ARCADIS Design & Consultancy for natural and built assets

Mr. Aaron M. Hale, P.G.
Environmental Manager
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Subject:
Summary Report for Site GP-9
McElmo Dome Unit, Southwestern Colorado

ENVIRONMENT

Date:
February 8, 2017

Contact:
Kelli Jo Preston

Phone:
303.471.3403

Email:
kellijo.preston@arcadis.com

Our ref:
CO002055

Dear Mr. Hale:

Included herein is the Summary Report for site GP-9, which is part of the McElmo Dome Unit in southwestern Colorado. Arcadis U.S., Inc. (Arcadis) completed field work at site GP-9 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).

Objectives

The objective of the work completed at site GP-9 (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.

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-9 is provided in **Attachment C**.

Detailed notes were kept during the field activities completed at site GP-9 and are provided in **Attachment D**.

Results

Analytical results received from ALS for the soil samples collected at site GP-9 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-9. 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:

- Two EC exceedances and two pH exceedances were observed in soils shallower than 3 feet, from two boring locations (boring 4 and 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 9.98 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.
- DRO was detected at concentrations above the SL of 500 mg/kg at boring 4 from 6 to 7 feet bgs (1,000 mg/kg), and at boring 7 from 7 to 8 feet bgs (600 mg/kg).
- Liner material was observed at 9 feet bgs in boring 6, 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

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

Sincerely,

Arcadis U.S., Inc.

Kelli Jo Preston
Project Manager

Tables

1 Soil Analytical Results for Samples Collected at McElmo Dome Site GP-9

Figures

1 GP-9 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

TABLES

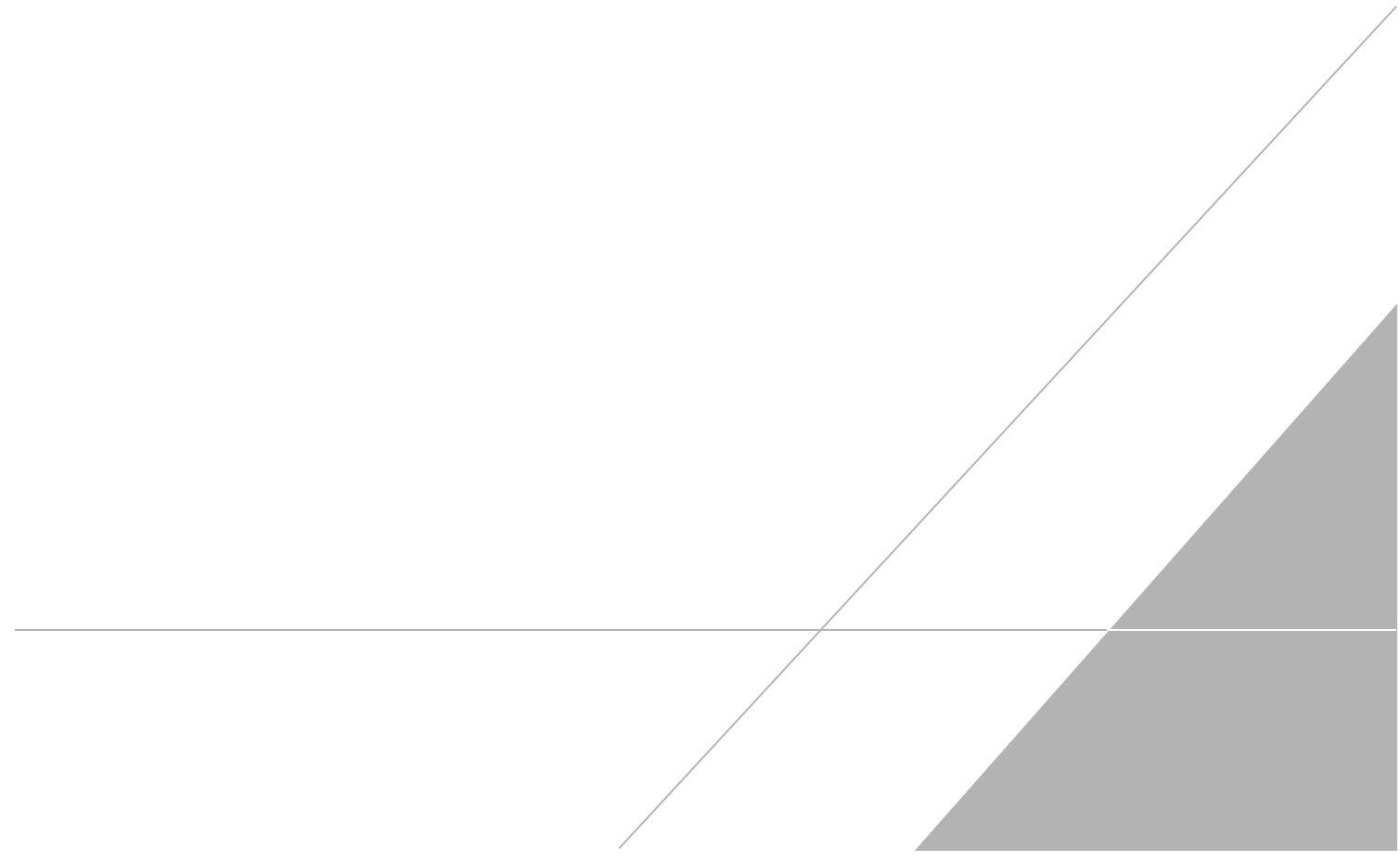


Table 1 - Soil Analytical Results for Samples Collected at McElmo Dome Site GP-9
Kinder Morgan CO2 Company LP

						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-9	Boring 1	2-3	11/8/2016	GP-9-1-2-3-110816	Soil	2.43	113	4.52	< 0.0486	7.23	4.70	5.35	8.23	< 0.175	< 0.0777	18.6	< 4.9 E-3	< 4.9 E-3	< 9.8 E-3	< 4.9 E-3	< 4.9 E-3	< 9.8 E-3
GP-9	Boring 1	6-7	11/8/2016	GP-9-1-6-7-110816	Soil	2.16	149	5.02	< 0.0472	6.24	4.49	5.10	6.85	< 0.170	< 0.0755	18.9	< 5.1 E-3	< 5.1 E-3	< 10 E-3	< 5.1 E-3	< 5.1 E-3	< 10 E-3
GP-9	Boring 1	9-10	11/8/2016	GP-9-1-9-10-110816	Soil	2.04	738	3.96	< 0.0479	2.78	2.42	1.79	2.98	< 0.173	< 0.0767	7.80	< 5.0 E-3	< 5.0 E-3	< 10 E-3	< 5.0 E-3	< 5.0 E-3	< 10 E-3
GP-9	Boring 2	0-1	11/8/2016	GP-9-2-0-1-110816	Soil	2.42	145	< 1.32	< 0.0471	7.63	5.75	7.05	7.18	< 0.170	< 0.0754	22.2	< 5.0 E-3	< 5.0 E-3	< 10 E-3	< 5.0 E-3	< 5.0 E-3	< 10 E-3
GP-9	Boring 2	5-6	11/8/2016	GP-9-2-5-6-110816	Soil	2.74	151	2.50	< 0.0471	7.67	5.76	6.43	7.52	< 0.170	< 0.0753	20.9	< 5.1 E-3	< 5.1 E-3	< 10 E-3	< 5.1 E-3	< 5.1 E-3	< 10 E-3
GP-9	Boring 2	9-10	11/8/2016	GP-9-2-9-10-110816	Soil	2.38	392	5.26	< 0.0459	6.57	5.73	5.51	7.45	< 0.165	< 0.0735	20.3	< 5.1 E-3	< 5.1 E-3	< 10 E-3	< 5.1 E-3	< 5.1 E-3	< 10 E-3
GP-9	Boring 3	2-3	11/8/2016	GP-9-3-2-3-110816	Soil	2.54	187	6.46	< 0.0472	7.32	5.54	6.17	7.84	< 0.170	< 0.0754	20.3	< 4.9 E-3	< 4.9 E-3	< 9.8 E-3	< 4.9 E-3	< 4.9 E-3	< 9.8 E-3
GP-9	Boring 3	3-4	11/8/2016	GP-9-3-3-4-110816	Soil	2.82	148	6.48	< 0.0461	7.63	6.93	6.83	8.09	< 0.166	< 0.0737	21.3	< 5.0 E-3	< 5.0 E-3	< 10 E-3	< 5.0 E-3	< 5.0 E-3	< 10 E-3
GP-9	Boring 3	12-13	11/8/2016	GP-9-3-12-13-110816	Soil	1.85	189	5.28	< 0.0456	4.79	3.14	3.83	6.27	< 0.164	< 0.0730	13.4	< 4.9 E-3	< 4.9 E-3	< 9.8 E-3	< 4.9 E-3	< 4.9 E-3	< 9.8 E-3
GP-9	Boring 4	2-3	11/8/2016	GP-9-4-2-3-110816	Soil	2.54	137	4.05	< 0.0458	7.02	5.72	6.18	7.45	< 0.165	< 0.0733	22.9	< 5.0 E-3	< 5.0 E-3	< 9.9 E-3	< 5.0 E-3	< 5.0 E-3	< 9.9 E-3
GP-9	Boring 4	6-7	11/8/2016	GP-9-4-6-7-110816	Soil	9.98	132	19.8	< 0.0480	9.17	6.55	7.08	6.81	< 0.173	< 0.0768	349	< 4.8 E-3	< 4.8 E-3	0.013	< 4.8 E-3	< 4.8 E-3	0.017
GP-9	Boring 4	14-15	11/8/2016	GP-9-4-14-15-110816	Soil	1.98	364	5.52	< 0.0471	4.14	3.47	3.70	5.44	< 0.169	< 0.0753	15.2	< 4.8 E-3	< 4.8 E-3	< 9.6 E-3	< 4.8 E-3	< 4.8 E-3	< 9.6 E-3
GP-9	Boring 5	2-3	11/9/2016	GP-9-5-2-3-110916	Soil	2.37	307	5.82	< 0.0472	6.20	4.91	5.20	7.10	< 0.170	< 0.0756	18.6	< 5.0 E-3	< 5.0 E-3	< 10 E-3	< 5.0 E-3	< 5.0 E-3	< 10 E-3
GP-9	Boring 5	7-8	11/9/2016	GP-9-5-7-8-110916	Soil	2.23	213	6.46	< 0.0469	5.36	4.56	4.47	6.23	< 0.169	< 0.0751	16.9	< 5.0 E-3	< 5.0 E-3	< 9.9 E-3	< 5.0 E-3	< 5.0 E-3	< 9.9 E-3
GP-9	Boring 5	10-11	11/9/2016	GP-9-5-10-11-110916	Soil	2.61	425	7.96	< 0.0471	4.99	5.11	4.29	6.17	< 0.169	< 0.0753	16.2	< 4.8 E-3	< 4.8 E-3	< 9.6 E-3	< 4.8 E-3	< 4.8 E-3	< 9.6 E-3
GP-9	Boring 6	2-3	11/9/2016	GP-9-6-2-3-110916	Soil	2.39	136	4.81	< 0.0486	6.59	5.10	6.00	7.48	< 0.175	< 0.0777	19.3	< 4.8 E-3	< 4.8 E-3	< 9.5 E-3	< 4.8 E-3	< 4.8 E-3	< 9.5 E-3
GP-9	Boring 6	5-6	11/9/2016	GP-9-6-5-6-110916	Soil	1.90	116	7.77	< 0.0463	9.28	5.70	4.44	4.99	< 0.167	< 0.0742	29.3	< 5.0 E-3	< 5.0 E-3	< 9.9 E-3	< 5.0 E-3	< 5.0 E-3	< 9.9 E-3
GP-9	Boring 6	13-14	11/9/2016	GP-9-6-13-14-110916	Soil	3.52	290	5.17	< 0.0459	2.40	3.40	3.50	2.92	< 0.165	< 0.0735	8.31	< 5.0 E-3	< 5.0 E-3	< 10 E-3	< 5.0 E-3	< 5.0 E-3	< 10 E-3
GP-9	Boring 7	2-3	11/9/2016	GP-9-7-2-3-110916	Soil	2.31	142	3.19	< 0.0476	6.55	5.00	5.43	7.16	< 0.171	< 0.0761	19.1	< 5.0 E-3	< 5.0 E-3	< 10 E-3	< 5.0 E-3	< 5.0 E-3	< 10 E-3
GP-9	Boring 7	7-8	11/9/2016	GP-9-7-7-8-110916	Soil	3.11	100	10.4	< 0.0477	10.7	8.95	5.75	6.76	< 0.172	< 0.0764	28.3	< 5.0 E-3	< 5.0 E-3	< 10 E-3	< 5.0 E-3	< 5.0 E-3	< 10 E-3
GP-9	Boring 7	12-13	11/9/2016	GP-9-7-12-13-110916	Soil	1.78	524	4.13	< 0.0475	3.18	2.97	2.47	3.85	< 0.171	< 0.0760	9.33	< 4.8 E-3	< 4.8 E-3	< 9.7 E-3	< 4.8 E-3	< 4.8 E-3	< 9.7 E-3
GP-9	Boring 8	2-3	11/9/2016	GP-9-8-2-3-110916	Soil	2.77	144	< 6.80	< 0.0486	4.95	3.86	4.47	5.73	< 0.175	< 0.0778	23.1	< 4.9 E-3	< 4.9 E-3	< 9.8 E-3	< 4.9 E-3	< 4.9 E-3	< 9.8 E-3
GP-9	Boring 8	11-12	11/9/2016	GP-9-8-11-12-110916	Soil	2.03	219	< 6.39	< 0.0457	4.92	3.30	4.14	6.20	< 0.164	< 0.0731	14.2	< 5.0 E-3	< 5.0 E-3	< 10 E-3	< 5.0 E-3	< 5.0 E-3	< 10 E-3
GP-9	Boring 8	14-15	11/9/2016	GP-9-8-14-15-110916	Soil	2.07	298	< 6.47	< 0.0462	5.01	3.61	3.85	5.48	< 0.166	< 0.0740	14.0	< 5.0 E-3	< 5.0 E-3	< 9.9 E-3	< 5.0 E-3	< 5.0 E-3	< 9.9 E-3

