21 Nov 2016 12:39	1
HS16110729-16	GP-11-5-9-10-111116	11 Nov 2016 15:45			21 Nov 2016 12:39	1
HS16110729-17	GP-11-6-2-3-111116	11 Nov 2016 14:00			21 Nov 2016 12:39	1
HS16110729-19	GP-11-6-8-9-111116	11 Nov 2016 14:30			21 Nov 2016 12:39	1
HS16110729-20	GP-11-6-4-5-111116	11 Nov 2016 14:15			21 Nov 2016 12:39	1
HS16110729-21	GP-11-7-2-3-111116	11 Nov 2016 13:15			21 Nov 2016 12:39	1
HS16110729-22	GP-11-7-4-5-111116	11 Nov 2016 13:20			21 Nov 2016 12:39	1
HS16110729-23	GP-11-7-11-12-111116	11 Nov 2016 13:45			21 Nov 2016 12:39	1
HS16110729-24	GP-11-8-2-3-111116	11 Nov 2016 12:50			21 Nov 2016 12:39	1
HS16110729-25	GP-11-8-8-9-111116	11 Nov 2016 13:00			21 Nov 2016 12:39	1
HS16110729-26	GP-11-8-10-11-111116	11 Nov 2016 13:10			21 Nov 2016 12:39	1
Batch ID R285671 Test Name : PH SOIL BY SW9045D Matrix: Soil						
HS16110729-01	GP-11-1-1-2-111116	11 Nov 2016 08:30			29 Nov 2016 17:15	1
HS16110729-02	GP-11-1-5-6-111116	11 Nov 2016 08:45			29 Nov 2016 17:15	1
HS16110729-03	GP-11-1-9-10-111116	11 Nov 2016 09:00			29 Nov 2016 17:15	1
HS16110729-04	GP-11-2-1-2-111116	11 Nov 2016 09:20			29 Nov 2016 17:15	1
HS16110729-05	GP-11-2-3-4-111116	11 Nov 2016 09:40			29 Nov 2016 17:15	1
HS16110729-06	GP-11-2-8-9-111116	11 Nov 2016 09:50			29 Nov 2016 17:15	1
HS16110729-07	GP-11-3-2-3-111116	11 Nov 2016 10:00			29 Nov 2016 17:15	1
HS16110729-08	GP-11-3-8-9-111116	11 Nov 2016 10:15			29 Nov 2016 17:15	1
HS16110729-10	GP-11-3-12-13-111116	11 Nov 2016 10:30			29 Nov 2016 17:15	1
HS16110729-11	GP-11-4-1-2-111116	11 Nov 2016 11:00			29 Nov 2016 17:15	1
HS16110729-12	GP-11-4-10-11-111116	11 Nov 2016 11:20			29 Nov 2016 17:15	1
HS16110729-13	GP-11-4-11-12-111116	11 Nov 2016 11:30			29 Nov 2016 17:15	1
HS16110729-14	GP-11-5-2-3-111116	11 Nov 2016 15:00			29 Nov 2016 17:15	1
HS16110729-15	GP-11-5-7-8-111116	11 Nov 2016 15:30			29 Nov 2016 17:15	1
HS16110729-16	GP-11-5-9-10-111116	11 Nov 2016 15:45			29 Nov 2016 17:15	1
HS16110729-17	GP-11-6-2-3-111116	11 Nov 2016 14:00			29 Nov 2016 17:15	1
HS16110729-19	GP-11-6-8-9-111116	11 Nov 2016 14:30			29 Nov 2016 17:15	1
HS16110729-20	GP-11-6-4-5-111116	11 Nov 2016 14:15			29 Nov 2016 17:15	1
Batch ID R285674 Test Name : PH SOIL BY SW9045D Matrix: Soil						
HS16110729-21	GP-11-7-2-3-111116	11 Nov 2016 13:15			29 Nov 2016 18:00	1
HS16110729-22	GP-11-7-4-5-111116	11 Nov 2016 13:20			29 Nov 2016 18:00	1
HS16110729-23	GP-11-7-11-12-111116	11 Nov 2016 13:45			29 Nov 2016 18:00	1
HS16110729-24	GP-11-8-2-3-111116	11 Nov 2016 12:50			29 Nov 2016 18:00	1
HS16110729-25	GP-11-8-8-9-111116	11 Nov 2016 13:00			29 Nov 2016 18:00	1
HS16110729-26	GP-11-8-10-11-111116	11 Nov 2016 13:10			29 Nov 2016 18:00	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R285798	Test Name : LA29B SATURATION POINT (AS FRACTION)			Matrix: Soil		
HS16110729-01	GP-11-1-1-2-111116	11 Nov 2016 08:30			01 Dec 2016 10:05	1
HS16110729-02	GP-11-1-5-6-111116	11 Nov 2016 08:45			01 Dec 2016 10:05	1
HS16110729-03	GP-11-1-9-10-111116	11 Nov 2016 09:00			01 Dec 2016 10:05	1
HS16110729-04	GP-11-2-1-2-111116	11 Nov 2016 09:20			01 Dec 2016 10:05	1
HS16110729-05	GP-11-2-3-4-111116	11 Nov 2016 09:40			01 Dec 2016 10:05	1
HS16110729-06	GP-11-2-8-9-111116	11 Nov 2016 09:50			01 Dec 2016 10:05	1
HS16110729-07	GP-11-3-2-3-111116	11 Nov 2016 10:00			01 Dec 2016 10:05	1
HS16110729-08	GP-11-3-8-9-111116	11 Nov 2016 10:15			01 Dec 2016 10:05	1
HS16110729-10	GP-11-3-12-13-111116	11 Nov 2016 10:30			01 Dec 2016 10:05	1
HS16110729-11	GP-11-4-1-2-111116	11 Nov 2016 11:00			01 Dec 2016 10:05	1
HS16110729-12	GP-11-4-10-11-111116	11 Nov 2016 11:20			01 Dec 2016 10:05	1
HS16110729-13	GP-11-4-11-12-111116	11 Nov 2016 11:30			01 Dec 2016 10:05	1
HS16110729-14	GP-11-5-2-3-111116	11 Nov 2016 15:00			01 Dec 2016 10:05	1
HS16110729-15	GP-11-5-7-8-111116	11 Nov 2016 15:30			01 Dec 2016 10:05	1
HS16110729-16	GP-11-5-9-10-111116	11 Nov 2016 15:45			01 Dec 2016 10:05	1
HS16110729-17	GP-11-6-2-3-111116	11 Nov 2016 14:00			01 Dec 2016 10:05	1
HS16110729-19	GP-11-6-8-9-111116	11 Nov 2016 14:30			01 Dec 2016 10:05	1
HS16110729-20	GP-11-6-4-5-111116	11 Nov 2016 14:15			01 Dec 2016 10:05	1
HS16110729-21	GP-11-7-2-3-111116	11 Nov 2016 13:15			01 Dec 2016 10:05	1
HS16110729-22	GP-11-7-4-5-111116	11 Nov 2016 13:20			01 Dec 2016 10:05	1
Batch ID R285801	Test Name : LA29B SATURATION POINT (AS FRACTION)			Matrix: Soil		
HS16110729-23	GP-11-7-11-12-111116	11 Nov 2016 13:45			01 Dec 2016 10:25	1
HS16110729-24	GP-11-8-2-3-111116	11 Nov 2016 12:50			01 Dec 2016 10:25	1
HS16110729-25	GP-11-8-8-9-111116	11 Nov 2016 13:00			01 Dec 2016 10:25	1
HS16110729-26	GP-11-8-10-11-111116	11 Nov 2016 13:10			01 Dec 2016 10:25	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R285812	Test Name : LA29B ELECTRICAL CONDUCTIVITY			Matrix: Soil		
HS16110729-01	GP-11-1-1-2-111116	11 Nov 2016 08:30			01 Dec 2016 16:48	1
HS16110729-02	GP-11-1-5-6-111116	11 Nov 2016 08:45			01 Dec 2016 16:48	1
HS16110729-03	GP-11-1-9-10-111116	11 Nov 2016 09:00			01 Dec 2016 16:48	1
HS16110729-04	GP-11-2-1-2-111116	11 Nov 2016 09:20			01 Dec 2016 16:48	1
HS16110729-05	GP-11-2-3-4-111116	11 Nov 2016 09:40			01 Dec 2016 16:48	1
HS16110729-06	GP-11-2-8-9-111116	11 Nov 2016 09:50			01 Dec 2016 16:48	1
HS16110729-07	GP-11-3-2-3-111116	11 Nov 2016 10:00			01 Dec 2016 16:48	1
HS16110729-08	GP-11-3-8-9-111116	11 Nov 2016 10:15			01 Dec 2016 16:48	1
HS16110729-10	GP-11-3-12-13-111116	11 Nov 2016 10:30			01 Dec 2016 16:48	1
HS16110729-11	GP-11-4-1-2-111116	11 Nov 2016 11:00			01 Dec 2016 16:48	1
HS16110729-12	GP-11-4-10-11-111116	11 Nov 2016 11:20			01 Dec 2016 16:48	1
HS16110729-13	GP-11-4-11-12-111116	11 Nov 2016 11:30			01 Dec 2016 16:48	1
HS16110729-14	GP-11-5-2-3-111116	11 Nov 2016 15:00			01 Dec 2016 16:48	1
HS16110729-15	GP-11-5-7-8-111116	11 Nov 2016 15:30			01 Dec 2016 16:48	1
HS16110729-16	GP-11-5-9-10-111116	11 Nov 2016 15:45			01 Dec 2016 16:48	1
HS16110729-17	GP-11-6-2-3-111116	11 Nov 2016 14:00			01 Dec 2016 16:48	1
HS16110729-19	GP-11-6-8-9-111116	11 Nov 2016 14:30			01 Dec 2016 16:48	1
HS16110729-20	GP-11-6-4-5-111116	11 Nov 2016 14:15			01 Dec 2016 16:48	1
HS16110729-21	GP-11-7-2-3-111116	11 Nov 2016 13:15			01 Dec 2016 16:48	1
HS16110729-22	GP-11-7-4-5-111116	11 Nov 2016 13:20			01 Dec 2016 16:48	1
Batch ID R285813	Test Name : LA29B ELECTRICAL CONDUCTIVITY			Matrix: Soil		
HS16110729-23	GP-11-7-11-12-111116	11 Nov 2016 13:45			01 Dec 2016 16:49	1
HS16110729-24	GP-11-8-2-3-111116	11 Nov 2016 12:50			01 Dec 2016 16:49	1
HS16110729-25	GP-11-8-8-9-111116	11 Nov 2016 13:00			01 Dec 2016 16:49	1
HS16110729-26	GP-11-8-10-11-111116	11 Nov 2016 13:10			01 Dec 2016 16:49	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID	R285815	Test Name : TRIVALENT CHROMIUM			Matrix: Soil	
HS16110729-01	GP-11-1-1-2-111116	11 Nov 2016 08:30			01 Dec 2016 16:51	1
HS16110729-02	GP-11-1-5-6-111116	11 Nov 2016 08:45			01 Dec 2016 16:51	1
HS16110729-03	GP-11-1-9-10-111116	11 Nov 2016 09:00			01 Dec 2016 16:51	1
HS16110729-04	GP-11-2-1-2-111116	11 Nov 2016 09:20			01 Dec 2016 16:51	1
HS16110729-05	GP-11-2-3-4-111116	11 Nov 2016 09:40			01 Dec 2016 16:51	1
HS16110729-06	GP-11-2-8-9-111116	11 Nov 2016 09:50			01 Dec 2016 16:51	1
HS16110729-07	GP-11-3-2-3-111116	11 Nov 2016 10:00			01 Dec 2016 16:51	1
HS16110729-08	GP-11-3-8-9-111116	11 Nov 2016 10:15			01 Dec 2016 16:51	1
HS16110729-10	GP-11-3-12-13-111116	11 Nov 2016 10:30			01 Dec 2016 16:51	1
HS16110729-11	GP-11-4-1-2-111116	11 Nov 2016 11:00			01 Dec 2016 16:51	1
HS16110729-12	GP-11-4-10-11-111116	11 Nov 2016 11:20			01 Dec 2016 16:51	1
HS16110729-13	GP-11-4-11-12-111116	11 Nov 2016 11:30			01 Dec 2016 16:51	1
HS16110729-14	GP-11-5-2-3-111116	11 Nov 2016 15:00			01 Dec 2016 16:51	1
HS16110729-15	GP-11-5-7-8-111116	11 Nov 2016 15:30			01 Dec 2016 16:51	1
HS16110729-16	GP-11-5-9-10-111116	11 Nov 2016 15:45			01 Dec 2016 16:51	1
HS16110729-17	GP-11-6-2-3-111116	11 Nov 2016 14:00			01 Dec 2016 16:51	1
HS16110729-19	GP-11-6-8-9-111116	11 Nov 2016 14:30			01 Dec 2016 16:51	1
HS16110729-20	GP-11-6-4-5-111116	11 Nov 2016 14:15			01 Dec 2016 16:51	1
HS16110729-21	GP-11-7-2-3-111116	11 Nov 2016 13:15			01 Dec 2016 16:51	1
HS16110729-22	GP-11-7-4-5-111116	11 Nov 2016 13:20			01 Dec 2016 16:51	1
HS16110729-23	GP-11-7-11-12-111116	11 Nov 2016 13:45			01 Dec 2016 16:51	1
HS16110729-24	GP-11-8-2-3-111116	11 Nov 2016 12:50			01 Dec 2016 16:51	1
HS16110729-25	GP-11-8-8-9-111116	11 Nov 2016 13:00			01 Dec 2016 16:51	1
HS16110729-26	GP-11-8-10-11-111116	11 Nov 2016 13:10			01 Dec 2016 16:51	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 109920		Instrument: FID-7		Method: SW8015M					
MBLK	Sample ID: MBLK-109920	Units: mg/Kg		Analysis Date: 22-Nov-2016 19:10					
Client ID:	Run ID: FID-7_285406		SeqNo: 3905185		PrepDate: 16-Nov-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