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.

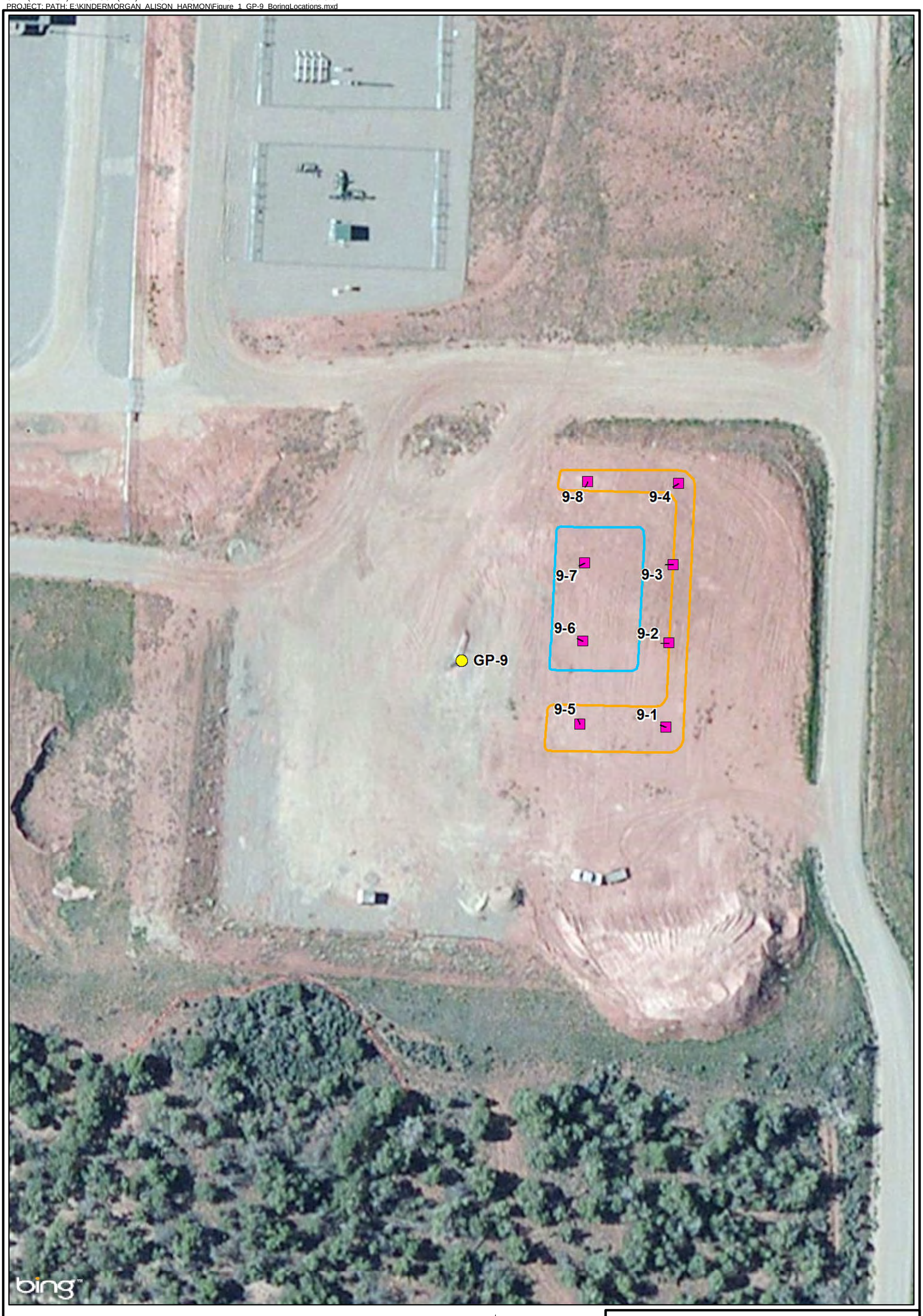
Table 1 - Soil Analytical Results for Samples Collected at McElmo Dome Site GP-9
Kinder Morgan CO2 Company LP

						Soluble Cations for SAR			Chromium		EC (mmhos/cm@25C)	TPH		Mercury	pH Units	SAR
Site	Sample Location	Depth (ft bgs)	Date Collected	Sample ID	Matrix	Calcium	Magnesium	Sodium	Cr(III)	Cr(VI)	EC@sat	GRO	DRO	Mercury	pH	SAR
			Table 910-1 Screening Level			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-9	Boring 1	2-3	11/8/2016	GP-9-1-2-3-110816	Soil	54.4	13.2	30.8	7.23	< 0.298	1.01	< 0.0099	1.8	0.0140	8.76	0.972
GP-9	Boring 1	6-7	11/8/2016	GP-9-1-6-7-110816	Soil	82.0	12.9	56.9	6.24	< 0.300	0.745	< 0.0099	< 0.50	0.00732	9.17	1.54
GP-9	Boring 1	9-10	11/8/2016	GP-9-1-9-10-110816	Soil	45.9	6.07	76.2	< 0.700	< 0.299	1.37	< 0.0099	< 0.50	0.00978	8.95	2.81
GP-9	Boring 2	0-1	11/8/2016	GP-9-2-0-1-110816	Soil	98.9	22.5	35.8	7.63	< 0.300	1.84	< 0.0099	< 0.50	0.0129	8.41	0.845
GP-9	Boring 2	5-6	11/8/2016	GP-9-2-5-6-110816	Soil	77.8	18.0	10.5	7.67	< 0.297	1.21	< 0.0099	< 0.50	0.0145	8.45	0.279
GP-9	Boring 2	9-10	11/8/2016	GP-9-2-9-10-110816	Soil	264	51.1	139	6.57	< 0.299	7.10	< 0.010	< 0.50	0.00470	8.19	2.05
GP-9	Boring 3	2-3	11/8/2016	GP-9-3-2-3-110816	Soil	67.8	13.2	26.8	7.32	< 0.299	1.11	< 0.010	1.8	0.0128	8.78	0.780
GP-9	Boring 3	3-4	11/8/2016	GP-9-3-3-4-110816	Soil	84.5	15.9	215	7.63	< 0.300	3.70	< 0.010	< 0.50	0.0116	8.41	5.63
GP-9	Boring 3	12-13	11/8/2016	GP-9-3-12-13-110816	Soil	350	61.8	196	< 0.700	< 0.299	7.14	< 0.010	< 0.50	0.00946	8.19	2.54
GP-9	Boring 4	2-3	11/8/2016	GP-9-4-2-3-110816	Soil	154	15.4	525	7.02	< 0.296	7.72	< 0.0099	49	0.0117	9.86	10.8
GP-9	Boring 4	6-7	11/8/2016	GP-9-4-6-7-110816	Soil	1770	< 5.00	14000	9.17	< 0.300	142	0.73	1000	0.00986	11.5	91.6
GP-9	Boring 4	14-15	11/8/2016	GP-9-4-14-15-110816	Soil	182	22.0	266	< 0.700	< 0.298	5.21	< 0.0099	8.8	0.0695	8.65	4.96
GP-9	Boring 5	2-3	11/9/2016	GP-9-5-2-3-110916	Soil	52.9	15.2	51.6	6.20	< 0.297	1.28	< 0.010	< 0.50	0.00813	8.77	1.61
GP-9	Boring 5	7-8	11/9/2016	GP-9-5-7-8-110916	Soil	36.4	11.5	52.1	5.36	< 0.298	0.987	< 0.010	< 0.50	0.00635	8.67	1.93
GP-9	Boring 5	10-11	11/9/2016	GP-9-5-10-11-110916	Soil	38.3	6.93	67.3	< 0.700	< 0.299	1.21	< 0.010	< 0.50	< 0.000494	8.92	2.63
GP-9	Boring 6	2-3	11/9/2016	GP-9-6-2-3-110916	Soil	54.8	13.0	96.8	6.59	< 0.299	1.64	< 0.010	< 0.50	0.0190	8.45	3.05
GP-9	Boring 6	5-6	11/9/2016	GP-9-6-5-6-110916	Soil	1070	< 5.00	1670	9.28	< 0.299	20.3	0.18	33	0.00417	11.4	14.1
GP-9	Boring 6	13-14	11/9/2016	GP-9-6-13-14-110916	Soil	33.7	10.2	114	< 0.700	< 0.300	1.85	< 0.010	< 0.50	0.00673	8.99	4.42
GP-9	Boring 7	2-3	11/9/2016	GP-9-7-2-3-110916	Soil	63.8	13.2	116	6.55	< 0.295	1.95	< 0.010	2.4	0.0145	8.46	3.45
GP-9	Boring 7	7-8	11/9/2016	GP-9-7-7-8-110916	Soil	510	6.46	1570	10.7	< 0.298	15.9	0.46	600	0.0137	11.8	18.9
GP-9	Boring 7	12-13	11/9/2016	GP-9-7-12-13-110916	Soil	72.9	10.1	74.3	< 0.700	< 0.295	1.41	< 0.0099	< 0.50	0.00733	9.01	2.16
GP-9	Boring 8	2-3	11/9/2016	GP-9-8-2-3-110916	Soil	698	< 5.00	318	< 0.700	< 0.300	9.33	< 0.0099	1.9	0.0134	10.3	3.31
GP-9	Boring 8	11-12	11/9/2016	GP-9-8-11-12-110916	Soil	528	50.8	1930	< 0.700	< 0.300	30.8	0.12	11	0.0146	8.28	21.5
GP-9	Boring 8	14-15	11/9/2016	GP-9-8-14-15-110916	Soil	1200	191	850	5.01	< 0.299	25.7	< 0.010	< 0.50	0.00582	8.10	6.01

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

CITY: (DENTECH) DIV/GROUP:(ENV) DB:KGPETERS LD: PIC: PM: TM: DATE: 12/7/2016
PROJECT: PATH: E:\KINDERMORGAN_ALISON_HARMON\Figure_1_GP-9_BoringLocations.mxd



LEGEND

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

0 60 120

SCALE IN FEET

KINDER MORGAN
CORTEZ, CO

GP-9 SITE FEATURES

ARCADIS

FIGURE
1

ATTACHMENT A

Form 27 Application

FORM 27 Rev 6/99

State of Colorado
Oil and Gas Conservation Commission

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

RECEIVED
MAY 05 2016
COGCC

FOR COGCC USE ONLY
OGCC Employee:
☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV
Tracking No:

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 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: 05-083-06633 County: Montezuma
Facility Name: N/A Facility Number: N/A
Well Name: Goodman Point (GP-9) Well Number: 9
Location: (QtrQtr, Sec, Twp, Rng, Meridian): NE 1/4 SE 1/4, Sec. 2, T36N, R18W Latitude: 37.40433 N Longitude: 108.79158 W

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Potential for CO2 well drill cuttings exceding 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.): 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):	Extent of Impact:	How Determined:
☑ Soils	Not yet determined	See attached assessment scope
☐ Vegetation		
☐ Groundwater		
☐ Surface Water		

REMEDIATION 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.

Submit Page 2 with Page 1

FORM 27 Rev 6/99

Page 2

State of Colorado
Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801, Denver, Colorado 80203
(303)894-2100 Fax:(303)894-2109

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

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 facilitiy 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: _____ Title: Environmental Protection Specialist Date: 5/18/16

See COAs

KINDER MORGAN
CO_2 COMPANY, L.P.

General Scope of Work for Goodman Point (GP-9)

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

<u>Soil Boring Program:</u>

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.

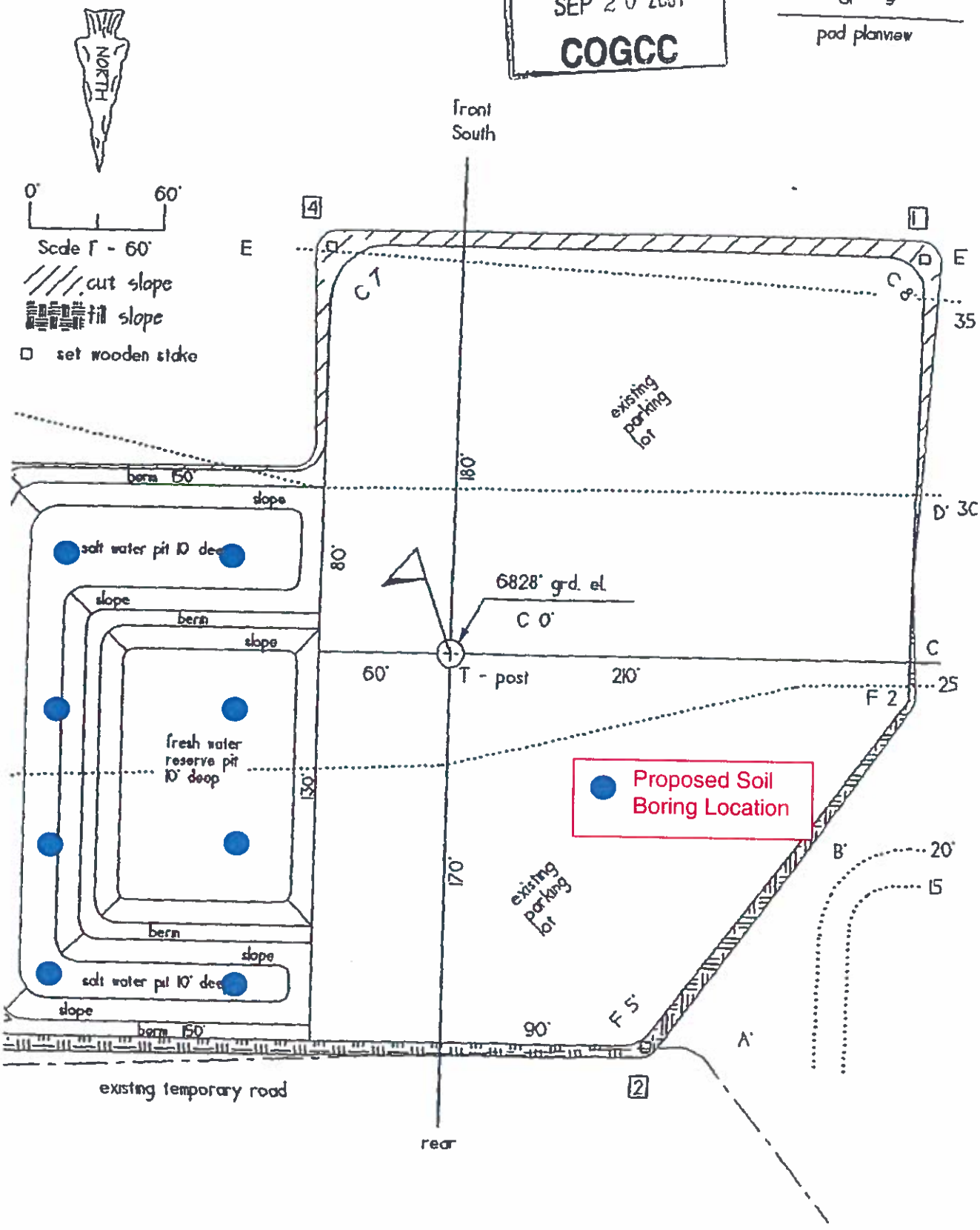
Summary Report:

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 20 2007
COGCC

GP - 9

pad planview



Remediation Project Number: 9xxx (Document #200439xxx) **Location ID: 313609**

Kinder Morgan CO_2 Co., NESE Section 2, 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 CO_2 Co., NESE Section 2, T36N, R18W, N PM, Montezuma County, Colorado, Form 27 Conditions of Approval (COAs)

ATTACHMENT B

Boring Logs

ARCADIS

EXPLORATORY BORING LOG

project no: CO002255.0001 | date: 11 - 8 -16 | boring number: GP9-1
client: Km
location: Cortez, CO
logged by: B. Draeger
driller/helper: Kyvek
page 1 of 1

field location of boring:
N: 774780.35ft
E: -8646635.29ft
6763.7ft
ground elevation: | datum: NAD1983

drilling method: Hollow Stem Auger
hole diameter:
casing diameter:
well completion data:

boring/well construction	headspace: gastech (PID) FID ppm	sample number (Conductivity)	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level / time / date	
	1.1	0.18	5				Clayey silt w/ f. sand, dry, mod hard, crumbly	
			6	1			non plastic, v. poorly graded brownish red	
	1.6	0.14	7			ML		
			11	2				
	2.2	1.23	8		①		Increase in hardness; some whitish staining	1330
			11	3				
	10.0	0.10	19				Same as above but very dry and not cohesive all	
			21	4		ML	all, light brown	
	3.5	0.10	8					
			20	5			Two units from above marbled together	
	10.5	0.11	28					
			27	6				
	10.2	0.19	21		②	ML		1400
			50; 5"	7				
	9.9	1.10	14				Primarily only unit seen at 3'; v. dry and crumbly	
			50; 5"	8				
	9.3	0.18	6					
			18	9				
	1.7	0.08	40; 4"		③	ML	Sandy silt, v.f. sand, dry, v. crumbly, mod	1430
				10			soft, v poorly graded, non plastic, light tan	
				11			End boring due to refusal	
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				