TPH (Diesel Range)	ND	1.7							
Surr: 2-Fluorobiphenyl	2.916	0.10	3.33	0	87.6	60 - 135			

LCS	Sample ID: LCS-109920	Units: mg/Kg		Analysis Date: 22-Nov-2016 19:35					
Client ID:	Run ID: FID-7_285406		SeqNo: 3905186		PrepDate: 16-Nov-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

TPH (Diesel Range)	35.07	1.7	33.33	0	105	70 - 130			
Surr: 2-Fluorobiphenyl	3.827	0.10	3.33	0	115	60 - 135			

MS	Sample ID: HS16110620-06MS	Units: mg/Kg		Analysis Date: 22-Nov-2016 22:01					
Client ID:	Run ID: FID-7_285406		SeqNo: 3905191		PrepDate: 16-Nov-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

TPH (Diesel Range)	43.16	1.7	33.27	0.2707	129	70 - 130			
Surr: 2-Fluorobiphenyl	3.908	0.10	3.324	0	118	60 - 135			

MSD	Sample ID: HS16110620-06MSD	Units: mg/Kg		Analysis Date: 22-Nov-2016 22:26					
Client ID:	Run ID: FID-7_285406		SeqNo: 3905192		PrepDate: 16-Nov-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

TPH (Diesel Range)	46.54	1.7	33.3	0.2707	139	70 - 130	43.16	7.55	30	S
Surr: 2-Fluorobiphenyl	3.407	0.10	3.327	0	102	60 - 135	3.908	13.7	30	

The following samples were analyzed in this batch:	HS16110729-01	HS16110729-02	HS16110729-03	HS16110729-04
	HS16110729-05	HS16110729-06	HS16110729-07	HS16110729-08
	HS16110729-10	HS16110729-11	HS16110729-12	HS16110729-13
	HS16110729-14	HS16110729-15		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110014		Instrument: FID-7		Method: SW8015M					
MBLK	Sample ID: MBLK-110014	Units: mg/Kg		Analysis Date: 29-Nov-2016 07:51					
Client ID:	Run ID: FID-7_285781		SeqNo: 3912574		PrepDate: 18-Nov-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

TPH (Diesel Range)	ND	1.7							
Surr: 2-Fluorobiphenyl	3.977	0.10	3.33	0	119	60 - 135			

LCS	Sample ID: LCS-110014	Units: mg/Kg		Analysis Date: 29-Nov-2016 08:16					
Client ID:	Run ID: FID-7_285781		SeqNo: 3912575		PrepDate: 18-Nov-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

TPH (Diesel Range)	33.04	1.7	33.33	0	99.1	70 - 130			
Surr: 2-Fluorobiphenyl	3.732	0.10	3.33	0	112	60 - 135			

MS	Sample ID: HS16110729-16MS	Units: mg/Kg		Analysis Date: 29-Nov-2016 09:05					
Client ID: GP-11-5-9-10-111116	Run ID: FID-7_285781		SeqNo: 3912577		PrepDate: 18-Nov-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

TPH (Diesel Range)	39.84	1.7	33.3	0	120	70 - 130			
Surr: 2-Fluorobiphenyl	3.429	0.10	3.327	0	103	60 - 135			

MSD	Sample ID: HS16110729-16MSD	Units: mg/Kg		Analysis Date: 29-Nov-2016 09:29					
Client ID: GP-11-5-9-10-111116	Run ID: FID-7_285781		SeqNo: 3912578		PrepDate: 18-Nov-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

TPH (Diesel Range)	33.74	1.7	33.26	0	101	70 - 130	39.84	16.6	30
Surr: 2-Fluorobiphenyl	3.258	0.10	3.323	0	98.0	60 - 135	3.429	5.11	30

The following samples were analyzed in this batch:	HS16110729-16	HS16110729-17	HS16110729-19	HS16110729-20
	HS16110729-21	HS16110729-22	HS16110729-23	HS16110729-24
	HS16110729-25	HS16110729-26		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: R284970		Instrument: FID-14		Method: SW8015	
MBLK	Sample ID: GBLK-161116	Units: mg/Kg		Analysis Date: 16-Nov-2016 17:04	
Client ID:	Run ID: FID-14_284970	SeqNo: 3895975		PrepDate:	DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual

Gasoline Range Organics	ND	0.050				
Surr: 4-Bromofluorobenzene	0.07464	0.0050	0.1	0	74.6	70 - 130

LCS	Sample ID: GLCS-161116	Units: mg/Kg			Analysis Date: 16-Nov-2016 16:00				
Client ID:		Run ID: FID-14_284970	SeqNo: 3895974		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Gasoline Range Organics	0.8224	0.050	1	0	82.2	70 - 130			
Surr: 4-Bromofluorobenzene	0.07995	0.0050	0.1	0	79.9	70 - 130			

MS		Sample ID: HS16110729-01MS		Units: mg/Kg		Analysis Date: 16-Nov-2016 18:08			
Client ID: GP-11-1-1-2-111116		Run ID: FID-14_284970		SeqNo: 3895979		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Gasoline Range Organics	0.758	0.050	1	0	75.8	70 - 130			
Surr: 4-Bromofluorobenzene	0.07378	0.0050	0.1	0	73.8	70 - 130			

MSD		Sample ID: HS16110729-01MSD		Units: mg/Kg		Analysis Date: 16-Nov-2016 18:24			
Client ID: GP-11-1-1-2-111116		Run ID: FID-14_284970		SeqNo: 3895980		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Gasoline Range Organics	0.7797	0.050	1	0	78.0	70 - 130	0.758	2.82	30
Surr: 4-Bromofluorobenzene	0.07684	0.0050	0.1	0	76.8	70 - 130	0.07378	4.07	30

The following samples were analyzed in this batch:			
HS16110729-01	HS16110729-02	HS16110729-03	HS16110729-04
HS16110729-05	HS16110729-06	HS16110729-07	HS16110729-08
HS16110729-10	HS16110729-11	HS16110729-12	HS16110729-13
HS16110729-14	HS16110729-15	HS16110729-16	HS16110729-17
HS16110729-19	HS16110729-20		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: R284984		Instrument: FID-14		Method: SW8015					
MBLK	Sample ID: GBLK-161116	Units: mg/Kg		Analysis Date: 17-Nov-2016 01:05					
Client ID:	Run ID: FID-14_284984	SeqNo: 3896358		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Gasoline Range Organics	ND	0.050							
Surr: 4-Bromofluorobenzene	0.08183	0.0050	0.1	0	81.8	70 - 130			
LCS	Sample ID: GLCS-161116	Units: mg/Kg		Analysis Date: 17-Nov-2016 00:32					
Client ID:	Run ID: FID-14_284984	SeqNo: 3896357		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Gasoline Range Organics	0.828	0.050	1	0	82.8	70 - 130			
Surr: 4-Bromofluorobenzene	0.08546	0.0050	0.1	0	85.5	70 - 130			
MS	Sample ID: HS16110729-21MS	Units: mg/Kg		Analysis Date: 17-Nov-2016 10:18					
Client ID: GP-11-7-2-3-111116	Run ID: FID-14_284984	SeqNo: 3896367		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Gasoline Range Organics	0.837	0.050	1	0	83.7	70 - 130			
Surr: 4-Bromofluorobenzene	0.07995	0.0050	0.1	0	79.9	70 - 130			
MSD	Sample ID: HS16110729-21MSD	Units: mg/Kg		Analysis Date: 17-Nov-2016 10:34					
Client ID: GP-11-7-2-3-111116	Run ID: FID-14_284984	SeqNo: 3896368		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Gasoline Range Organics	0.7777	0.050	1	0	77.8	70 - 130	0.837	7.34	30
Surr: 4-Bromofluorobenzene	0.07264	0.0050	0.1	0	72.6	70 - 130	0.07995	9.58	30
The following samples were analyzed in this batch:									
HS16110729-21		HS16110729-22		HS16110729-23		HS16110729-24			
HS16110729-25		HS16110729-26							

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110049		Instrument: ICPMS04		Method: SW6020						
MBLK	Sample ID: MBLK-110049	Units: mg/Kg			Analysis Date: 22-Nov-2016 19:06					
Client ID:	Run ID: ICPMS04_285279	SeqNo: 3903849		PrepDate: 21-Nov-2016			DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.500								
Barium	ND	0.500								
Boron	ND	2.50								
Cadmium	ND	0.500								
Chromium	ND	0.500								
Copper	ND	0.200								
Lead	ND	0.500								
Nickel	ND	0.500								
Selenium	ND	0.500								
Silver	ND	0.500								
Zinc	ND	0.500								

LCS	Sample ID: LCS-110049	Units: mg/Kg			Analysis Date: 22-Nov-2016 19:11					
Client ID:	Run ID: ICPMS04_285279	SeqNo: 3903850		PrepDate: 21-Nov-2016			DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.356	0.500	10	0	93.6	80 - 120				
Barium	9.533	0.500	10	0	95.3	80 - 120				
Boron	50.31	2.50	50	0	101	80 - 120				
Cadmium	9.472	0.500	10	0	94.7	80 - 120				
Chromium	9.081	0.500	10	0	90.8	80 - 120				
Copper	9.301	0.200	10	0	93.0	80 - 120				
Lead	9.485	0.500	10	0	94.9	80 - 120				
Nickel	9.391	0.500	10	0	93.9	80 - 120				
Selenium	9.278	0.500	10	0	92.8	80 - 120				
Silver	9.988	0.500	10	0	99.9	80 - 120				
Zinc	9.579	0.500	10	0	95.8	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110049		Instrument: ICPMS04		Method: SW6020						
MS	Sample ID: HS16110923-02MS	Units: mg/Kg			Analysis Date: 22-Nov-2016 21:06					
Client ID:	Run ID: ICPMS04_285279	SeqNo: 3903876		PrepDate: 21-Nov-2016		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.514	0.455	9.109	1.283	90.4	75 - 125				
Barium	36.76	0.455	9.109	30.19	72.1	75 - 125				S
Boron	47	2.28	45.55	2.91	96.8	75 - 125				
Cadmium	8.639	0.455	9.109	0.1202	93.5	75 - 125				
Chromium	96.27	0.455	9.109	96.03	2.59	75 - 125				SO
Copper	20.98	0.182	9.109	15.09	64.7	75 - 125				S
Lead	15.26	0.455	9.109	10.7	50.1	75 - 125				S
Nickel	74.7	0.455	9.109	97.26	-248	75 - 125				SO
Selenium	8.846	0.455	9.109	0.2944	93.9	75 - 125				
Silver	8.551	0.455	9.109	-0.00478	93.9	75 - 125				
Zinc	28.8	0.455	9.109	19.97	96.9	75 - 125				
MSD	Sample ID: HS16110923-02MSD	Units: mg/Kg			Analysis Date: 22-Nov-2016 21:10					
Client ID:	Run ID: ICPMS04_285279	SeqNo: 3903877		PrepDate: 21-Nov-2016		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.52	0.467	9.332	1.283	98.9	75 - 125	9.514	10	20	
Barium	37.34	0.467	9.332	30.19	76.5	75 - 125	36.76	1.56	20	
Boron	51.54	2.33	46.66	2.91	104	75 - 125	47	9.23	20	
Cadmium	9.068	0.467	9.332	0.1202	95.9	75 - 125	8.639	4.84	20	
Chromium	122.1	0.467	9.332	96.03	279	75 - 125	96.27	23.6	20	SRO
Copper	26.66	0.187	9.332	15.09	124	75 - 125	20.98	23.9	20	R
Lead	15.86	0.467	9.332	10.7	55.4	75 - 125	15.26	3.88	20	S
Nickel	97.9	0.467	9.332	97.26	6.87	75 - 125	74.7	26.9	20	SRO
Selenium	9.345	0.467	9.332	0.2944	97.0	75 - 125	8.846	5.49	20	
Silver	8.842	0.467	9.332	-0.00478	94.8	75 - 125	8.551	3.35	20	
Zinc	45.94	0.467	9.332	19.97	278	75 - 125	28.8	45.9	20	SR
MSD	Sample ID: HS16110923-02MSD	Units: mg/Kg			Analysis Date: 23-Nov-2016 14:57					
Client ID:	Run ID: ICPMS04_285392	SeqNo: 3904950		PrepDate: 21-Nov-2016		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	53.32	2.33	46.66	2.91	108	75 - 125	47	12.6	20	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110049		Instrument: ICPMS04		Method: SW6020						
PDS		Sample ID: HS16110923-02BS		Units: mg/Kg		Analysis Date: 22-Nov-2016 21:14				
Client ID:		Run ID: ICPMS04_285279		SeqNo: 3903878		PrepDate: 21-Nov-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.601	0.460	9.193	1.283	90.5	75 - 125				
Barium	38.76	0.460	9.193	30.19	93.2	75 - 125				
Boron	43.28	2.30	45.96	2.91	87.8	75 - 125				
Cadmium	8.145	0.460	9.193	0.1202	87.3	75 - 125				
Chromium	106.5	0.460	9.193	96.03	114	75 - 125				O
Copper	24.17	0.184	9.193	15.09	98.8	75 - 125				
Lead	19.04	0.460	9.193	10.7	90.7	75 - 125				
Nickel	107.7	0.460	9.193	97.26	113	75 - 125				O
Selenium	8.768	0.460	9.193	0.2944	92.2	75 - 125				
Silver	8.102	0.460	9.193	0	88.1	75 - 125				
Zinc	28.31	0.460	9.193	19.97	90.7	75 - 125				