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

ARCADIS

EXPLORATORY BORING LOG

project no: COOO2255.0001 date: 11 - 8 -16 boring number: GP-9-2 ~~GP-9-3~~

client: KM

location: Cortez, CO

logged by: B. Draeger

driller/helper: Kyvek

page 1 of 1

field location of boring:
N: 774831.28ft
E: -8646612.38ft
6764.12ft

ground elevation: Conductivity datum: NAD1983

drilling method:
hole diameter:
casing diameter:
well completion data:

boring/well construction	headspace: gastech(PID) FID ppm	~~sample number~~ Conductivity	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level / time / date	
	~~10.2~~	~~0.14~~	8					
	9.9	0.1	8	1	①	ML	Clayey Silt w/ some fine sand, dry, v. hard and brittle, non plastic, v. poorly graded, reddish brown	1440
	~~10.8~~	~~0.16~~	9					
	1.7	0.03	9	2		ML	Increase in sand grain size to med w/ some coarse, some light brown staining	
	~~11.1~~	~~0.16~~	8				Returns to 0'-1' unit	
	1.1	0.06	8	3				
	~~11.0~~	~~0.26~~	18					
	1.8	0.13	10	4		ML		
	~~10.9~~	~~0.21~~	7				Some thin lines of whitish staining	
	2.1	0.08	14	5				
	~~0.8~~	~~0.05~~	21					
	10.3	0.38	20	6	②			1450
	~~1.7~~	~~0.05~~	16					
	10.3	0.25	35	7			Clayey silt w/ some v. fine sand, v. dry, brittle, and crumbly, v. poorly graded, reddish brown and light brown marbled together	
	~~10.0~~	~~0.08~~	50; 5"					
	10.1	0.30	20	8				
	~~10.6~~	~~0.07~~	50; 5"					
	9.7	0.11	22	9				
	~~9.8~~	~~0.22~~	50; 5"					
	10.2	0.17	30/50; 3"	10	③			1500
	~~2.8~~	~~0.03~~	~~50; 5"~~				End Boring due to refusal	
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				

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

ARCADIS

EXPLORATORY BORING LOG

project no: CO 002255.0001 | date: 11 - 8 - 16 | boring number: GP9-3 ~~GP9-3/2-3~~

client: km

location: Cortez, CO

logged by: B. Draeger

driller/helper: Kyrex

page 1 of 1

field location of boring:
N: 7748 76.38ft
E: -8646594.67ft
6763.60ft

ground elevation: | datum: NAD 1983

drilling method: Hollow Stem Auger
hole diameter:
casing diameter:
well completion data:

Conductivity

boring/well construction	headspace: gastech/PID/FID ppm	~~sample number~~	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level / time / date	
	10.9	0.14	5				Clayey silt w/ some f, and trace C. Sand, dry, hard, brittle, v. poorly graded, reddish brown	
			10	1				
	10.8	0.15	10			ML		
			10	2				
	11.1	0.15	10		①			1530
			14	3		SP/Base	6" layer of fine sand mixed w/ small sandstone pieces,	
	11.0	0.25	18		②		loose, dry, poorly graded	1540
			12	4			Clayey Silt, ~~dry~~, v. hard, cohesive/slightly sticky,	
	10.9	0.21	6				v. poorly graded, dry to slightly damp, dark	
			10	5			reddish brown	
	0.8	0.05	12			ML		
		~~0.05~~ 0.05	10	6				
	1.7	~~0.08~~ 0.08	7					
			14	7				
	10.0	0.08	19					
			19	8			Some thin veins of whitish staining; slightly crumbly	
	10.6	~~0.32~~ 0.07	11					
			29	9			Clayey Silt, v. dry, brittle, and crumbly, non	
	9.2	0.22	41				cohesive/plastic, v. poorly graded, light brown	
			33	10				
	2.8	0.03	8				Slight increase in clay/decrease in crumbly	
			15	11			texture	
	10.1	0.52	12				Continued characteristics of unit ~~at~~ at 9'	
			24	12				
	10.4	0.31	13		③			1600
			10/22; 2"	13				
	—	—	~~22/2"~~ 29				No Rec	
			50; 5"	14				
							End Boring due to refusal	
				15				
				16				
				17				
				18				
				19				
				20				

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

ARCADIS

EXPLORATORY BORING LOG

project no: CO002255.0001 | date: 11 - 9 - 16 | boring number: GP-9-4

client: KM

location: Cortez, CO

logged by: B. Draeger

driller/helper: Kyvek

page 1 of 1

field location of boring:
N: 7749 30.06ft E: -8646572.76ft
E: 6765.12 ft

ground elevation: | datum: NAD1983

drilling method: Hollow Stem Auger
hole diameter:
casing diameter:
well completion data:

boring/well construction	headspace: gastech/PID FID ppm	sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level / time / date	
	0.7	0.04	6					TopSoil
			7	1				Clayey silt w/ ~~sand~~, f. sand, dry, mod soft, non
	0.6	0.19	8					plastic, slightly cohesive, poorly graded, reddish
			7	2				brown
	0.8	0.47	5		①			3/4" layer of Sandy silt, dry, crumbly, mod graded, 0740
			20	3				f. sand w/ some gravel, tan to light brown
	37.6	1.92	27					Same as 0'-1'6" but increased clay and
			18	4				cohesiveness/ hardness
	23.2	7.06	17					Contaminated Soil
			12	5				loose, dry, silty sand, crumbly, poorly graded,
	19.7	0.74	20					black w/ white halite
			34	6				At 4', 4" layer of silty clay, damp, hard/ cohesive,
	86.5	2.59	14		②			v. poorly graded, black and reddish brown 0750
			35	7				Contaminated soil seen at 3'
	54.9	0.53	40					
			23	8				
	47.3	3.33	5					At 8', Contammated soil begins to be mixed
			9	9				w/ cohesive, hard, damp clay seen at 4'
	4.7	2.28	18					Becomes soft and Sticky at base of 8'
			15	10				Transitions ~~to~~ fully to ~~silty, sandy clay~~ silty
	21.3	0.64	6					cohesive clay, hard cohesive, v. poorly graded,
			12	11				dry to slightly damp, reddish brown
	3.0	0.53	21					Some pockets of dry, crumbly clay
			21	12				Transitions to dry, crumbly, sandy, clayey silt,
	2.5	0.20	5					hard, f. sand, poorly graded, light reddish brown
			23	13				
	2.0	0.19	20					Becomes more crumbly w/ depth and color
			41	14				change to light brown/ tan
	5.5	0.27	12		③			0830
			25	15				Slight increase in clay content/ cohesiveness
								End boring
				16				
				17				
				18				
				19				
				20				

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

ARCADIS

EXPLORATORY BORING LOG

project no: CO002255.0001 | date: 11-9-16 | boring number: GP-9-5

client: KM

location: Cortez, CO

logged by: B. Draeger

driller/helper: Kyvek

page 1 of 1

field location of boring:
N: 774809.27ft
E: -86466688.54ft

drilling method: Hollow Stem Auger
hole diameter:
casing diameter:
well completion data:

ground elevation: 6763.23ft datum: NAD 1983

boring/well construction	headspace: gastech/PID FID ppm	sample number (Conductivity)	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level / time / date	
	4.2	0.2	6					Top Soil
			8	1				Clay, v. hard, cemented, dry to damp, v. poorly graded, non plastic, reddish brown
	6.6	0.22	12					
			9	2				
	7.4	0.14	4		①			Clayey silt w/ fine sand, damp, poorly graded, low plasticity, soft, reddish brown 1100
			6	3				
	7.6	0.24	4					
			4	4				
	7.8	1.1	3					
			4	5				
	9.4	0.14	3					
			4	6				
	8.1	0.21	3					
			3	7				
	11.0	0.13	3		②			1130
			8	8	-			SAA but dry, crumbly, and light brown
	2.7	0.05	3					
			10	9				
	1.5	0.03	27					
			32	10				
	4.6	0.03	18		③			1150
			39/50;3"	11				Sandstone at base
								End boring due to refusal
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				

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

ARCADIS

EXPLORATORY BORING LOG

project no: COOO2255.0001 | date: 11 - 9 - 16 | boring number: GP-9-6
client: KM
location: Cortez, CO
logged by: B. Draeger
driller/helper: Kyrek
page 1 of 1

field location of boring:
N: 774856.19ft
E: -8646666.97ft
6764.27ft
ground elevation: Conductivity datum: NAD 1983

drilling method: Hollow Stem Auger
hole diameter:
casing diameter:
well completion data:

boring/well construction	headspace: gastech/(PID) FID ppm	sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level / time / date	
	10.9	0.12	6				Top Soil	
			10	1			Clay, v. hard and dry, non plastic, v. poorly graded, well cemented, reddish brown	
	11.2	0.13	12			CL		
			~~6~~ 8	2				
	11.7	0.43	6		①			1020
			7	3				
	47.6	0.40	12					
			16	4		SP/CL	Contaminated Soil mixed w/ above unit, 4" layer of sand cemented w/ halite and clay, hard, dry, mod ~~sorting~~ graded, med sand, white, gray, and black	
	46.8	0.21	8					
			12	5				
	89.9	0.31	15		②	CL	Returns to clay but w/ silt, slightly damp and softer,	1040
			10	6				
	30.3	0.13	6			SP/mL	At 5.5', 2" layer of contaminated soil, much more fine grained, halite not visible, f. sand and silt, hard, dry, gray	
			8	7				
	32.3	0.07	14					
			14	8			Same clay as 4'10" but damp and sticky	
	18.1	0.30	5				Some pockets of soil similar to 5.5' seen	
			8	9		CL w/ sp/mL		
	29.7	0.32	11				At 9', liner (folded/ ~~doubled~~ over) seen w/in core	
			10	10				
	32.4	0.24	8					
			2	11		CL	Pockets of grey soil decrease w/ depth, moisture content and stickiness increase	
	9.5	0.18	3					
			33	12			Abrupt transition to sandy (f.) silt, v. dry and crumbly, poorly graded, light brown	
	9.3	0.19	20			mL		
			50; 5"	13				
	5.6	0.02	33		③		Sandstone pieces mixed with C. Sand, dry, loose,	1050
			39	14		SP/Base rock	poorly graded, yellowish brown	
							End Boring due to refusal	
				15				
				16				
				17				
				18				
				19				
				20				

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

ARCADIS

EXPLORATORY BORING LOG

project no: COOO2255.0001 date: 11 - 9 - 16 boring number:
client: KM
location: Cortez, CO GP-9-7
logged by: B. Draeger
driller/helper: Kyvec
page 1 of 1

field location of boring:
N: 6774908.03ft
E: -8646646.27ft
6763.98ft
ground elevation: Conductivity datum: NAD 1983

~~drilling method~~: ~~Coordinates~~ Hollow Stem Auger
~~hole diameter~~:
~~casing diameter~~:
well completion data:

boring/well construction	headspace: gastech/PID/FID ppm	~~sample number~~	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level / time / date	
	8.5	0.10	11					Top Soil
			14	1				Sandy silt, f. Sand, some gravel, v. hard and dry,
	9.7	0.07	11					brittle, non plastic, poor to mod grading, reddish
			12	2				brown, roots
	16.1	0.07	8		(1)			0950
			16	3				
	134.1	0.11	24					
			21	4				
	126.6	0.29	8					At 4', 4" of contaminated sand cemented w/ clay
			16	5				and halite mix, dry, hard, mod grading, white and gray/black
	85.4	0.09	18					Sandy silt, hard, some areas cohesive w/ mod
			35	6				plasticity, others non cohesive/crumbly/non plastic,
	223.4	0.14	12					med to c. Sand, poor to mod grading, gray mixed
			29	7				w/ reddish brown
	235.9	0.34	40		(2)			Returns to contaminated soil seen at 4' 1015
			30	8				Contaminated soil becomes well mixed w/
	4.0	0.20	12					cohesive, v. poorly graded, damp, low plasticity clay
			30	9				Clayey silt w/ some f. sand, dry to slightly damp,
	9.2	0.13	36					mod soft, non plastic, low to moderately cohesive,
			39	10				~~hard~~ poorly graded, light brown
	2.8	0.8	12					Decrease in cohesiveness, dry
			30	11				
	15.2	0.7	50					
			—	12				Sandy Silt, v.f. to f. sand, dry, crumbly, non plastic,
	14.7	0.8	45/15;1"		(3)			poorly graded, ~~hard~~ mod hard, light brown 1030
				13				
								End boring due to refusal
				14				
				15				
				16				
				17				
				18				
				19				
				20				

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

ARCADIS

EXPLORATORY BORING LOG

project no: CO002255.0001 | date: 11 - 9 - 16 | boring number: GP-9-8

client: KM

location: Cortez, CO

logged by: B. Draeger

driller/helper: Kyrek

page 1 of 1

field location of boring:
N: ~~6774908.03ft~~ 774959.86ft
E: -864666 26.68ft

drilling method: Hollow Stem Auger
hole diameter:
casing diameter:
well completion data:

6763.70ft
ground elevation:

Conductivity

datum: NAD 1983

boring/well construction	headspace: gastech/PID/FID ppm	~~sample number~~	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level / time / date	
	0.8	0.13	3					Top Soil
			7	1				Sandy clayey silt, f. sand, trace small gravel,
	0.7	0.06	8					dry, med soft, non plastic, slightly cohesive,
			5	2				poorly graded, light reddish brown
	2.8	0.17	8		①			0900
			33	3				
	5.1	0.33	50					Contaminated sal, dry, hard but brittle, high
			—	4				salt content
	4.6	0.84	12					Sand cemented together by clay/salt mix, med
			6	5				to coarse sand, mod grading, white and gray/black
	18.8	1.92	5					
			9	6				Clay, damp to moist, high plasticity, v. poorly
	14.9	0.45	5					graded, v. soft, dark brown
			8	7				Silty clay, damp, non plastic, low cohesiveness,
	30.9	1.73	12					mod hard, poorly graded, reddish brown
			10	8				
	10.5	0.93	6					Clay content increases w/ depth (as does
			11	9				hardness and cohesiveness
	4.0	0.50	17					
			13	10				
	25.2	1.09	6					Silty clay, dry, hard, brittle/crumbly, v.
			20	11				poorly graded, non plastic/cohesive, light brown
	35.2	1.10	30		②			0930
			35	12				
	7.2	1.47	12					
			28	13				
	5.9	1.02	31					
			30	14				
	7.6	1.94	12		③			
			20	15				0950
								End Boring
				16				
				17				
				18				
				19				
				20				

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:
11/8/16

Description:
Looking east

Location:
GP-9

Photo: 2

Date:
11/8/16

Description:
Looking north

Location:
GP-9

Project Photographs

McElmo Dome
Cortez, Colorado

Photo: 3

Date:
11/8/16

Description:
Looking south

Location:
GP-9

Photo: 4

Date:
11/8/16

Description:
Looking west

Location:
GP-9

ATTACHMENT D

Field Notes

ARCADIS Design & Consultancy for natural and built assets

DAILY LOG

Project No.: COO2255.0001 Page 1 of

Site Location: Cortez, CO

Prepared By: B. Drageger

Date	Time	Description of Activities
11/8/16	0720	Arrive on site ; tailgate
	1200	Arrive back at field office to decon
		~~demob~~ mob to GP9 site.
	1315	Arrive at GP9 ; start set up on GP9-1
	1430	Completed GP9-1 (only to 10' due to refusal ; no contaminated soil)
		moved to GP9-2
	1515	Completed GP9-2 ; ~~began break down~~ As we still have not seen any evidence
		of contamination, we are continuing to an additional location
	1530	Started at GP9-3
	1615	Completed GP9-3 ; hit refusal at 14', no evidence of contamination
	1630	Clean up and off site
	1700	Arrived back at warehouse to pack soil samples
	2200	Depart warehouse
	2230	Purchase additional field supplies

ARCADIS Design & Consultancy for natural and built assets

DAILY LOG

Project No.: CO002255.0001 Page 1 of

Site Location: Cortez, CO

Prepared By: B. Draeger

Date	Time	Description of Activities
11/9/16	0700	Arrive on site
	0730	Tailgate; start at GP9-4
	0830	Complete GP-9-4; contaminated soil seen from ~3' to 9'
		Some black liner seen around 3' but it was not the heavy-duty liner seen at previous locations. Jimmy indicated that it was likely a liner used to cover the tops of the pits
	0920	Completed GP-9-8; contamination seen from ~3' to 5.5'
		No liner seen
		Moved to GP-9-7
	1015	Refusal at 13'; completed boring location
		4" layer of contaminated soil was seen at 4' and was then again seen from ~6' to 8'
		no liner seen
		Moved to GP9-6 ← completed GP9-6; moved to GP-9-5 (11:00 - 11:50)
	1150	Hit refusal at 11'; Contamination not seen at this location
		GP-9 concluded
		Drillers began break down and mobed back to warehouse to decon. Compressor was able to be ordered so drillers ~~went to~~ will go pick it up and we will resume drilling w/ the 50 ft location at DC-5 tomorrow
		Arcadis remains at GP-9 to collect PID readings of samples
	1545	Completed PID readings and collected GPS coords + site pictures
		mobed to warehouse
	2030	Completed packing samples; demob

ATTACHMENT E

Laboratory Analytical Reports

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

November 29, 2016

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

Work Order: **HS16110618**

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

Dear Aaron,

ALS Environmental received 27 sample(s) on Nov 11, 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,

Generated By: Jumoke.Lawal
Sonia West
Project Manager

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16110618

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS16110618-01	GP-9-1-2-3-110816	Soil		08-Nov-2016 13:30	11-Nov-2016 08:35	
HS16110618-02	GP-9-1-6-7-110816	Soil		08-Nov-2016 14:00	11-Nov-2016 08:35	
HS16110618-03	GP-9-1-9-10-110816	Soil		08-Nov-2016 14:30	11-Nov-2016 08:35	
HS16110618-04	GP-9-2-0-1-110816	Soil		08-Nov-2016 14:40	11-Nov-2016 08:35	
HS16110618-05	GP-9-2-5-6-110816	Soil		08-Nov-2016 14:50	11-Nov-2016 08:35	
HS16110618-06	GP-9-2-9-10-110816	Soil		08-Nov-2016 15:00	11-Nov-2016 08:35	
HS16110618-07	GP-9-3-2-3-110816	Soil		08-Nov-2016 15:30	11-Nov-2016 08:35	
HS16110618-08	GP-9-3-3-4-110816	Soil		08-Nov-2016 15:40	11-Nov-2016 08:35	
HS16110618-09	Trip Blank - 100716-54	Water		08-Nov-2016 00:00	11-Nov-2016 08:35	
HS16110618-10	GP-9-3-12-13-110816	Soil		08-Nov-2016 16:00	11-Nov-2016 08:35	
HS16110618-11	GP-9-4-2-3-110816	Soil		08-Nov-2016 07:40	11-Nov-2016 08:35	
HS16110618-12	GP-9-4-6-7-110816	Soil		08-Nov-2016 07:50	11-Nov-2016 08:35	
HS16110618-13	GP-9-4-14-15-110816	Soil		08-Nov-2016 08:30	11-Nov-2016 08:35	
HS16110618-14	GP-9-5-2-3-110916	Soil		09-Nov-2016 11:00	11-Nov-2016 08:35	
HS16110618-15	GP-9-5-7-8-110916	Soil		09-Nov-2016 11:30	11-Nov-2016 08:35	
HS16110618-16	GP-9-5-10-11-110916	Soil		09-Nov-2016 11:50	11-Nov-2016 08:35	
HS16110618-17	GP-9-6-2-3-110916	Soil		09-Nov-2016 10:30	11-Nov-2016 08:35	
HS16110618-18	Trip Blank - 100716-70	Water		08-Nov-2016 00:00	11-Nov-2016 08:35	
HS16110618-19	GP-9-6-5-6-110916	Soil		09-Nov-2016 10:40	11-Nov-2016 08:35	
HS16110618-20	GP-9-6-13-14-110916	Soil		09-Nov-2016 10:50	11-Nov-2016 08:35	
HS16110618-21	GP-9-7-2-3-110916	Soil		09-Nov-2016 09:50	11-Nov-2016 08:35	
HS16110618-22	GP-9-7-7-8-110916	Soil		09-Nov-2016 10:15	11-Nov-2016 08:35	
HS16110618-23	GP-9-7-12-13-110916	Soil		09-Nov-2016 10:30	11-Nov-2016 08:35	
HS16110618-24	GP-9-8-2-3-110916	Soil		09-Nov-2016 09:00	11-Nov-2016 08:35	
HS16110618-25	GP-9-8-11-12-110916	Soil		09-Nov-2016 09:30	11-Nov-2016 08:35	
HS16110618-26	GP-9-8-14-15-110916	Soil		09-Nov-2016 09:50	11-Nov-2016 08:35	
HS16110618-27	Trip Blank - 100716-77	Water		09-Nov-2016 00:00	11-Nov-2016 08:35	

Client: Kinder Morgan **CASE NARRATIVE**
Project: McElmo Dome & Doe Canyon
Work Order: HS16110618

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: 109871

Sample ID: **GP-9-4-6-7-110816 (HS16110618-12)**
• Due to sample matrix interferences, the surrogate recovery was outside of the established control limits.

Batch ID: 109913

Sample ID: **GP-9-7-7-8-110916 (HS16110618-22)**
• Due to sample matrix interferences, the surrogate recovery was outside of the established control limits.

Batch ID: 109870

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

GC Volatile Organics by Method SW8015

Batch ID: R284804

Sample ID: **GP-9-2-0-1-110816 (HS16110618-04MS)**
• The MS and/or MSD recovery was below the lower control limit.