SD		Sample ID: HS16110923-02 DIL SX		Units: mg/Kg		Analysis Date: 22-Nov-2016 21:01				
Client ID:		Run ID: ICPMS04_285279		SeqNo: 3903875		PrepDate: 21-Nov-2016		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Arsenic	1.399	2.30					1.283	0	10	J
Barium	30.25	2.30					30.19	0.193	10	
Boron	ND	11.5					2.91	0	10	
Cadmium	ND	2.30					0.1202	0	10	
Copper	16.55	0.919					15.09	9.71	10	
Lead	10.12	2.30					10.7	5.44	10	
Nickel	103.8	2.30					97.26	6.77	10	
Selenium	ND	2.30					0.2944	0	10	
Silver	ND	2.30					-0.00478	0	10	
Zinc	21.81	2.30					19.97	9.2	10	

SD		Sample ID: HS16110923-02 DIL SX		Units: mg/Kg		Analysis Date: 23-Nov-2016 14:52				
Client ID:		Run ID: ICPMS04_285392		SeqNo: 3904949		PrepDate: 21-Nov-2016		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Chromium	97	2.30					96.03	1.02	10	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110049 **Instrument:** ICPMS04 **Method:** SW6020

The following samples were analyzed in this batch:

HS16110729-01	HS16110729-02	HS16110729-03	HS16110729-04
HS16110729-05	HS16110729-06	HS16110729-07	HS16110729-08
HS16110729-10	HS16110729-11	HS16110729-12	HS16110729-13
HS16110729-14	HS16110729-15	HS16110729-16	HS16110729-17
HS16110729-19	HS16110729-20		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110093											Instrument: ICPMS04			Method: SW6020		
MBLK		Sample ID: MBLK-110093			Units: mg/Kg			Analysis Date: 22-Nov-2016 21:36								
Client ID:		Run ID: ICPMS04_285279			SeqNo: 3903910		PrepDate: 22-Nov-2016		DF: 1							
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual					

Arsenic	ND	0.500								
Barium	ND	0.500								
Boron	ND	2.50								
Cadmium	ND	0.500								
Chromium	ND	0.500								
Copper	ND	0.200								
Lead	ND	0.500								
Nickel	ND	0.500								
Selenium	ND	0.500								
Silver	ND	0.500								
Zinc	ND	0.500								

MBLK	Sample ID: MBLK-110093		Units: mg/Kg		Analysis Date: 23-Nov-2016 15:28					
Client ID:	Run ID: ICPMS04_285392		SeqNo: 3905065		PrepDate: 22-Nov-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Boron	ND	2.50								
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LCS	Sample ID: LCS-110093	Units: mg/Kg			Analysis Date: 22-Nov-2016 21:41					
Client ID:		Run ID: ICPMS04_285279	SeqNo: 3903911		PrepDate: 22-Nov-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	10.37	0.500	10	0	104	80 - 120				
Barium	9.556	0.500	10	0	95.6	80 - 120				
Boron	50.86	2.50	50	0	102	80 - 120				
Cadmium	9.476	0.500	10	0	94.8	80 - 120				
Chromium	9.964	0.500	10	0	99.6	80 - 120				
Copper	10.16	0.200	10	0	102	80 - 120				
Lead	9.431	0.500	10	0	94.3	80 - 120				
Nickel	10.27	0.500	10	0	103	80 - 120				
Selenium	10.5	0.500	10	0	105	80 - 120				
Silver	9.364	0.500	10	0	93.6	80 - 120				
Zinc	10.39	0.500	10	0	104	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110093		Instrument: ICPMS04			Method: SW6020					
LCS	Sample ID: LCS-110093	Units: mg/Kg			Analysis Date: 23-Nov-2016 15:32					
Client ID:		Run ID: ICPMS04_285392	SeqNo: 3905066		PrepDate: 22-Nov-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Boron	51.63	2.50	50	0	103	80 - 120				

MS	Sample ID: HS16110729-26MS	Units: mg/Kg			Analysis Date: 23-Nov-2016 19:36					
Client ID: GP-11-8-10-11-111116		Run ID: ICPMS04_285443	SeqNo: 3905482		PrepDate: 22-Nov-2016		DF: 5			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Arsenic	12.26	2.35	9.393	3.289	95.5	75 - 125				
Barium	616.1	2.35	9.393	587.5	304	75 - 125			SO	
Cadmium	8.691	2.35	9.393	0.09148	91.6	75 - 125				
Chromium	11.53	2.35	9.393	3.052	90.2	75 - 125				
Copper	11.18	0.939	9.393	2.931	87.8	75 - 125				
Lead	10.6	2.35	9.393	2.548	85.7	75 - 125				
Nickel	11.66	2.35	9.393	3.521	86.6	75 - 125				
Selenium	8.76	2.35	9.393	0.4507	88.5	75 - 125				
Silver	8.96	2.35	9.393	-0.08678	96.3	75 - 125				
Zinc	18.36	2.35	9.393	10.62	82.4	75 - 125				

MS	Sample ID: HS16110729-26MS	Units: mg/Kg			Analysis Date: 26-Nov-2016 16:35					
Client ID: GP-11-8-10-11-111116		Run ID: ICPMS04_285456	SeqNo: 3905884		PrepDate: 22-Nov-2016		DF: 5			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Boron	46.89	11.7	46.97	7.713	83.4	75 - 125				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110093		Instrument: ICPMS04		Method: SW6020						
MSD		Sample ID: HS16110729-26MSD		Units: mg/Kg		Analysis Date: 23-Nov-2016 19:41				
Client ID: GP-11-8-10-11-111116		Run ID: ICPMS04_285443		SeqNo: 3905483		PrepDate: 22-Nov-2016		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.08	2.39	9.547	3.289	71.2	75 - 125	12.26	19.5	20	S
Barium	562	2.39	9.547	587.5	-268	75 - 125	616.1	9.19	20	SO
Cadmium	7.635	2.39	9.547	0.09148	79.0	75 - 125	8.691	12.9	20	
Chromium	9.626	2.39	9.547	3.052	68.9	75 - 125	11.53	18	20	S
Copper	9.19	0.955	9.547	2.931	65.5	75 - 125	11.18	19.5	20	S
Lead	9.306	2.39	9.547	2.548	70.8	75 - 125	10.6	13	20	S
Nickel	9.831	2.39	9.547	3.521	66.1	75 - 125	11.66	17	20	S
Selenium	7.646	2.39	9.547	0.4507	75.4	75 - 125	8.76	13.6	20	
Silver	8.265	2.39	9.547	-0.08678	87.5	75 - 125	8.96	8.07	20	
Zinc	15.28	2.39	9.547	10.62	48.8	75 - 125	18.36	18.3	20	S

MSD		Sample ID: HS16110729-26MSD		Units: mg/Kg		Analysis Date: 26-Nov-2016 16:40				
Client ID: GP-11-8-10-11-111116		Run ID: ICPMS04_285456		SeqNo: 3905885		PrepDate: 22-Nov-2016		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	39.85	11.9	47.74	7.713	67.3	75 - 125	46.89	16.2	20	S

PDS		Sample ID: HS16110729-26BS		Units: mg/Kg		Analysis Date: 23-Nov-2016 19:45				
Client ID: GP-11-8-10-11-111116		Run ID: ICPMS04_285443		SeqNo: 3905484		PrepDate: 22-Nov-2016		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	43.63	2.30	46.02	3.289	87.7	75 - 125				
Barium	617.7	2.30	46.02	587.5	65.5	75 - 125				SO
Cadmium	40.04	2.30	46.02	0	87.0	75 - 125				
Chromium	40.42	2.30	46.02	3.052	81.2	75 - 125				
Copper	40.9	0.920	46.02	2.931	82.5	75 - 125				
Lead	39.71	2.30	46.02	2.548	80.8	75 - 125				
Nickel	41.77	2.30	46.02	3.521	83.1	75 - 125				
Selenium	40.12	2.30	46.02	0	87.2	75 - 125				
Silver	41.69	2.30	46.02	0	90.6	75 - 125				
Zinc	49.04	2.30	46.02	10.62	83.5	75 - 125				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110093		Instrument: ICPMS04		Method: SW6020					
PDS		Sample ID: HS16110729-26BS		Units: mg/Kg		Analysis Date: 26-Nov-2016 16:44			
Client ID: GP-11-8-10-11-111116		Run ID: ICPMS04_285456		SeqNo: 3905886		PrepDate: 22-Nov-2016		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Boron 199.9 11.5 230.1 7.713 83.5 75 - 125

SD										
Sample ID:		HS16110729-26 DIL SX			Units: mg/Kg		Analysis Date: 23-Nov-2016 19:32			
Client ID:		GP-11-8-10-11-111116		Run ID: ICPMS04_285443		SeqNo: 3905481		PrepDate: 22-Nov-2016		DF: 25
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit Qual

Arsenic	3.527	11.5					3.289	0	10	J
Barium	566.5	11.5					587.5	3.57	10	
Cadmium	ND	11.5					0.09148	0	10	
Chromium	2.973	11.5					3.052	0	10	J
Copper	3.002	4.60					2.931	0	10	J
Lead	2.668	11.5					2.548	0	10	J
Nickel	3.638	11.5					3.521	0	10	J
Selenium	ND	11.5					0.4507	0	10	
Silver	ND	11.5					-0.08678	0	10	
Zinc	10.28	11.5					10.62	0	10	J

SD										
Sample ID:		HS16110729-26 DIL SX			Units: mg/Kg		Analysis Date: 26-Nov-2016 16:31			
Client ID:		GP-11-8-10-11-111116		Run ID: ICPMS04_285456		SeqNo: 3905883		PrepDate: 22-Nov-2016		DF: 25
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit Qual

Boron ND 57.5 7.713 0 10

The following samples were analyzed in this batch:

HS16110729-21	HS16110729-22	HS16110729-23	HS16110729-24
HS16110729-25	HS16110729-26		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110269		Instrument: HG03		Method: SW7471A					
MBLK	Sample ID: MBLK-110269	Units: ug/Kg		Analysis Date: 30-Nov-2016 15:44					
Client ID:		Run ID: HG03_285713		SeqNo: 3910987		PrepDate: 29-Nov-2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	ND	3.35							
LCS	Sample ID: LCS-110269	Units: ug/Kg		Analysis Date: 30-Nov-2016 15:46					
Client ID:		Run ID: HG03_285713		SeqNo: 3910988		PrepDate: 29-Nov-2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	337.2	3.42	342.7	0	98.4	85 - 115			
MS	Sample ID: HS16110729-04MS	Units: ug/Kg		Analysis Date: 30-Nov-2016 16:03					
Client ID: GP-11-2-1-2-111116		Run ID: HG03_285713		SeqNo: 3911239		PrepDate: 29-Nov-2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	371.2	3.59	359.6	12.77	99.7	85 - 115			
MSD	Sample ID: HS16110729-04MSD	Units: ug/Kg		Analysis Date: 30-Nov-2016 16:05					
Client ID: GP-11-2-1-2-111116		Run ID: HG03_285713		SeqNo: 3911240		PrepDate: 29-Nov-2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	375.4	3.57	358.2	12.77	101	85 - 115	371.2	1.13	20
The following samples were analyzed in this batch:									
		HS16110729-01	HS16110729-02	HS16110729-03	HS16110729-04				
		HS16110729-05	HS16110729-06	HS16110729-07	HS16110729-08				
		HS16110729-10	HS16110729-11	HS16110729-12	HS16110729-13				
		HS16110729-14	HS16110729-15	HS16110729-16	HS16110729-17				
		HS16110729-19	HS16110729-20	HS16110729-21	HS16110729-22				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110270		Instrument: HG03		Method: SW7471A						
MBLK	Sample ID: MBLK-110270	Units: ug/Kg		Analysis Date: 30-Nov-2016 16:47						
Client ID:	Run ID: HG03_285713		SeqNo: 3911261		PrepDate: 29-Nov-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual
Mercury	ND	3.39								
LCS	Sample ID: LCS-110270	Units: ug/Kg		Analysis Date: 30-Nov-2016 16:49						
Client ID:	Run ID: HG03_285713		SeqNo: 3911262		PrepDate: 29-Nov-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual
Mercury	341.8	3.37	337.8	0	101	85 - 115				
MS	Sample ID: HS16110729-23MS	Units: ug/Kg		Analysis Date: 30-Nov-2016 16:52						
Client ID: GP-11-7-11-12-111116	Run ID: HG03_285713		SeqNo: 3911264		PrepDate: 29-Nov-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual
Mercury	373.2	3.59	359.6	9.486	101	85 - 115				
MSD	Sample ID: HS16110729-23MSD	Units: ug/Kg		Analysis Date: 30-Nov-2016 16:54						
Client ID: GP-11-7-11-12-111116	Run ID: HG03_285713		SeqNo: 3911265		PrepDate: 29-Nov-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual
Mercury	378.4	3.61	361.8	9.486	102	85 - 115	373.2	1.38	20	
The following samples were analyzed in this batch:										
HS16110729-23			HS16110729-24			HS16110729-25			HS16110729-26	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110325		Instrument: ICPMS05		Method: La29B-6020	
MBLK	Sample ID: MBLK-110325	Units: mg/L		Analysis Date: 01-Dec-2016 12:48	
Client ID:	Run ID: ICPMS05_285732	SeqNo: 3912883		PrepDate: 30-Nov-2016	DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Calcium	ND	0.500			
Magnesium	ND	0.500			
Sodium	ND	0.500			