GC Volatiles by Method SW8015

Batch ID: R284873

Sample ID: **GP-9-8-14-15-110916 (HS16110618-26MS)**
• The MSD recovery was below the lower control limit for surrogate

Batch ID: R284792

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

GCMS Volatiles by Method SW8260

Batch ID: R284788,R284889

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

Batch ID: R284975

Sample ID: **GP-9-6-13-14-110916 (HS16110618-20MS)**
• MS failed QC limits for compounds.

Sample ID: **GP-9-7-7-8-110916 (HS16110618-22**
Sample ID: **GP-9-8-2-3-110916 (HS16110618-24)**
• Surrogate failure due to sample matrix.

Metals by Method La29B-6020

Batch ID: 110222,110223

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

Client: Kinder Morgan **CASE NARRATIVE**
Project: McElmo Dome & Doe Canyon
Work Order: HS16110618

Metals by Method Calculation

Batch ID: R285616

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

Metals by Method La29B SAR

Batch ID: 110222A,110223A

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

Metals by Method SW6020

Batch ID: 110001

Sample ID: **HS16110784-09MS**
• MS and MSD are for an unrelated sample

Batch ID: 110012

Sample ID: **GP-9-5-10-11-110916 (HS16110618-16MS)**
• 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-9-5-10-11-110916 (HS16110618-16MSD)**
• Copper failed in the MSD but passed in the MS and PDS.

Sample ID: **GP-9-8-11-12-110916 (HS16110618-25)**
Sample ID: **GP-9-8-14-15-110916 (HS16110618-26)**
Sample ID: **GP-9-8-2-3-110916 (HS16110618-24)**
• Sample ran at a 5x due to internal standard 6 (Boron) failure at a 1x.

Metals by Method SW7471A

Batch ID: 110000,110051

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

WetChemistry by Method LaDNR-29B EC

Batch ID: R285629,R285630

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

WetChemistry by Method SW9045B

Batch ID: R285312,R285535,R285606

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

WetChemistry by Method LaDNR-29B SP

Batch ID: R285621,R285622

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

WetChemistry by Method SW3550

Batch ID: R284958,R284959

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

Client: Kinder Morgan **CASE NARRATIVE**
Project: McElmo Dome & Doe Canyon
Work Order: HS16110618

WetChemistry by Method SW7196

Batch ID: 110108,110111

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

Batch ID: 110170

Sample ID: **HS16110876-11MS**
• The MS recovery was below the lower control limit.

Sample ID: **HS16110876-11MSD**
• The RPD between the MS and MSD was outside of the control limit.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-1-2-3-110816
Collection Date: 08-Nov-2016 13:30

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-01
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	16-Nov-2016 09:53
Ethylbenzene	ND		4.9	ug/Kg	1	16-Nov-2016 09:53
m,p-Xylene	ND		9.8	ug/Kg	1	16-Nov-2016 09:53
o-Xylene	ND		4.9	ug/Kg	1	16-Nov-2016 09:53
Toluene	ND		4.9	ug/Kg	1	16-Nov-2016 09:53
Xylenes, Total	ND		9.8	ug/Kg	1	16-Nov-2016 09:53
Surr: 1,2-Dichloroethane-d4	*105*		*70-128*	*%REC*	*1*	*16-Nov-2016 09:53*
Surr: 4-Bromofluorobenzene	*93.1*		*73-126*	*%REC*	*1*	*16-Nov-2016 09:53*
Surr: Dibromofluoromethane	*111*		*71-128*	*%REC*	*1*	*16-Nov-2016 09:53*
Surr: Toluene-d8	*96.4*		*73-127*	*%REC*	*1*	*16-Nov-2016 09:53*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 00:14
Surr: 4-Bromofluorobenzene	*86.3*		*70-130*	*%REC*	*1*	*15-Nov-2016 00:14*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Nov-2016		Analyst: AAP
TPH (Diesel Range)	**1.8**		**1.7**	**mg/Kg**	1	16-Nov-2016 06:55
Surr: 2-Fluorobiphenyl	*72.6*		*60-135*	*%REC*	*1*	*16-Nov-2016 06:55*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	**7.23**		**5.00**	**mg/Kg**	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**0.972**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**54.4**		**5.00**	**mg/L**	10	28-Nov-2016 17:33
Magnesium	**13.2**		**5.00**	**mg/L**	10	28-Nov-2016 17:33
Sodium	**30.8**		**5.00**	**mg/L**	10	28-Nov-2016 17:33
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.43**		**0.486**	**mg/Kg**	1	18-Nov-2016 19:39
Barium	**113**		**0.486**	**mg/Kg**	1	18-Nov-2016 19:39
Boron	**4.52**		**2.43**	**mg/Kg**	1	18-Nov-2016 19:39
Cadmium	ND		0.486	mg/Kg	1	18-Nov-2016 19:39
Chromium	**7.23**		**0.486**	**mg/Kg**	1	18-Nov-2016 19:39
Copper	**4.70**		**0.194**	**mg/Kg**	1	18-Nov-2016 19:39
Lead	**5.35**		**0.486**	**mg/Kg**	1	18-Nov-2016 19:39
Nickel	**8.23**		**0.486**	**mg/Kg**	1	18-Nov-2016 19:39
Selenium	ND		0.486	mg/Kg	1	18-Nov-2016 19:39
Silver	ND		0.486	mg/Kg	1	18-Nov-2016 19:39
Zinc	**18.6**		**0.486**	**mg/Kg**	1	18-Nov-2016 19:39
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 18-Nov-2016		Analyst: JCJ
Mercury	**14.0**		**3.52**	**ug/Kg**	1	18-Nov-2016 18:01

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-1-2-3-110816
Collection Date: 08-Nov-2016 13:30

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-01
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**1.01**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**0.508**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.505**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.505**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**28.7**		**0.0100**	**wt%**	1	15-Nov-2016 09:53
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		1.98	mg/kg	1	23-Nov-2016 12:45
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.76**	H	**0.100**	**pH Units**	1	22-Nov-2016 14:00
Temp Deg C @pH	**22.6**	H	**0**	**°C**	1	22-Nov-2016 14:00

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-1-6-7-110816
Collection Date: 08-Nov-2016 14:00

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-02
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	16-Nov-2016 10:20
Ethylbenzene	ND		5.1	ug/Kg	1	16-Nov-2016 10:20
m,p-Xylene	ND		10	ug/Kg	1	16-Nov-2016 10:20
o-Xylene	ND		5.1	ug/Kg	1	16-Nov-2016 10:20
Toluene	ND		5.1	ug/Kg	1	16-Nov-2016 10:20
Xylenes, Total	ND		10	ug/Kg	1	16-Nov-2016 10:20
Surr: 1,2-Dichloroethane-d4	*92.0*		*70-128*	*%REC*	*1*	*16-Nov-2016 10:20*
Surr: 4-Bromofluorobenzene	*95.5*		*73-126*	*%REC*	*1*	*16-Nov-2016 10:20*
Surr: Dibromofluoromethane	*101*		*71-128*	*%REC*	*1*	*16-Nov-2016 10:20*
Surr: Toluene-d8	*98.2*		*73-127*	*%REC*	*1*	*16-Nov-2016 10:20*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 02:54
Surr: 4-Bromofluorobenzene	*73.9*		*70-130*	*%REC*	*1*	*15-Nov-2016 02:54*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Nov-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	16-Nov-2016 07:19
Surr: 2-Fluorobiphenyl	*62.4*		*60-135*	*%REC*	*1*	*16-Nov-2016 07:19*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	**6.24**		**5.00**	**mg/Kg**	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**1.54**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**82.0**		**5.00**	**mg/L**	10	28-Nov-2016 17:36
Magnesium	**12.9**		**5.00**	**mg/L**	10	28-Nov-2016 17:36
Sodium	**56.9**		**5.00**	**mg/L**	10	28-Nov-2016 17:36
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.16**		**0.472**	**mg/Kg**	1	18-Nov-2016 19:43
Barium	**149**		**0.472**	**mg/Kg**	1	18-Nov-2016 19:43
Boron	**5.02**		**2.36**	**mg/Kg**	1	18-Nov-2016 19:43
Cadmium	ND		0.472	mg/Kg	1	18-Nov-2016 19:43
Chromium	**6.24**		**0.472**	**mg/Kg**	1	18-Nov-2016 19:43
Copper	**4.49**		**0.189**	**mg/Kg**	1	18-Nov-2016 19:43
Lead	**5.10**		**0.472**	**mg/Kg**	1	18-Nov-2016 19:43
Nickel	**6.85**		**0.472**	**mg/Kg**	1	18-Nov-2016 19:43
Selenium	ND		0.472	mg/Kg	1	18-Nov-2016 19:43
Silver	ND		0.472	mg/Kg	1	18-Nov-2016 19:43
Zinc	**18.9**		**0.472**	**mg/Kg**	1	18-Nov-2016 19:43
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 18-Nov-2016		Analyst: JCJ
Mercury	**7.32**		**3.35**	**ug/Kg**	1	18-Nov-2016 18:03

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-1-6-7-110816
Collection Date: 08-Nov-2016 14:00

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-02
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**0.745**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**0.388**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.521**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.521**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**11.3**		**0.0100**	**wt%**	1	15-Nov-2016 09:53
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		2.00	mg/kg	1	23-Nov-2016 12:45
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**9.17**	H	**0.100**	**pH Units**	1	28-Nov-2016 14:45
Temp Deg C @pH	**22.3**	H	**0**	**°C**	1	28-Nov-2016 14:45

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-1-9-10-110816
Collection Date: 08-Nov-2016 14:30

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-03
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	16-Nov-2016 12:34
Ethylbenzene	ND		5.0	ug/Kg	1	16-Nov-2016 12:34
m,p-Xylene	ND		10	ug/Kg	1	16-Nov-2016 12:34
o-Xylene	ND		5.0	ug/Kg	1	16-Nov-2016 12:34
Toluene	ND		5.0	ug/Kg	1	16-Nov-2016 12:34
Xylenes, Total	ND		10	ug/Kg	1	16-Nov-2016 12:34
Surr: 1,2-Dichloroethane-d4	*101*		*70-128*	*%REC*	*1*	*16-Nov-2016 12:34*
Surr: 4-Bromofluorobenzene	*96.2*		*73-126*	*%REC*	*1*	*16-Nov-2016 12:34*
Surr: Dibromofluoromethane	*92.2*		*71-128*	*%REC*	*1*	*16-Nov-2016 12:34*
Surr: Toluene-d8	*92.8*		*73-127*	*%REC*	*1*	*16-Nov-2016 12:34*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 03:11
Surr: 4-Bromofluorobenzene	*84.9*		*70-130*	*%REC*	*1*	*15-Nov-2016 03:11*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Nov-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	16-Nov-2016 09:22
Surr: 2-Fluorobiphenyl	*63.2*		*60-135*	*%REC*	*1*	*16-Nov-2016 09:22*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	ND		5.00	mg/Kg	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**2.81**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**45.9**		**5.00**	**mg/L**	10	28-Nov-2016 17:41
Magnesium	**6.07**		**5.00**	**mg/L**	10	28-Nov-2016 17:41
Sodium	**76.2**		**5.00**	**mg/L**	10	28-Nov-2016 17:41
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.04**		**0.479**	**mg/Kg**	1	18-Nov-2016 19:48
Barium	**738**		**4.79**	**mg/Kg**	10	21-Nov-2016 13:30
Boron	**3.96**		**2.40**	**mg/Kg**	1	18-Nov-2016 19:48
Cadmium	ND		0.479	mg/Kg	1	18-Nov-2016 19:48
Chromium	**2.78**		**0.479**	**mg/Kg**	1	18-Nov-2016 19:48
Copper	**2.42**		**0.192**	**mg/Kg**	1	18-Nov-2016 19:48
Lead	**1.79**		**0.479**	**mg/Kg**	1	18-Nov-2016 19:48
Nickel	**2.98**		**0.479**	**mg/Kg**	1	18-Nov-2016 19:48
Selenium	ND		0.479	mg/Kg	1	18-Nov-2016 19:48
Silver	ND		0.479	mg/Kg	1	18-Nov-2016 19:48
Zinc	**7.80**		**0.479**	**mg/Kg**	1	18-Nov-2016 19:48
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 18-Nov-2016		Analyst: JCJ
Mercury	**9.78**		**3.46**	**ug/Kg**	1	18-Nov-2016 18:05

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-1-9-10-110816
Collection Date: 08-Nov-2016 14:30

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-03
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**1.37**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**0.567**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.415**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.415**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**35.5**		**0.0100**	**wt%**	1	15-Nov-2016 09:53
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		2.00	mg/kg	1	23-Nov-2016 12:45
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.95**	H	**0.100**	**pH Units**	1	22-Nov-2016 14:00
Temp Deg C @pH	**22.5**	H	**0**	**°C**	1	22-Nov-2016 14:00

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-2-0-1-110816
Collection Date: 08-Nov-2016 14:40

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-04
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	16-Nov-2016 13:01
Ethylbenzene	ND		5.0	ug/Kg	1	16-Nov-2016 13:01
m,p-Xylene	ND		10	ug/Kg	1	16-Nov-2016 13:01
o-Xylene	ND		5.0	ug/Kg	1	16-Nov-2016 13:01
Toluene	ND		5.0	ug/Kg	1	16-Nov-2016 13:01
Xylenes, Total	ND		10	ug/Kg	1	16-Nov-2016 13:01
Surr: 1,2-Dichloroethane-d4	*99.3*		*70-128*	*%REC*	*1*	*16-Nov-2016 13:01*
Surr: 4-Bromofluorobenzene	*95.9*		*73-126*	*%REC*	*1*	*16-Nov-2016 13:01*
Surr: Dibromofluoromethane	*103*		*71-128*	*%REC*	*1*	*16-Nov-2016 13:01*
Surr: Toluene-d8	*97.7*		*73-127*	*%REC*	*1*	*16-Nov-2016 13:01*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 02:06
Surr: 4-Bromofluorobenzene	*80.4*		*70-130*	*%REC*	*1*	*15-Nov-2016 02:06*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Nov-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	16-Nov-2016 09:46
Surr: 2-Fluorobiphenyl	*62.7*		*60-135*	*%REC*	*1*	*16-Nov-2016 09:46*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	**7.63**		**5.00**	**mg/Kg**	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**0.845**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**98.9**		**5.00**	**mg/L**	10	28-Nov-2016 17:44
Magnesium	**22.5**		**5.00**	**mg/L**	10	28-Nov-2016 17:44
Sodium	**35.8**		**5.00**	**mg/L**	10	28-Nov-2016 17:44
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.42**		**0.471**	**mg/Kg**	1	18-Nov-2016 19:52
Barium	**145**		**0.471**	**mg/Kg**	1	18-Nov-2016 19:52
Boron	ND		2.35	mg/Kg	1	18-Nov-2016 19:52
Cadmium	ND		0.471	mg/Kg	1	18-Nov-2016 19:52
Chromium	**7.63**		**0.471**	**mg/Kg**	1	18-Nov-2016 19:52
Copper	**5.75**		**0.188**	**mg/Kg**	1	18-Nov-2016 19:52
Lead	**7.05**		**0.471**	**mg/Kg**	1	18-Nov-2016 19:52
Nickel	**7.18**		**0.471**	**mg/Kg**	1	18-Nov-2016 19:52
Selenium	ND		0.471	mg/Kg	1	18-Nov-2016 19:52
Silver	ND		0.471	mg/Kg	1	18-Nov-2016 19:52
Zinc	**22.2**		**0.471**	**mg/Kg**	1	18-Nov-2016 19:52
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 18-Nov-2016		Analyst: JCJ
Mercury	**12.9**		**3.42**	**ug/Kg**	1	18-Nov-2016 18:06

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-2-0-1-110816
Collection Date: 08-Nov-2016 14:40

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-04
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**1.84**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**0.899**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.490**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.490**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**10.2**		**0.0100**	**wt%**	1	15-Nov-2016 09:53
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		2.00	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.41**	H	**0.100**	**pH Units**	1	22-Nov-2016 14:00
Temp Deg C @pH	**22.5**	H	**0**	**°C**	1	22-Nov-2016 14:00

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-2-5-6-110816
Collection Date: 08-Nov-2016 14:50

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-05
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	16-Nov-2016 13:29
Ethylbenzene	ND		5.1	ug/Kg	1	16-Nov-2016 13:29
m,p-Xylene	ND		10	ug/Kg	1	16-Nov-2016 13:29
o-Xylene	ND		5.1	ug/Kg	1	16-Nov-2016 13:29
Toluene	ND		5.1	ug/Kg	1	16-Nov-2016 13:29
Xylenes, Total	ND		10	ug/Kg	1	16-Nov-2016 13:29
Surr: 1,2-Dichloroethane-d4	*95.9*		*70-128*	*%REC*	*1*	*16-Nov-2016 13:29*
Surr: 4-Bromofluorobenzene	*94.9*		*73-126*	*%REC*	*1*	*16-Nov-2016 13:29*
Surr: Dibromofluoromethane	*101*		*71-128*	*%REC*	*1*	*16-Nov-2016 13:29*
Surr: Toluene-d8	*95.4*		*73-127*	*%REC*	*1*	*16-Nov-2016 13:29*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 03:27
Surr: 4-Bromofluorobenzene	*81.8*		*70-130*	*%REC*	*1*	*15-Nov-2016 03:27*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Nov-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	16-Nov-2016 10:11
Surr: 2-Fluorobiphenyl	*70.5*		*60-135*	*%REC*	*1*	*16-Nov-2016 10:11*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	**7.67**		**5.00**	**mg/Kg**	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**0.279**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**77.8**		**5.00**	**mg/L**	10	28-Nov-2016 17:47
Magnesium	**18.0**		**5.00**	**mg/L**	10	28-Nov-2016 17:47
Sodium	**10.5**		**5.00**	**mg/L**	10	28-Nov-2016 17:47
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.74**		**0.471**	**mg/Kg**	1	18-Nov-2016 19:56
Barium	**151**		**0.471**	**mg/Kg**	1	18-Nov-2016 19:56
Boron	**2.50**		**2.35**	**mg/Kg**	1	18-Nov-2016 19:56
Cadmium	ND		0.471	mg/Kg	1	18-Nov-2016 19:56
Chromium	**7.67**		**0.471**	**mg/Kg**	1	18-Nov-2016 19:56
Copper	**5.76**		**0.188**	**mg/Kg**	1	18-Nov-2016 19:56
Lead	**6.43**		**0.471**	**mg/Kg**	1	18-Nov-2016 19:56
Nickel	**7.52**		**0.471**	**mg/Kg**	1	18-Nov-2016 19:56
Selenium	ND		0.471	mg/Kg	1	18-Nov-2016 19:56
Silver	ND		0.471	mg/Kg	1	18-Nov-2016 19:56
Zinc	**20.9**		**0.471**	**mg/Kg**	1	18-Nov-2016 19:56
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 18-Nov-2016		Analyst: JCJ
Mercury	**14.5**		**3.51**	**ug/Kg**	1	18-Nov-2016 18:08

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-2-5-6-110816
Collection Date: 08-Nov-2016 14:50

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-05
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**1.21**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**0.604**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.499**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.499**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**10.8**		**0.0100**	**wt%**	1	15-Nov-2016 09:53
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		1.98	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.45**	H	**0.100**	**pH Units**	1	22-Nov-2016 14:00
Temp Deg C @pH	**22.5**	H	**0**	**°C**	1	22-Nov-2016 14:00

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-2-9-10-110816
Collection Date: 08-Nov-2016 15:00

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-06
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	16-Nov-2016 13:56
Ethylbenzene	ND		5.1	ug/Kg	1	16-Nov-2016 13:56
m,p-Xylene	ND		10	ug/Kg	1	16-Nov-2016 13:56
o-Xylene	ND		5.1	ug/Kg	1	16-Nov-2016 13:56
Toluene	ND		5.1	ug/Kg	1	16-Nov-2016 13:56
Xylenes, Total	ND		10	ug/Kg	1	16-Nov-2016 13:56
Surr: 1,2-Dichloroethane-d4	*106*		*70-128*	*%REC*	*1*	*16-Nov-2016 13:56*
Surr: 4-Bromofluorobenzene	*92.4*		*73-126*	*%REC*	*1*	*16-Nov-2016 13:56*
Surr: Dibromofluoromethane	*110*		*71-128*	*%REC*	*1*	*16-Nov-2016 13:56*
Surr: Toluene-d8	*92.8*		*73-127*	*%REC*	*1*	*16-Nov-2016 13:56*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 03:43
Surr: 4-Bromofluorobenzene	*85.5*		*70-130*	*%REC*	*1*	*15-Nov-2016 03:43*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Nov-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	16-Nov-2016 13:02
Surr: 2-Fluorobiphenyl	*93.9*		*60-135*	*%REC*	*1*	*16-Nov-2016 13:02*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	**6.57**		**5.00**	**mg/Kg**	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**2.05**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**264**		**5.00**	**mg/L**	10	28-Nov-2016 17:50
Magnesium	**51.1**		**5.00**	**mg/L**	10	28-Nov-2016 17:50
Sodium	**139**		**5.00**	**mg/L**	10	28-Nov-2016 17:50
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.38**		**0.459**	**mg/Kg**	1	18-Nov-2016 20:01
Barium	**392**		**4.59**	**mg/Kg**	10	21-Nov-2016 13:34
Boron	**5.26**		**2.30**	**mg/Kg**	1	18-Nov-2016 20:01
Cadmium	ND		0.459	mg/Kg	1	18-Nov-2016 20:01
Chromium	**6.57**		**0.459**	**mg/Kg**	1	18-Nov-2016 20:01
Copper	**5.73**		**0.184**	**mg/Kg**	1	18-Nov-2016 20:01
Lead	**5.51**		**0.459**	**mg/Kg**	1	18-Nov-2016 20:01
Nickel	**7.45**		**0.459**	**mg/Kg**	1	18-Nov-2016 20:01
Selenium	ND		0.459	mg/Kg	1	18-Nov-2016 20:01
Silver	ND		0.459	mg/Kg	1	18-Nov-2016 20:01
Zinc	**20.3**		**0.459**	**mg/Kg**	1	18-Nov-2016 20:01
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 18-Nov-2016		Analyst: JCJ
Mercury	**4.70**		**3.55**	**ug/Kg**	1	18-Nov-2016 18:13