DUP	Sample ID: HS16110729-15DUP	Units: mg/L		Analysis Date: 01-Dec-2016 13:39	
Client ID: GP-11-5-7-8-111116	Run ID: ICPMS05_285732	SeqNo: 3912901		PrepDate: 30-Nov-2016	DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Calcium	769.5	5.00			769.5 0.0105 30
Magnesium	146.9	5.00			145.4 1.02 30

DUP	Sample ID: HS16110729-15DUP	Units: mg/L		Analysis Date: 01-Dec-2016 14:50	
Client ID: GP-11-5-7-8-111116	Run ID: ICPMS05_285732	SeqNo: 3912925		PrepDate: 30-Nov-2016	DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Sodium	11850	50.0			11910 0.465 30

The following samples were analyzed in this batch:					
HS16110729-01	HS16110729-02	HS16110729-03	HS16110729-04		
HS16110729-05	HS16110729-06	HS16110729-07	HS16110729-08		
HS16110729-10	HS16110729-11	HS16110729-12	HS16110729-13		
HS16110729-14	HS16110729-15	HS16110729-16	HS16110729-17		
HS16110729-19	HS16110729-20	HS16110729-21	HS16110729-22		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110325A		Instrument: MISC-Metals		Method: La29B SAR					
DUP	Sample ID: HS16110729-15DUP	Units: meq/meq		Analysis Date: 01-Dec-2016 13:41					
Client ID: GP-11-5-7-8-111116	Run ID: MISC-Metals_285776	SeqNo: 3912420		PrepDate: 30-Nov-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Sodium Adsorption Ratio	103	0.0100					103.2	0.212	30	
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The following samples were analyzed in this batch:

HS16110729-01	HS16110729-02	HS16110729-03	HS16110729-04
HS16110729-05	HS16110729-06	HS16110729-07	HS16110729-08
HS16110729-10	HS16110729-11	HS16110729-12	HS16110729-13
HS16110729-14	HS16110729-15	HS16110729-16	HS16110729-17
HS16110729-19	HS16110729-20	HS16110729-21	HS16110729-22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110326		Instrument: ICPMS05		Method: La29B-6020					
MBLK	Sample ID: MBLK-110326	Units: mg/L		Analysis Date: 01-Dec-2016 14:11					
Client ID:	Run ID: ICPMS05_285732	SeqNo: 3912912		PrepDate: 30-Nov-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Calcium	ND	0.500							
Magnesium	ND	0.500							
Sodium	ND	0.500							

DUP	Sample ID: HS16110729-23DUP	Units: mg/L		Analysis Date: 01-Dec-2016 14:17					
Client ID: GP-11-7-11-12-111116	Run ID: ICPMS05_285732	SeqNo: 3912914		PrepDate: 30-Nov-2016		DF: 10			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Calcium	729.2	5.00					778.6	6.56	30
Magnesium	68.56	5.00					71.77	4.57	30
Sodium	982.8	5.00					1038	5.48	30

The following samples were analyzed in this batch:

HS16110729-23	HS16110729-24	HS16110729-25	HS16110729-26
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Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110326A		Instrument: MISC-Metals		Method: La29B SAR						
DUP	Sample ID: HS16110729-23DUP		Units: meq/meq		Analysis Date: 01-Dec-2016 13:44					
Client ID: GP-11-7-11-12-111116		Run ID: MISC-Metals_285778		SeqNo: 3912428		PrepDate: 30-Nov-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Sodium Adsorption Ratio	9.328	0.0100					9.56	2.46	30	
The following samples were analyzed in this batch:										
HS16110729-23		HS16110729-24		HS16110729-25		HS16110729-26				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: R284973		Instrument: VOA4		Method: SW8260					
MBLK	Sample ID: VBLKW-161116	Units: ug/L		Analysis Date: 16-Nov-2016 13:07					
Client ID:	Run ID: VOA4_284973	SeqNo: 3896029		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	ND	1.0							
Ethylbenzene	ND	1.0							
m,p-Xylene	ND	2.0							
o-Xylene	ND	1.0							
Toluene	ND	1.0							
Xylenes, Total	ND	1.0							
Surr: 1,2-Dichloroethane-d4	50.17	1.0	50	0	100	71 - 125			
Surr: 4-Bromofluorobenzene	48.84	1.0	50	0	97.7	70 - 125			
Surr: Dibromofluoromethane	52.1	1.0	50	0	104	74 - 125			
Surr: Toluene-d8	53.71	1.0	50	0	107	75 - 125			

LCS	Sample ID: VLCSW-161116	Units: ug/L		Analysis Date: 16-Nov-2016 12:17					
Client ID:	Run ID: VOA4_284973	SeqNo: 3896028		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	52.37	1.0	50	0	105	75 - 122			
Ethylbenzene	55.33	1.0	50	0	111	80 - 120			
m,p-Xylene	112.3	2.0	100	0	112	80 - 120			
o-Xylene	55.03	1.0	50	0	110	80 - 120			
Toluene	55.1	1.0	50	0	110	75 - 121			
Xylenes, Total	167.3	1.0	150	0	112	79 - 124			
Surr: 1,2-Dichloroethane-d4	48.26	1.0	50	0	96.5	71 - 125			
Surr: 4-Bromofluorobenzene	51.37	1.0	50	0	103	70 - 125			
Surr: Dibromofluoromethane	51.42	1.0	50	0	103	74 - 125			
Surr: Toluene-d8	52.76	1.0	50	0	106	75 - 125			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: R284973		Instrument: VOA4		Method: SW8260						
MS		Sample ID: HS16110737-01MS		Units: ug/L		Analysis Date: 16-Nov-2016 14:49				
Client ID:		Run ID: VOA4_284973		SeqNo: 3896033		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	54.79	1.0	50	0	110	75 - 122				
Ethylbenzene	56.11	1.0	50	0	112	80 - 120				
m,p-Xylene	116.7	2.0	100	0	117	80 - 120				
o-Xylene	55.37	1.0	50	0	111	80 - 120				
Toluene	56.91	1.0	50	0	114	75 - 121				
Xylenes, Total	172.1	1.0	150	0	115	80 - 124				
Surr: 1,2-Dichloroethane-d4	51.52	1.0	50	0	103	71 - 125				
Surr: 4-Bromofluorobenzene	51.67	1.0	50	0	103	70 - 125				
Surr: Dibromofluoromethane	54.73	1.0	50	0	109	74 - 125				
Surr: Toluene-d8	54.43	1.0	50	0	109	75 - 125				

MSD		Sample ID: HS16110737-01MSD		Units: ug/L		Analysis Date: 16-Nov-2016 15:14				
Client ID:		Run ID: VOA4_284973		SeqNo: 3896034		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	52.47	1.0	50	0	105	75 - 122	54.79	4.32	20	
Ethylbenzene	55.33	1.0	50	0	111	80 - 120	56.11	1.39	20	
m,p-Xylene	112.1	2.0	100	0	112	80 - 120	116.7	4.01	20	
o-Xylene	54.77	1.0	50	0	110	80 - 120	55.37	1.08	20	
Toluene	55.05	1.0	50	0	110	75 - 121	56.91	3.32	20	
Xylenes, Total	166.9	1.0	150	0	111	80 - 124	172.1	3.06	20	
Surr: 1,2-Dichloroethane-d4	51.69	1.0	50	0	103	71 - 125	51.52	0.327	20	
Surr: 4-Bromofluorobenzene	51.83	1.0	50	0	104	70 - 125	51.67	0.313	20	
Surr: Dibromofluoromethane	54.13	1.0	50	0	108	74 - 125	54.73	1.09	20	
Surr: Toluene-d8	55.03	1.0	50	0	110	75 - 125	54.43	1.1	20	

The following samples were analyzed in this batch: HS16110729-09 HS16110729-18 HS16110729-27

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: R285031		Instrument: VOA5		Method: SW8260					
MBLK	Sample ID: VBLKS1-111716	Units: ug/Kg		Analysis Date: 17-Nov-2016 20:49					
Client ID:	Run ID: VOA5_285031	SeqNo: 3897161		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	ND	5.0							
Ethylbenzene	ND	5.0							
m,p-Xylene	ND	10							
o-Xylene	ND	5.0							
Toluene	ND	5.0							
Xylenes, Total	ND	5.0							
Surr: 1,2-Dichloroethane-d4	40.56	0	50	0	81.1	70 - 128			
Surr: 4-Bromofluorobenzene	50.03	0	50	0	100	73 - 126			
Surr: Dibromofluoromethane	38.25	0	50	0	76.5	71 - 128			
Surr: Toluene-d8	51.34	0	50	0	103	73 - 127			

LCS	Sample ID: VLCSS1-111716	Units: ug/Kg		Analysis Date: 17-Nov-2016 20:03					
Client ID:	Run ID: VOA5_285031	SeqNo: 3897160		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	47.99	5.0	50	0	96.0	79 - 122			
Ethylbenzene	48.59	5.0	50	0	97.2	80 - 122			
m,p-Xylene	97.27	10	100	0	97.3	79 - 122			
o-Xylene	48.94	5.0	50	0	97.9	80 - 123			
Toluene	48.93	5.0	50	0	97.9	79 - 120			
Xylenes, Total	146.2	5.0	150	0	97.5	79 - 123			
Surr: 1,2-Dichloroethane-d4	48.64	0	50	0	97.3	70 - 128			
Surr: 4-Bromofluorobenzene	51.13	0	50	0	102	73 - 126			
Surr: Dibromofluoromethane	48.55	0	50	0	97.1	71 - 128			
Surr: Toluene-d8	51	0	50	0	102	73 - 127			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: R285031		Instrument: VOA5		Method: SW8260						
MS		Sample ID: HS16110770-01MS		Units: ug/Kg		Analysis Date: 17-Nov-2016 22:45				
Client ID:		Run ID: VOA5_285031		SeqNo: 3897166		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	43.83	4.9	49	0	89.4	79 - 122				
Ethylbenzene	42.61	4.9	49	0	87.0	80 - 122				
m,p-Xylene	81.17	9.8	98	0	82.8	79 - 122				
o-Xylene	40.47	4.9	49	0	82.6	80 - 123				
Toluene	43.36	4.9	49	0	88.5	79 - 120				
Xylenes, Total	121.6	4.9	147	0	82.7	79 - 123				
Surr: 1,2-Dichloroethane-d4	46.13	0	49	0	94.1	70 - 128				
Surr: 4-Bromofluorobenzene	51.57	0	49	0	105	73 - 126				
Surr: Dibromofluoromethane	46.42	0	49	0	94.7	71 - 128				
Surr: Toluene-d8	51.79	0	49	0	106	73 - 127				

MSD		Sample ID: HS16110770-01MSD		Units: ug/Kg		Analysis Date: 17-Nov-2016 23:08				
Client ID:		Run ID: VOA5_285031		SeqNo: 3897167		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	49.28	4.8	48.5	0	102	79 - 122	43.83	11.7	30	
Ethylbenzene	47.71	4.8	48.5	0	98.4	80 - 122	42.61	11.3	30	
m,p-Xylene	90.48	9.7	97	0	93.3	79 - 122	81.17	10.9	30	
o-Xylene	46.06	4.8	48.5	0	95.0	80 - 123	40.47	12.9	30	
Toluene	48.32	4.8	48.5	0	99.6	79 - 120	43.36	10.8	30	
Xylenes, Total	136.5	4.8	145.5	0	93.8	79 - 123	121.6	11.5	30	
Surr: 1,2-Dichloroethane-d4	50.55	0	48.5	0	104	70 - 128	46.13	9.14	30	
Surr: 4-Bromofluorobenzene	50.82	0	48.5	0	105	73 - 126	51.57	1.47	30	
Surr: Dibromofluoromethane	51.67	0	48.5	0	107	71 - 128	46.42	10.7	30	
Surr: Toluene-d8	50.79	0	48.5	0	105	73 - 127	51.79	1.95	30	

The following samples were analyzed in this batch:

HS16110729-01	HS16110729-02	HS16110729-03	HS16110729-04
HS16110729-05	HS16110729-06		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: R285130		Instrument: VOA5		Method: SW8260					
MBLK	Sample ID: VBLKS2-111816	Units: ug/Kg		Analysis Date: 18-Nov-2016 21:12					
Client ID:	Run ID: VOA5_285130	SeqNo: 3899163		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	ND	5.0							
Ethylbenzene	ND	5.0							
m,p-Xylene	ND	10							
o-Xylene	ND	5.0							
Toluene	ND	5.0							
Xylenes, Total	ND	5.0							
Surr: 1,2-Dichloroethane-d4	43.57	0	50	0	87.1	70 - 128			
Surr: 4-Bromofluorobenzene	49.62	0	50	0	99.2	73 - 126			
Surr: Dibromofluoromethane	44.11	0	50	0	88.2	71 - 128			
Surr: Toluene-d8	51.87	0	50	0	104	73 - 127			

LCS	Sample ID: VLCSS2-111816	Units: ug/Kg		Analysis Date: 18-Nov-2016 20:26					
Client ID:	Run ID: VOA5_285130	SeqNo: 3899162		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	48.31	5.0	50	0	96.6	79 - 122			
Ethylbenzene	50.21	5.0	50	0	100	80 - 122			
m,p-Xylene	98.79	10	100	0	98.8	79 - 122			
o-Xylene	48.99	5.0	50	0	98.0	80 - 123			
Toluene	49.21	5.0	50	0	98.4	79 - 120			
Xylenes, Total	147.8	5.0	150	0	98.5	79 - 123			
Surr: 1,2-Dichloroethane-d4	44.18	0	50	0	88.4	70 - 128			
Surr: 4-Bromofluorobenzene	48.11	0	50	0	96.2	73 - 126			
Surr: Dibromofluoromethane	46.76	0	50	0	93.5	71 - 128			
Surr: Toluene-d8	50.16	0	50	0	100	73 - 127			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: R285130		Instrument: VOA5		Method: SW8260						
MS		Sample ID: HS16110729-07MS		Units: ug/Kg		Analysis Date: 18-Nov-2016 22:45				
Client ID: GP-11-3-2-3-111116		Run ID: VOA5_285130		SeqNo: 3899167		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	42.96	5.0	50.5	0	85.1	79 - 122				
Ethylbenzene	36.63	5.0	50.5	0	72.5	80 - 122				S
m,p-Xylene	74.95	10	101	0	74.2	79 - 122				S
o-Xylene	37.51	5.0	50.5	0	74.3	80 - 123				S
Toluene	40.04	5.0	50.5	0	79.3	79 - 120				
Xylenes, Total	112.5	5.0	151.5	0	74.2	79 - 123				S
Surr: 1,2-Dichloroethane-d4	54.1	0	50.5	0	107	70 - 128				
Surr: 4-Bromofluorobenzene	52.34	0	50.5	0	104	73 - 126				
Surr: Dibromofluoromethane	54.83	0	50.5	0	109	71 - 128				
Surr: Toluene-d8	50.9	0	50.5	0	101	73 - 127				

MSD		Sample ID: HS16110729-07MSD		Units: ug/Kg		Analysis Date: 18-Nov-2016 23:08				
Client ID: GP-11-3-2-3-111116		Run ID: VOA5_285130		SeqNo: 3899168		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	33.87	5.0	50	0	67.7	79 - 122	42.96	23.7	30	S
Ethylbenzene	30.74	5.0	50	0	61.5	80 - 122	36.63	17.5	30	S
m,p-Xylene	63.14	10	100	0	63.1	79 - 122	74.95	17.1	30	S
o-Xylene	31.29	5.0	50	0	62.6	80 - 123	37.51	18.1	30	S
Toluene	33.14	5.0	50	0	66.3	79 - 120	40.04	18.9	30	S
Xylenes, Total	94.43	5.0	150	0	63.0	79 - 123	112.5	17.4	30	S
Surr: 1,2-Dichloroethane-d4	48.41	0	50	0	96.8	70 - 128	54.1	11.1	30	
Surr: 4-Bromofluorobenzene	50.88	0	50	0	102	73 - 126	52.34	2.83	30	
Surr: Dibromofluoromethane	49.11	0	50	0	98.2	71 - 128	54.83	11	30	
Surr: Toluene-d8	52.07	0	50	0	104	73 - 127	50.9	2.26	30	

The following samples were analyzed in this batch:				HS16110729-07	HS16110729-08	HS16110729-10	HS16110729-11
				HS16110729-12	HS16110729-13	HS16110729-14	HS16110729-15
				HS16110729-16	HS16110729-17	HS16110729-19	HS16110729-20
				HS16110729-21	HS16110729-22	HS16110729-23	HS16110729-24
				HS16110729-25	HS16110729-26		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110272		Instrument: UV-2450		Method: SW7196						
MBLK	Sample ID: MBLK-110272	Units: mg/kg		Analysis Date: 30-Nov-2016 15:00						
Client ID:		Run ID: UV-2450_285723		SeqNo: 3911149	PrepDate: 29-Nov-2016	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	2.00								
LCS	Sample ID: LCS-110272	Units: mg/kg		Analysis Date: 30-Nov-2016 15:00						
Client ID:		Run ID: UV-2450_285723		SeqNo: 3911148	PrepDate: 29-Nov-2016	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	8.92	2.00	10	0	89.2	80 - 120				
MS	Sample ID: HS16110729-22MS	Units: mg/kg		Analysis Date: 30-Nov-2016 15:00						
Client ID: GP-11-7-4-5-111116		Run ID: UV-2450_285723		SeqNo: 3911146	PrepDate: 29-Nov-2016	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	8.706	2.00	9.984	-0.4399	91.6	75 - 125				
MSD	Sample ID: HS16110729-22MSD	Units: mg/kg		Analysis Date: 30-Nov-2016 15:00						
Client ID: GP-11-7-4-5-111116		Run ID: UV-2450_285723		SeqNo: 3911147	PrepDate: 29-Nov-2016	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	8.792	2.00	9.991	-0.4399	92.4	75 - 125	8.706	0.977	20	
The following samples were analyzed in this batch:										
		HS16110729-01	HS16110729-02	HS16110729-03	HS16110729-04					
		HS16110729-05	HS16110729-06	HS16110729-07	HS16110729-08					
		HS16110729-10	HS16110729-11	HS16110729-12	HS16110729-13					
		HS16110729-14	HS16110729-15	HS16110729-16	HS16110729-17					
		HS16110729-19	HS16110729-20	HS16110729-21	HS16110729-22					

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: 110286		Instrument: UV-2450		Method: SW7196						
MBLK	Sample ID: MBLK-110286	Units: mg/kg		Analysis Date: 30-Nov-2016 17:00						
Client ID:		Run ID: UV-2450_285724		SeqNo: 3911189	PrepDate: 30-Nov-2016	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	2.00								
LCS	Sample ID: LCS-110286	Units: mg/kg		Analysis Date: 30-Nov-2016 17:00						
Client ID:		Run ID: UV-2450_285724		SeqNo: 3911188	PrepDate: 30-Nov-2016	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	8.76	2.00	10	0	87.6	80 - 120				
MS	Sample ID: HS16110729-26MS	Units: mg/kg		Analysis Date: 30-Nov-2016 17:00						
Client ID: GP-11-8-10-11-111116		Run ID: UV-2450_285724		SeqNo: 3911186	PrepDate: 30-Nov-2016	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	9.061	2.00	9.979	-0.03994	91.2	75 - 125				
MSD	Sample ID: HS16110729-26MSD	Units: mg/kg		Analysis Date: 30-Nov-2016 17:00						
Client ID: GP-11-8-10-11-111116		Run ID: UV-2450_285724		SeqNo: 3911187	PrepDate: 30-Nov-2016	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	9.06	2.00	9.978	-0.03994	91.2	75 - 125	9.061	0.00399	20	
The following samples were analyzed in this batch:										
		HS16110729-23	HS16110729-24	HS16110729-25	HS16110729-26					

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: R285169		Instrument: Balance1		Method: SW3550	
DUP	Sample ID: HS16110843-09DUP	Units: wt%		Analysis Date: 18-Nov-2016 11:41	
Client ID:	Run ID: Balance1_285169	SeqNo: 3900095		PrepDate:	DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Percent Moisture	16.8	0.0100			16.1 4.26 20

The following samples were analyzed in this batch:

HS16110729-01	HS16110729-02	HS16110729-03	HS16110729-04
HS16110729-05	HS16110729-06	HS16110729-07	HS16110729-08
HS16110729-10	HS16110729-11	HS16110729-12	HS16110729-13
HS16110729-14			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: R285282		Instrument: Balance1		Method: SW3550					
DUP	Sample ID: HS16110893-06DUP	Units: wt%		Analysis Date: 21-Nov-2016 12:39					
Client ID:	Run ID: Balance1_285282		SeqNo: 3902029		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Percent Moisture	14.8	0.0100					15.1	2.01	20

The following samples were analyzed in this batch:

HS16110729-15	HS16110729-16	HS16110729-17	HS16110729-19
HS16110729-20	HS16110729-21	HS16110729-22	HS16110729-23
HS16110729-24	HS16110729-25	HS16110729-26	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: R285671		Instrument: WetChem_HS		Method: SW9045B					
DUP		Sample ID: HS16110729-12DUP		Units: pH Units		Analysis Date: 29-Nov-2016 17:15			
Client ID: GP-11-4-10-11-111116		Run ID: WetChem_HS_285671		SeqNo: 3910187		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
pH	8.13	0.100					8.12	0.123	10
Temp Deg C @pH	22.4	0					22.4	0	10

The following samples were analyzed in this batch:

HS16110729-01	HS16110729-02	HS16110729-03	HS16110729-04
HS16110729-05	HS16110729-06	HS16110729-07	HS16110729-08
HS16110729-10	HS16110729-11	HS16110729-12	HS16110729-13
HS16110729-14	HS16110729-15	HS16110729-16	HS16110729-17
HS16110729-19	HS16110729-20		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: R285674		Instrument: WetChem_HS		Method: SW9045B	
DUP	Sample ID: HS16110729-21DUP	Units: pH Units		Analysis Date: 29-Nov-2016 18:00	
Client ID: GP-11-7-2-3-111116	Run ID: WetChem_HS_285674	SeqNo: 3910220		PrepDate:	DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC Control Limit RPD Ref Value %RPD RPD Limit Qual
pH	8.28	0.100			8.26 0.242 10
Temp Deg C @pH	22.3	0			22.3 0 10
The following samples were analyzed in this batch:					
HS16110729-21		HS16110729-22		HS16110729-23	
HS16110729-25		HS16110729-26		HS16110729-24	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: R285798		Instrument: Balance1		Method: LaDNR-29B SP					
DUP	Sample ID: HS16110729-15DUP	Units: SP as fraction		Analysis Date: 01-Dec-2016 10:05					
Client ID: GP-11-5-7-8-111116	Run ID: Balance1_285798		SeqNo: 3912891		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Saturation Point	0.514	0.100					0.526	2.31	30
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The following samples were analyzed in this batch:

HS16110729-01	HS16110729-02	HS16110729-03	HS16110729-04
HS16110729-05	HS16110729-06	HS16110729-07	HS16110729-08
HS16110729-10	HS16110729-11	HS16110729-12	HS16110729-13
HS16110729-14	HS16110729-15	HS16110729-16	HS16110729-17
HS16110729-19	HS16110729-20	HS16110729-21	HS16110729-22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: R285801		Instrument: Balance1		Method: LaDNR-29B SP					
DUP	Sample ID: HS16110729-23DUP	Units: SP as fraction		Analysis Date: 01-Dec-2016 10:25					
Client ID: GP-11-7-11-12-111116	Run ID: Balance1_285801	SeqNo: 3912973		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Saturation Point	0.36	0.100					0.365	1.38	30
The following samples were analyzed in this batch:									
HS16110729-23 HS16110729-24 HS16110729-25 HS16110729-26									

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: R285812		Instrument: WetChem_HS		Method: LaDNR-29B EC					
DUP	Sample ID: HS16110729-15DUP	Units: mmhos/cm @25°C		Analysis Date: 01-Dec-2016 16:48					
Client ID: GP-11-5-7-8-111116	Run ID: WetChem_HS_285812	SeqNo: 3913131		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Electrical Conductivity @ saturation	145.5	0.0100					141.3	2.91	20
Electrical Conductivity, 1:1 aqueous	74.8	0.0100					74.3	0.671	20
Saturation % as decimal	0.514	0					0.526	2.31	20
The following samples were analyzed in this batch:									
HS16110729-01		HS16110729-02		HS16110729-03		HS16110729-04			
HS16110729-05		HS16110729-06		HS16110729-07		HS16110729-08			
HS16110729-10		HS16110729-11		HS16110729-12		HS16110729-13			
HS16110729-14		HS16110729-15		HS16110729-16		HS16110729-17			
HS16110729-19		HS16110729-20		HS16110729-21		HS16110729-22			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

QC BATCH REPORT

Batch ID: R285813		Instrument: WetChem_HS		Method: LaDNR-29B EC					
DUP	Sample ID: HS16110729-23DUP	Units: mmhos/cm @25°C		Analysis Date: 01-Dec-2016 16:49					
Client ID: GP-11-7-11-12-111116	Run ID: WetChem_HS_285813		SeqNo: 3913157		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Electrical Conductivity @ saturation	32.39	0.0100					32.36	0.0772	20
Electrical Conductivity, 1:1 aqueous	11.66	0.0100					11.8	1.19	20
Saturation % as decimal	0.36	0					0.365	1.38	20
The following samples were analyzed in this batch:									
HS16110729-23 HS16110729-24 HS16110729-25 HS16110729-26									

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110729

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	16-022-1	27-Mar-2017
California	2919 2016-2018	31-Jul-2018
Illinois	003872	09-May-2017
Kansas	E-10352 2016-2017	31-Jul-2017
Kentucky	96 2016-2017	30-Apr-2017
Louisiana	03087 2016-2017	30-Jun-2017
North Carolina	624 - 2016	31-Dec-2016
North Dakota	R193 2016-2017	30-Apr-2017
Oklahoma	2016-122	31-Aug-2017
Texas	TX104704231-16-17	30-Apr-2017

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16110729

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS16110729-01	GP-11-1-1-2-111116	Login	11/15/2016 4:14:29 PM	PMG	4E
HS16110729-01	GP-11-1-1-2-111116	Login	11/15/2016 4:14:29 PM	PMG	VW-2
HS16110729-01	GP-11-1-1-2-111116	Login	11/15/2016 4:14:29 PM	PMG	BTEX B1
HS16110729-01	GP-11-1-1-2-111116	Login	11/15/2016 4:14:29 PM	PMG	4E
HS16110729-02	GP-11-1-5-6-111116	Login	11/15/2016 4:22:20 PM	PMG	4E
HS16110729-02	GP-11-1-5-6-111116	Login	11/15/2016 4:22:20 PM	PMG	VW-2
HS16110729-02	GP-11-1-5-6-111116	Login	11/15/2016 4:22:20 PM	PMG	BTEX B1
HS16110729-02	GP-11-1-5-6-111116	Login	11/15/2016 4:22:20 PM	PMG	4E
HS16110729-03	GP-11-1-9-10-111116	Login	11/15/2016 4:22:22 PM	PMG	4E
HS16110729-03	GP-11-1-9-10-111116	Login	11/15/2016 4:22:22 PM	PMG	VW-2
HS16110729-03	GP-11-1-9-10-111116	Login	11/15/2016 4:22:22 PM	PMG	BTEX B1
HS16110729-03	GP-11-1-9-10-111116	Login	11/15/2016 4:22:22 PM	PMG	4E
HS16110729-04	GP-11-2-1-2-111116	Login	11/15/2016 4:22:23 PM	PMG	4E
HS16110729-04	GP-11-2-1-2-111116	Login	11/15/2016 4:22:23 PM	PMG	VW-2
HS16110729-04	GP-11-2-1-2-111116	Login	11/15/2016 4:22:23 PM	PMG	BTEX B1
HS16110729-04	GP-11-2-1-2-111116	Login	11/15/2016 4:22:23 PM	PMG	4E
HS16110729-05	GP-11-2-3-4-111116	Login	11/15/2016 4:22:26 PM	PMG	4E
HS16110729-05	GP-11-2-3-4-111116	Login	11/15/2016 4:22:26 PM	PMG	VW-2
HS16110729-05	GP-11-2-3-4-111116	Login	11/15/2016 4:22:26 PM	PMG	BTEX B1
HS16110729-05	GP-11-2-3-4-111116	Login	11/15/2016 4:22:26 PM	PMG	4E
HS16110729-06	GP-11-2-8-9-111116	Login	11/15/2016 4:22:28 PM	PMG	4E
HS16110729-06	GP-11-2-8-9-111116	Login	11/15/2016 4:22:28 PM	PMG	VW-2
HS16110729-06	GP-11-2-8-9-111116	Login	11/15/2016 4:22:28 PM	PMG	BTEX B1
HS16110729-06	GP-11-2-8-9-111116	Login	11/15/2016 4:22:28 PM	PMG	4E
HS16110729-07	GP-11-3-2-3-111116	Login	11/15/2016 4:22:30 PM	PMG	4E
HS16110729-07	GP-11-3-2-3-111116	Login	11/15/2016 4:22:30 PM	PMG	VW-2
HS16110729-07	GP-11-3-2-3-111116	Login	11/15/2016 4:22:30 PM	PMG	BTEX B1
HS16110729-07	GP-11-3-2-3-111116	Login	11/15/2016 4:22:30 PM	PMG	4E
HS16110729-08	GP-11-3-8-9-111116	Login	11/15/2016 4:22:32 PM	PMG	4E
HS16110729-08	GP-11-3-8-9-111116	Login	11/15/2016 4:22:32 PM	PMG	VW-2
HS16110729-08	GP-11-3-8-9-111116	Login	11/15/2016 4:22:32 PM	PMG	BTEX B1
HS16110729-08	GP-11-3-8-9-111116	Login	11/15/2016 4:22:32 PM	PMG	4E
HS16110729-09	Trip Blank - 100716-66	Login	11/15/2016 4:23:42 PM	PMG	VW-3
HS16110729-10	GP-11-3-12-13-111116	Login	11/15/2016 4:27:19 PM	PMG	4E
HS16110729-10	GP-11-3-12-13-111116	Login	11/15/2016 4:27:19 PM	PMG	VW-2
HS16110729-10	GP-11-3-12-13-111116	Login	11/15/2016 4:27:19 PM	PMG	BTEX B1
HS16110729-10	GP-11-3-12-13-111116	Login	11/15/2016 4:27:19 PM	PMG	4E
HS16110729-11	GP-11-4-1-2-111116	Login	11/15/2016 4:27:21 PM	PMG	4E
HS16110729-11	GP-11-4-1-2-111116	Login	11/15/2016 4:27:21 PM	PMG	VW-2
HS16110729-11	GP-11-4-1-2-111116	Login	11/15/2016 4:27:21 PM	PMG	BTEX B1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16110729

SAMPLE TRACKING

HS16110729-11	GP-11-4-1-2-111116	Login	11/15/2016 4:27:21 PM	PMG	4E
HS16110729-12	GP-11-4-10-11-111116	Login	11/15/2016 4:27:24 PM	PMG	4E
HS16110729-12	GP-11-4-10-11-111116	Login	11/15/2016 4:27:24 PM	PMG	VW-2
HS16110729-12	GP-11-4-10-11-111116	Login	11/15/2016 4:27:24 PM	PMG	BTEX B1
HS16110729-12	GP-11-4-10-11-111116	Login	11/15/2016 4:27:24 PM	PMG	4E
HS16110729-13	GP-11-4-11-12-111116	Login	11/15/2016 4:27:26 PM	PMG	4E
HS16110729-13	GP-11-4-11-12-111116	Login	11/15/2016 4:27:26 PM	PMG	VW-2
HS16110729-13	GP-11-4-11-12-111116	Login	11/15/2016 4:27:26 PM	PMG	BTEX B1
HS16110729-13	GP-11-4-11-12-111116	Login	11/15/2016 4:27:26 PM	PMG	4E
HS16110729-14	GP-11-5-2-3-111116	Login	11/15/2016 4:27:28 PM	PMG	4E
HS16110729-14	GP-11-5-2-3-111116	Login	11/15/2016 4:27:28 PM	PMG	VW-2
HS16110729-14	GP-11-5-2-3-111116	Login	11/15/2016 4:27:28 PM	PMG	BTEX B1
HS16110729-14	GP-11-5-2-3-111116	Login	11/15/2016 4:27:28 PM	PMG	4E
HS16110729-15	GP-11-5-7-8-111116	Login	11/15/2016 4:27:30 PM	PMG	4E
HS16110729-15	GP-11-5-7-8-111116	Login	11/15/2016 4:27:30 PM	PMG	VW-2
HS16110729-15	GP-11-5-7-8-111116	Login	11/15/2016 4:27:30 PM	PMG	BTEX B1
HS16110729-15	GP-11-5-7-8-111116	Login	11/15/2016 4:27:30 PM	PMG	4E
HS16110729-16	GP-11-5-9-10-111116	Login	11/15/2016 4:27:33 PM	PMG	4E
HS16110729-16	GP-11-5-9-10-111116	Login	11/15/2016 4:27:33 PM	PMG	VW-2
HS16110729-16	GP-11-5-9-10-111116	Login	11/15/2016 4:27:33 PM	PMG	BTEX B1
HS16110729-16	GP-11-5-9-10-111116	Login	11/15/2016 4:27:33 PM	PMG	4E
HS16110729-17	GP-11-6-2-3-111116	Login	11/15/2016 4:27:34 PM	PMG	4E
HS16110729-17	GP-11-6-2-3-111116	Login	11/15/2016 4:27:34 PM	PMG	VW-2
HS16110729-17	GP-11-6-2-3-111116	Login	11/15/2016 4:27:34 PM	PMG	BTEX B1
HS16110729-17	GP-11-6-2-3-111116	Login	11/15/2016 4:27:34 PM	PMG	4E
HS16110729-18	Trip Blank - 082916-95	Login	11/15/2016 4:30:17 PM	PMG	VW-3
HS16110729-19	GP-11-6-8-9-111116	Login	11/15/2016 4:38:05 PM	PMG	4E
HS16110729-19	GP-11-6-8-9-111116	Login	11/15/2016 4:38:05 PM	PMG	VW-2
HS16110729-19	GP-11-6-8-9-111116	Login	11/15/2016 4:38:05 PM	PMG	BTEX B1
HS16110729-19	GP-11-6-8-9-111116	Login	11/15/2016 4:38:05 PM	PMG	4E
HS16110729-20	GP-11-6-4-5-111116	Login	11/15/2016 4:38:07 PM	PMG	4E
HS16110729-20	GP-11-6-4-5-111116	Login	11/15/2016 4:38:07 PM	PMG	VW-2
HS16110729-20	GP-11-6-4-5-111116	Login	11/15/2016 4:38:07 PM	PMG	BTEX B1
HS16110729-20	GP-11-6-4-5-111116	Login	11/15/2016 4:38:07 PM	PMG	4E
HS16110729-21	GP-11-7-2-3-111116	Login	11/15/2016 4:38:10 PM	PMG	4E
HS16110729-21	GP-11-7-2-3-111116	Login	11/15/2016 4:38:10 PM	PMG	VW-2
HS16110729-21	GP-11-7-2-3-111116	Login	11/15/2016 4:38:10 PM	PMG	BTEX B1
HS16110729-21	GP-11-7-2-3-111116	Login	11/15/2016 4:38:10 PM	PMG	4E
HS16110729-22	GP-11-7-4-5-111116	Login	11/15/2016 4:38:14 PM	PMG	4E
HS16110729-22	GP-11-7-4-5-111116	Login	11/15/2016 4:38:14 PM	PMG	VW-2
HS16110729-22	GP-11-7-4-5-111116	Login	11/15/2016 4:38:14 PM	PMG	BTEX B1
HS16110729-22	GP-11-7-4-5-111116	Login	11/15/2016 4:38:14 PM	PMG	4E

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16110729

SAMPLE TRACKING

HS16110729-23	GP-11-7-11-12-111116	Login	11/15/2016 4:38:16 PM	PMG	4E
HS16110729-23	GP-11-7-11-12-111116	Login	11/15/2016 4:38:16 PM	PMG	VW-2
HS16110729-23	GP-11-7-11-12-111116	Login	11/15/2016 4:38:16 PM	PMG	BTEX B1
HS16110729-23	GP-11-7-11-12-111116	Login	11/15/2016 4:38:16 PM	PMG	4E
HS16110729-24	GP-11-8-2-3-111116	Login	11/15/2016 4:38:18 PM	PMG	4E
HS16110729-24	GP-11-8-2-3-111116	Login	11/15/2016 4:38:18 PM	PMG	VW-2
HS16110729-24	GP-11-8-2-3-111116	Login	11/15/2016 4:38:18 PM	PMG	BTEX B1
HS16110729-24	GP-11-8-2-3-111116	Login	11/15/2016 4:38:18 PM	PMG	4E
HS16110729-25	GP-11-8-8-9-111116	Login	11/15/2016 4:38:20 PM	PMG	4E
HS16110729-25	GP-11-8-8-9-111116	Login	11/15/2016 4:38:20 PM	PMG	VW-2
HS16110729-25	GP-11-8-8-9-111116	Login	11/15/2016 4:38:20 PM	PMG	BTEX B1
HS16110729-25	GP-11-8-8-9-111116	Login	11/15/2016 4:38:20 PM	PMG	4E
HS16110729-26	GP-11-8-10-11-111116	Login	11/15/2016 4:38:22 PM	PMG	4E
HS16110729-26	GP-11-8-10-11-111116	Login	11/15/2016 4:38:22 PM	PMG	VW-2
HS16110729-26	GP-11-8-10-11-111116	Login	11/15/2016 4:38:22 PM	PMG	BTEX B1
HS16110729-26	GP-11-8-10-11-111116	Login	11/15/2016 4:38:22 PM	PMG	4E
HS16110729-27	Trip Blank - 082916-94	Login	11/15/2016 4:39:04 PM	PMG	VW-3
HS16110729-01	GP-11-1-1-2-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-02	GP-11-1-5-6-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-03	GP-11-1-9-10-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-04	GP-11-2-1-2-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-05	GP-11-2-3-4-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-06	GP-11-2-8-9-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-07	GP-11-3-2-3-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-08	GP-11-3-8-9-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-10	GP-11-3-12-13-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-11	GP-11-4-1-2-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-12	GP-11-4-10-11-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-13	GP-11-4-11-12-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-14	GP-11-5-2-3-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-15	GP-11-5-7-8-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-16	GP-11-5-9-10-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-17	GP-11-6-2-3-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-19	GP-11-6-8-9-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-20	GP-11-6-4-5-111116	Out	11/21/2016 1:54:16 PM	PVL	METPREP
HS16110729-01	GP-11-1-1-2-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-02	GP-11-1-5-6-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-03	GP-11-1-9-10-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-04	GP-11-2-1-2-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-05	GP-11-2-3-4-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-06	GP-11-2-8-9-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-07	GP-11-3-2-3-111116	Return	11/21/2016 1:54:49 PM	PVL	4E

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16110729

SAMPLE TRACKING

HS16110729-08	GP-11-3-8-9-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-10	GP-11-3-12-13-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-11	GP-11-4-1-2-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-12	GP-11-4-10-11-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-13	GP-11-4-11-12-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-14	GP-11-5-2-3-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-15	GP-11-5-7-8-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-16	GP-11-5-9-10-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-17	GP-11-6-2-3-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-19	GP-11-6-8-9-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-20	GP-11-6-4-5-111116	Return	11/21/2016 1:54:49 PM	PVL	4E
HS16110729-21	GP-11-7-2-3-111116	Out	11/22/2016 10:52:52 AM	PVL	METPREP
HS16110729-22	GP-11-7-4-5-111116	Out	11/22/2016 10:52:52 AM	PVL	METPREP
HS16110729-23	GP-11-7-11-12-111116	Out	11/22/2016 10:52:52 AM	PVL	METPREP
HS16110729-24	GP-11-8-2-3-111116	Out	11/22/2016 10:52:52 AM	PVL	METPREP
HS16110729-25	GP-11-8-8-9-111116	Out	11/22/2016 10:52:52 AM	PVL	METPREP
HS16110729-26	GP-11-8-10-11-111116	Out	11/22/2016 10:52:52 AM	PVL	METPREP
HS16110729-21	GP-11-7-2-3-111116	Return	11/22/2016 10:53:11 AM	PVL	4E
HS16110729-22	GP-11-7-4-5-111116	Return	11/22/2016 10:53:11 AM	PVL	4E
HS16110729-23	GP-11-7-11-12-111116	Return	11/22/2016 10:53:11 AM	PVL	4E
HS16110729-24	GP-11-8-2-3-111116	Return	11/22/2016 10:53:11 AM	PVL	4E
HS16110729-25	GP-11-8-8-9-111116	Return	11/22/2016 10:53:11 AM	PVL	4E
HS16110729-26	GP-11-8-10-11-111116	Return	11/22/2016 10:53:11 AM	PVL	4E
HS16110729-01	GP-11-1-1-2-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-02	GP-11-1-5-6-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-03	GP-11-1-9-10-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-04	GP-11-2-1-2-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-05	GP-11-2-3-4-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-06	GP-11-2-8-9-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-07	GP-11-3-2-3-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-08	GP-11-3-8-9-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-10	GP-11-3-12-13-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-11	GP-11-4-1-2-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-12	GP-11-4-10-11-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-13	GP-11-4-11-12-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-14	GP-11-5-2-3-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-15	GP-11-5-7-8-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-16	GP-11-5-9-10-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-17	GP-11-6-2-3-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-19	GP-11-6-8-9-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-20	GP-11-6-4-5-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-21	GP-11-7-2-3-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16110729

SAMPLE TRACKING

HS16110729-22	GP-11-7-4-5-111116	Out	11/29/2016 4:47:43 PM	JCJ	METPREP
HS16110729-01	GP-11-1-1-2-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-02	GP-11-1-5-6-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-03	GP-11-1-9-10-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-04	GP-11-2-1-2-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-05	GP-11-2-3-4-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-06	GP-11-2-8-9-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-07	GP-11-3-2-3-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-08	GP-11-3-8-9-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-10	GP-11-3-12-13-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-11	GP-11-4-1-2-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-12	GP-11-4-10-11-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-13	GP-11-4-11-12-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-14	GP-11-5-2-3-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-15	GP-11-5-7-8-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-16	GP-11-5-9-10-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-17	GP-11-6-2-3-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-19	GP-11-6-8-9-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-20	GP-11-6-4-5-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-21	GP-11-7-2-3-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-22	GP-11-7-4-5-111116	Return	11/29/2016 4:48:01 PM	JCJ	4E
HS16110729-23	GP-11-7-11-12-111116	Out	11/29/2016 4:50:37 PM	JCJ	METPREP
HS16110729-24	GP-11-8-2-3-111116	Out	11/29/2016 4:50:37 PM	JCJ	METPREP
HS16110729-25	GP-11-8-8-9-111116	Out	11/29/2016 4:50:37 PM	JCJ	METPREP
HS16110729-26	GP-11-8-10-11-111116	Out	11/29/2016 4:50:37 PM	JCJ	METPREP
HS16110729-23	GP-11-7-11-12-111116	Return	11/29/2016 4:50:56 PM	JCJ	4E
HS16110729-24	GP-11-8-2-3-111116	Return	11/29/2016 4:50:56 PM	JCJ	4E
HS16110729-25	GP-11-8-8-9-111116	Return	11/29/2016 4:50:56 PM	JCJ	4E
HS16110729-26	GP-11-8-10-11-111116	Return	11/29/2016 4:50:56 PM	JCJ	4E

Sample Receipt Checklist

Client Name: Kinder Morgan
Work Order: HS16110729

Date/Time Received: **15-Nov-2016 08:45**
Received by: **Jared R. Makan**

Checklist completed by: Paresh M. Giga 15-Nov-2016
eSignature Date

Reviewed by: Sonia West 16-Nov-2016
eSignature Date

Matrices: **Soil/Water**Carrier name: **ALS Courier**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
TX1005 solids received in hermetically sealed vials?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Temperature(s)/Thermometer(s):

1.1c/1.4c,1.0c/1.3c,0.8c/1.1c U/C

IR11

Cooler(s)/Kit(s):

5606,3035,3034

Date/Time sample(s) sent to storage:

11/15/16 17:10

Water - VOA vials have zero headspace?

Yes ☒No ☐

No VOA vials submitted

☐

Water - pH acceptable upon receipt?

Yes ☒No ☐N/A ☐

pH adjusted?

Yes ☐No ☒N/A ☐

pH adjusted by:

Login Notes: Sample 19 to 26 - Client omitted 111116 on IDs. Sample GP-11-2-8-9-111116 - 16oz jar ID differs -jar label - GP-11-2-3-4-111116.
Trip Blanks checked off for all analysis on COC. Logged in for 8260 only

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



Environmental

Cincinnati, OH
+1 513 733 5336

Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 1 of 1

COC ID: **147532**

HS16110729

Kinder Morgan

McElmo Dome & Doe Canyon



Customer Information		Project Information		ALS Project Manager:	
Purchase Order	Workorder Dir. 47971	Project Name	McElmo Dome & Doe Canyon	A	8260_S (BTEX 8260)
Work Order		Project Number	CO002255.0001	B	8015_GRO_S (GRO 8015)
Company Name	Kinder Morgan	Bill To Company	Kinder Morgan CO2 Company, L.P.	C	8015M_S_LL (DRO 8015)
Send Report To	Aaron Hale	Invoice Attn	Mike Hannigan	D	LA29B SAR (SAR & EC)
Address	1001 Louisiana Street Suite 740D	Address	17801 Highway 491	E	PH_S (pH)
City/State/Zip	Houston, TX 77002	City/State/Zip	Cortez, CO 81321	F	ICP_S_Low (As,Ba,B,Cd,Cr,Cu,Pb,Ni,Se,Ag,Zn)
Phone	(713)369-9193	Phone	(970) 882-5532	G	HG_S_Low (Mercury)
Fax	(713)495-2835	Fax		H	Cr3_S (Trivalent Chromium)
e-Mail Address		e-Mail Address		I	Cr6_S (Hexavalent Chromium)
				J	MOIST_SW3550 (Moisture)

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	GP-11-1-1-2-111116	11/11/16	0830	Soil	n/a	4	X	X	X	X	X	X	X	X	X	X	
2	GP-11-1-5-6-111116		0845														
3	GP-11-1-9-10-111116		0900														
4	GP-11-2-1-2-111116		0920														
5	GP-11-2-3-4-111116		0940														
6	GP-11-2-8-9-111116		0950														
7	GP-11-3-2-3-111116		1000														
8	GP-11-3-8-9-111116		1015														
9	Trip Blank		1030			2											
10																	

Sampler(s) Please Print & Sign Beth Draeger		Shipment Method Fed Ex		Required Turnaround Time: (Check Box) TAT <u>10 days</u> Other: _____		Results Due Date: _____	
Relinquished by: Beth Draeger		Date: <u>11/11/16</u>	Time: <u>1700</u>	Received by:		Notes: [KM CO2 RFP 16MDLRFP077]	
Relinquished by:		Date:	Time:	Received by (Laboratory):		Cooler ID	
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		Cooler Temp.	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035						QC Package: (Check One Box Below)	
						QC Level <u>STD</u>	
						Other: _____	

note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
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Chain of Custody Form

Page 1 of 1

COC ID: **147530**

HS16110729

Kinder Morgan

McElmo Dome & Doe Canyon



Customer Information		Project Information		ALS Project Manager:	
Purchase Order	Workorder Dir. 47971	Project Name	McElmo Dome & Doe Canyon	A	8260_S (BTEX 8260)
Work Order		Project Number	CO002255.0001	B	8015_GRO_S (GRO 8015)
Company Name	Kinder Morgan	Bill To Company	Kinder Morgan CO2 Company, L.P.	C	8015M_S_LL (DRO 8015)
Send Report To	Aaron Hale	Invoice Attn	Mike Hannigan	D	LA29B SAR (SAR & EC)
Address	1001 Louisiana Street Suite 740D	Address	17801 Highway 491	E	PH_S (pH)
City/State/Zip	Houston, TX 77002	City/State/Zip	Cortez, CO 81321	F	ICP_S_Low (As,Ba,B,Cd,Cr,Cu,Pb,Ni,Se,Ag,Zn)
Phone	(713) 369-9193	Phone	(970) 882-5532	G	HG_S_Low (Mercury)
Fax	(713) 495-2835	Fax		H	Cr3_S (Trivalent Chromium)
e-Mail Address		e-Mail Address		I	Cr6_S (Hexavalent Chromium)
				J	MOIST_SW3550 (Moisture)

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	GP- 11 11-3-12-13-111116	11/11/16	1030	Soil	n/a	4	X	X	X	X	X	X	X	X	X	X	
2	GP- 11 11-4-1-2-111116		1100														
3	GP- 11 11-4-10-11-111116		1120														
4	GP- 11 11-4-11-12-111116		1130														
5	GP- 11 11-5-2-3-111116		1300														
6	GP- 11 11-5-7-8-111116		1530														
7	GP- 11 11-5-9-10-111116		1545														
8	GP- 11 11-6-2-3-111116		1400														
9	Trip Blank																
10																	

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date:	
Beth Draeger <i>Beth Draeger</i>		Fed Ex		TAT <u>10 days</u> Other: _____			
Relinquished by: Beth Draeger		Date: 11/11/16	Time: 1700	Received by:		Notes: [KM CO2 REP 16MDLRFP077]	
Relinquished by:		Date:	Time:	Received by (Laboratory):		QC Package: (Check One Box Below)	
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory): JM 11/15/16 08:45		QC Level <u>STD</u>	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035				Cooler ID: 3035		Cooler Temp: 1.0	
				Other: 1211		Other: _____	

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Chain of Custody For

Page 1 of 1

COC ID: **147531**

HS16110729

Kinder Morgan

McElmo Dome & Doe Canyon




on, WV
is
io

Customer Information				ALS Project Manager:				Project Information												
Purchase Order	Workorder Dir. 47971			Project Name	McElmo Dome & Doe Canyon			A	8260_S (BTEX 8260)											
Work Order				Project Number	CO002255.0001			B	8015_GRO_S (GRO 8015)											
Company Name	Kinder Morgan			Bill To Company	Kinder Morgan CO2 Company, L.P.			C	8015M_S_LL (DRO 8015)											
Send Report To	Aaron Hale			Invoice Attn	Mike Hannigan			D	LA29B SAR (SAR & EC)											
Address	1001 Louisiana Street Suite 740D			Address	17801 Highway 491			E	PH_S (pH)											
City/State/Zip	Houston, TX 77002			City/State/Zip	Cortez, CO 81321			F	ICP_S_Low (As,Ba,B,Cd,Cr,Cu,Pb,Ni,Se,Ag,Zn)											
Phone	(713) 369-9193			Phone	(970) 882-5532			G	HG_S_Low (Mercury)											
Fax	(713) 495-2835			Fax				H	Cr3_S (Trivalent Chromium)											
e-Mail Address				e-Mail Address				I	Cr6_S (Hexavalent Chromium)											
								J	MOIST_SW3550 (Moisture)											


No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	GP-11-6-8-9	11/11/16	1430	Soil	n/a	4	X	X	X	X	X	X	X	X	X	X	
2	GP-11-6-4-5		1415														
3	GP-11-7-2-3		1315														
4	GP-11-7-4-5		1320														
5	GP-11-7-11-12		1345														
6	GP-11-8-2-3		1250														
7	GP-11-8-8-9		1300														
8	GP-11-8-10-11		1310														
9	Trip Blank					2											
10																	


Sampler(s) Please Print & Sign			Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date:	
Beth Draeger <i>Beth Draeger</i>			Fed Ex		TAT <u>10 days</u> Other: _____			
Relinquished by:		Date:	Time:	Received by:		Notes:		
Beth Draeger		11/11/16	1700			[KM CO2 RFP 16MDLRFP077]		
Relinquished by:		Date:	Time:	Received by (Laboratory):		QC Package: (Check One Box Below)		
				JM 11/15/16 08:45		QC Level <u>STD</u>		
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		Cooler ID	Cooler Temp.	Other:
						3034	0.8	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035							12.11	
							CF0.3	


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 ALS Environmental 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By:
	Date:	Time:	8m
	Name:		Date:
	Company:		11/15/16


5606 NOV 15 2016

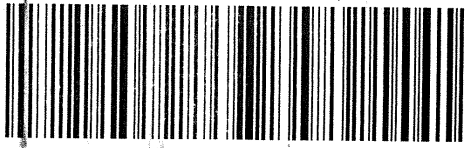
 ALS Environmental 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By:
	Date:	Time:	8m
	Name:		Date:
	Company:		11/15/16


FedEx TRK# 0221 6786 7201 3499 XH SGRA  FID 5204368 14NOV15 CEZA 539C3/8EBA	TUE - 15 NOV 10:30A PRIORITY OVERNIGHT 5606 77099 TX-US IAH
---	--

 ALS Environmental 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By:
	Date:	Time:	8m
	Name:		Date:
	Company:		11/15/16


3035 NOV 15 2016

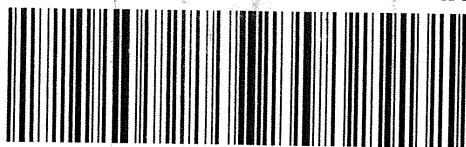
 ALS Environmental 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By:
	Date:	Time:	8m
	Name:		Date:
	Company:		11/15/16

FedEx TRK# 0221 6786 7200 4380 XH SGRA  FID 5204368 14NOV16 CEZA 539C3/CBB1/8EBA	TUE - 15 NOV 10:30A PRIORITY OVERNIGHT 3035 77099 TX-US IAH
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 ALS Environmental 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL Time: _____ Date: _____ By: _____		Seal Broken By: <i>SM</i> Date: 11/15/16
	3034		

3034 NOV 15 2016

 ALS Environmental 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL Date: _____ Time: _____ Name: _____ Company: _____		Seal Broken By: <i>SM</i> Date: 11/15/16
	3034		

FedEx TRK# 0221 6786 7200 4417	TUE - 15 NOV 10:30A PRIORITY OVERNIGHT
XH SGRA	3034
	
77099 TX-US IAH <small>FID 5204368 14NOV16 CEZA 539C3/CBB1/8EBA</small>	

ATTACHMENT F

CDPHE White Paper on Arsenic Concentrations in Soil





Arsenic Concentrations in Soil

Risk management guidance for evaluating

reviewed/revised July 2014

Regulatory Limitation

This guidance does not modify, replace, or pre-empt any existing statutory or regulatory requirements, enforcement actions, agreements, policies or other legal mechanisms that may govern actions within the Hazardous Materials and Waste Management Division's (the "division's") various remedial programs. In the event of a conflict between this guidance and existing risk assessment guidance and other programmatic requirements, this guidance defers to the various legal and operating mechanisms of those remedial programs.

This guidance was developed with the division's remedial programs in mind. Other state and federal agencies are not obligated to use the process outlined herein, although the same analysis could apply to other sites undergoing investigation and cleanup where testing for arsenic is required and it may be present in sampled environmental media. Parties wanting to use this guidance at their site must seek approval to do so from the regulatory agency responsible for overseeing their remedial activities.

Purpose

The division has prepared this guidance for the purpose of making preliminary determinations when screening data collected from sites that don't necessarily have a reason to believe arsenic contamination may be present, such as a routine Phase II investigation conducted prior to a property transaction. This guidance is simply meant to inform the regulated community of their responsibilities in managing arsenic risks: it is not regulation, nor does it constitute an enforceable standard that must be complied with.

Background

Arsenic is naturally occurring in some geologic environments in Colorado due to weathering and erosion of bedrock and soil, including highly mineralized areas that are mined for metal ores. It is present in more than 200 different minerals, the most common of which is called arsenopyrite. It may also be present in the environment due to a number of anthropogenic activities including: military operations and firing ranges; mining, especially sulfide ores; smelting copper, gold and lead ores; preservation of wood (CCA); chicken feed operations and associated manures (CAFO) due to arsenic-containing growth promoters; tanning and taxidermy operations; coal-burning emissions and ash-derived residues from power plants; and may be present in landfills and landfill-derived leachate. Arsenic may also be found due to the manufacture, use and disposal of: ammunition; fireworks; pigments (paint, paper, ceramics, etc.); older herbicides, insecticides, and pesticides (examples: monosodium methanearsonate (MSMA), disodium methanearsonate (DSMA) and lead-arsonate); electronics containing Gallium-Arsenide-Selenium (GAS) semi-conductors; lead acid battery plates; glass; and some pharmaceuticals. Other anthropogenic arsenic sources may likely exist. Arsenic contamination in soil is of public health concern due to its toxic effects as a carcinogen and a non-carcinogen. Making risk management decisions about arsenic can be difficult because natural occurring concentrations in soil often exceed carcinogenic risk based exposure values.

This guidance was prepared by the division using a data set of background arsenic concentrations developed by the U.S. EPA Region 8. The data set includes over 2,700 samples from 44 counties in Colorado. The areas sampled included: native grasslands; agricultural areas; urban mixed land use; and mining. A summary of the data set is presented in the table below. The complete data set may be found on the U.S. EPA Region 8's website at <http://www2.epa.gov/region8/hh-exposure-assessment>.

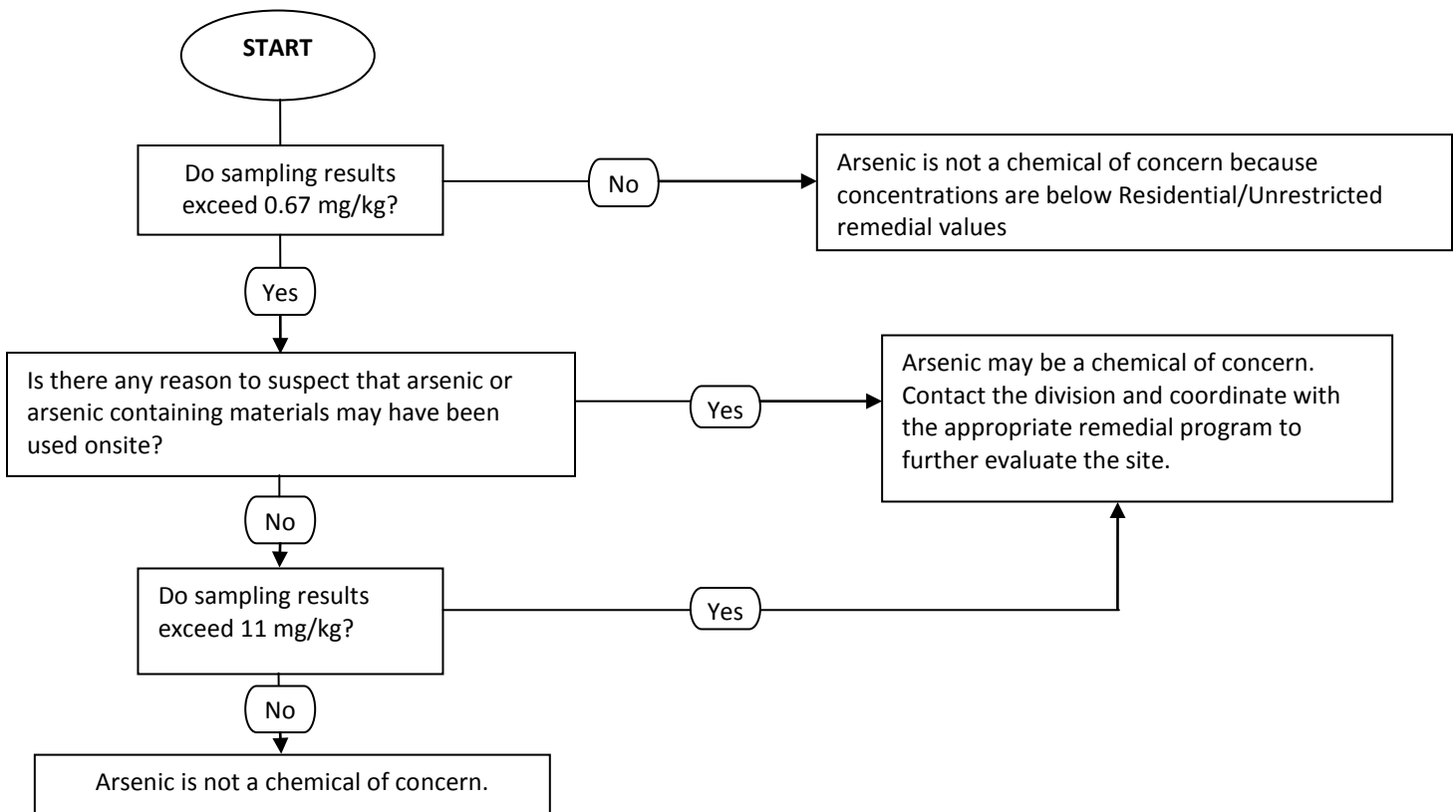
Region 8 U.S. EPA 95% UCLM Background Soil Arsenic Concentrations in Colorado

Land Use	Concentration (mg/kg)
Native Grassland, Rangeland, or Agriculture	3-14
Urban Mixed Use	6-19
Mining	10
Average of all land uses	11

Division Guidance Regarding Background Arsenic Concentration

The division's approach to evaluating arsenic in soil is depicted in the following flowchart. This guidance assumes that, based upon the size, history and environmental concerns associated with a particular site, an adequate amount of arsenic data has been obtained to make a determination regarding arsenic concentrations in soil. It isn't meant to be a guide on how to conduct a background study for risk assessment and/or site closure purposes. Guidance on the subject of data collection and analysis needs for conducting a background study should be sought from other published sources. Soil samples should be collected and analyzed for arsenic if the site history suggests it may be present as a result of anthropogenic activities. However, since arsenic is one of the chemicals included as part of a standard "metals" analysis package from a laboratory, you may already have obtained arsenic data for your site.

The current residential/unrestricted land use remedial objective for inorganic arsenic is 0.67 mg/kg (U.S. EPA regional screening level). If arsenic concentrations at your site are lower than 0.67 mg/kg, the division will require no further action to address arsenic in soil. If arsenic concentrations are lower than 11 mg/kg (the average of the 95% UCLM of background concentrations found by the U.S. EPA in Colorado), and releases of arsenic could not have occurred at the site, based on historical data or process knowledge, the division will require no further action to address arsenic in soil. If arsenic concentrations are greater than 0.67 mg/kg, and the available information suggests that a release of arsenic could have occurred at the site, the division will require additional evaluation of the data and possibly additional sampling to determine whether corrective measures for arsenic are required. This evaluation may include a site specific background study with sampling from offsite locations, and/or additional sampling in areas of the site where activities that could have contributed to environmental contamination never occurred. Please consult with the division prior to performing any background study. If it can be demonstrated that arsenic concentrations in soil are unrelated to site activities, the division will require no further action regarding arsenic. It should be noted that material such as arsenic-bearing mine tailings or oil and gas drill cuttings, although derived from a naturally occurring source material, are not considered to be naturally occurring background once they have been generated through human activity. Therefore, mine tailings and drill cuttings may be subject to remediation if ecological or health-based concentrations are exceeded.



For more information please contact:

Colorado Department of Public Health and Environment
Hazardous Materials and Waste Management Division
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Customer Technical Assistance Line:
(303) 692-3320
(888) 569-1831 ext. 3320 toll-free
E-mail: comments.hmwmd@state.co.us
Website: www.colorado.gov/cdphe/hm