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-2-9-10-110816
Collection Date: 08-Nov-2016 15:00

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-06
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**7.10**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**3.27**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.461**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.461**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**12.2**		**0.0100**	**wt%**	1	15-Nov-2016 09:53
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		1.99	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.19**	H	**0.100**	**pH Units**	1	22-Nov-2016 14:00
Temp Deg C @pH	**22.6**	H	**0**	**°C**	1	22-Nov-2016 14:00

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-3-2-3-110816
Collection Date: 08-Nov-2016 15:30

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-07
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	16-Nov-2016 14:22
Ethylbenzene	ND		4.9	ug/Kg	1	16-Nov-2016 14:22
m,p-Xylene	ND		9.8	ug/Kg	1	16-Nov-2016 14:22
o-Xylene	ND		4.9	ug/Kg	1	16-Nov-2016 14:22
Toluene	ND		4.9	ug/Kg	1	16-Nov-2016 14:22
Xylenes, Total	ND		9.8	ug/Kg	1	16-Nov-2016 14:22
Surr: 1,2-Dichloroethane-d4	*87.1*		*70-128*	*%REC*	*1*	*16-Nov-2016 14:22*
Surr: 4-Bromofluorobenzene	*94.3*		*73-126*	*%REC*	*1*	*16-Nov-2016 14:22*
Surr: Dibromofluoromethane	*95.0*		*71-128*	*%REC*	*1*	*16-Nov-2016 14:22*
Surr: Toluene-d8	*94.5*		*73-127*	*%REC*	*1*	*16-Nov-2016 14:22*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 04:15
Surr: 4-Bromofluorobenzene	*80.0*		*70-130*	*%REC*	*1*	*15-Nov-2016 04:15*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Nov-2016		Analyst: AAP
TPH (Diesel Range)	**1.8**		**1.7**	**mg/Kg**	1	16-Nov-2016 10:35
Surr: 2-Fluorobiphenyl	*72.2*		*60-135*	*%REC*	*1*	*16-Nov-2016 10:35*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	**7.32**		**5.00**	**mg/Kg**	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**0.780**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**67.8**		**5.00**	**mg/L**	10	28-Nov-2016 17:53
Magnesium	**13.2**		**5.00**	**mg/L**	10	28-Nov-2016 17:53
Sodium	**26.8**		**5.00**	**mg/L**	10	28-Nov-2016 17:53
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.54**		**0.472**	**mg/Kg**	1	21-Nov-2016 16:02
Barium	**187**		**4.72**	**mg/Kg**	10	22-Nov-2016 13:00
Boron	**6.46**		**2.36**	**mg/Kg**	1	21-Nov-2016 16:02
Cadmium	ND		0.472	mg/Kg	1	21-Nov-2016 16:02
Chromium	**7.32**		**0.472**	**mg/Kg**	1	21-Nov-2016 16:02
Copper	**5.54**		**0.189**	**mg/Kg**	1	21-Nov-2016 16:02
Lead	**6.17**		**0.472**	**mg/Kg**	1	21-Nov-2016 16:02
Nickel	**7.84**		**0.472**	**mg/Kg**	1	21-Nov-2016 16:02
Selenium	ND		0.472	mg/Kg	1	21-Nov-2016 16:02
Silver	ND		0.472	mg/Kg	1	21-Nov-2016 16:02
Zinc	**20.3**		**0.472**	**mg/Kg**	1	21-Nov-2016 16:02
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 18-Nov-2016		Analyst: JCJ
Mercury	**12.8**		**3.33**	**ug/Kg**	1	18-Nov-2016 18:18

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-3-2-3-110816
Collection Date: 08-Nov-2016 15:30

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-07
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**1.11**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**0.530**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.479**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.479**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**7.75**		**0.0100**	**wt%**	1	15-Nov-2016 09:53
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		1.99	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.78**	H	**0.100**	**pH Units**	1	22-Nov-2016 14:00
Temp Deg C @pH	**22.6**	H	**0**	**°C**	1	22-Nov-2016 14:00

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-3-3-4-110816
Collection Date: 08-Nov-2016 15:40

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-08
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	16-Nov-2016 14:49
Ethylbenzene	ND		5.0	ug/Kg	1	16-Nov-2016 14:49
m,p-Xylene	ND		10	ug/Kg	1	16-Nov-2016 14:49
o-Xylene	ND		5.0	ug/Kg	1	16-Nov-2016 14:49
Toluene	ND		5.0	ug/Kg	1	16-Nov-2016 14:49
Xylenes, Total	ND		10	ug/Kg	1	16-Nov-2016 14:49
Surr: 1,2-Dichloroethane-d4	*99.6*		*70-128*	*%REC*	*1*	*16-Nov-2016 14:49*
Surr: 4-Bromofluorobenzene	*93.8*		*73-126*	*%REC*	*1*	*16-Nov-2016 14:49*
Surr: Dibromofluoromethane	*96.3*		*71-128*	*%REC*	*1*	*16-Nov-2016 14:49*
Surr: Toluene-d8	*93.4*		*73-127*	*%REC*	*1*	*16-Nov-2016 14:49*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 04:31
Surr: 4-Bromofluorobenzene	*82.4*		*70-130*	*%REC*	*1*	*15-Nov-2016 04:31*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Nov-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	16-Nov-2016 11:00
Surr: 2-Fluorobiphenyl	*81.7*		*60-135*	*%REC*	*1*	*16-Nov-2016 11:00*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	**7.63**		**5.00**	**mg/Kg**	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**5.63**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**84.5**		**5.00**	**mg/L**	10	28-Nov-2016 17:56
Magnesium	**15.9**		**5.00**	**mg/L**	10	28-Nov-2016 17:56
Sodium	**215**		**5.00**	**mg/L**	10	28-Nov-2016 17:56
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.82**		**0.461**	**mg/Kg**	1	21-Nov-2016 16:06
Barium	**148**		**0.461**	**mg/Kg**	1	21-Nov-2016 16:06
Boron	**6.48**		**2.30**	**mg/Kg**	1	21-Nov-2016 16:06
Cadmium	ND		0.461	mg/Kg	1	21-Nov-2016 16:06
Chromium	**7.63**		**0.461**	**mg/Kg**	1	21-Nov-2016 16:06
Copper	**6.93**		**0.184**	**mg/Kg**	1	21-Nov-2016 16:06
Lead	**6.83**		**0.461**	**mg/Kg**	1	21-Nov-2016 16:06
Nickel	**8.09**		**0.461**	**mg/Kg**	1	21-Nov-2016 16:06
Selenium	ND		0.461	mg/Kg	1	21-Nov-2016 16:06
Silver	ND		0.461	mg/Kg	1	21-Nov-2016 16:06
Zinc	**21.3**		**0.461**	**mg/Kg**	1	21-Nov-2016 16:06
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 18-Nov-2016		Analyst: JCJ
Mercury	**11.6**		**3.33**	**ug/Kg**	1	18-Nov-2016 18:20

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-3-3-4-110816
Collection Date: 08-Nov-2016 15:40

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-08
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**3.70**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**1.77**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.479**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.479**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**10.4**		**0.0100**	**wt%**	1	15-Nov-2016 09:53
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		2.00	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.41**	H	**0.100**	**pH Units**	1	22-Nov-2016 14:00
Temp Deg C @pH	**22.6**	H	**0**	**°C**	1	22-Nov-2016 14:00

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: Trip Blank - 100716-54
Collection Date: 08-Nov-2016 00:00

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-09
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	15-Nov-2016 05:08
Ethylbenzene	ND		1.0	ug/L	1	15-Nov-2016 05:08
m,p-Xylene	ND		2.0	ug/L	1	15-Nov-2016 05:08
o-Xylene	ND		1.0	ug/L	1	15-Nov-2016 05:08
Toluene	ND		1.0	ug/L	1	15-Nov-2016 05:08
Xylenes, Total	ND		1.0	ug/L	1	15-Nov-2016 05:08
Surr: 1,2-Dichloroethane-d4	*103*		*71-125*	*%REC*	*1*	*15-Nov-2016 05:08*
Surr: 4-Bromofluorobenzene	*97.4*		*70-125*	*%REC*	*1*	*15-Nov-2016 05:08*
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	*1*	*15-Nov-2016 05:08*
Surr: Toluene-d8	*108*		*75-125*	*%REC*	*1*	*15-Nov-2016 05:08*

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-3-12-13-110816
Collection Date: 08-Nov-2016 16:00

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-10
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	16-Nov-2016 15:16
Ethylbenzene	ND		4.9	ug/Kg	1	16-Nov-2016 15:16
m,p-Xylene	ND		9.8	ug/Kg	1	16-Nov-2016 15:16
o-Xylene	ND		4.9	ug/Kg	1	16-Nov-2016 15:16
Toluene	ND		4.9	ug/Kg	1	16-Nov-2016 15:16
Xylenes, Total	ND		9.8	ug/Kg	1	16-Nov-2016 15:16
Surr: 1,2-Dichloroethane-d4	*87.7*		*70-128*	*%REC*	*1*	*16-Nov-2016 15:16*
Surr: 4-Bromofluorobenzene	*92.8*		*73-126*	*%REC*	*1*	*16-Nov-2016 15:16*
Surr: Dibromofluoromethane	*92.3*		*71-128*	*%REC*	*1*	*16-Nov-2016 15:16*
Surr: Toluene-d8	*97.3*		*73-127*	*%REC*	*1*	*16-Nov-2016 15:16*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 04:47
Surr: 4-Bromofluorobenzene	*82.9*		*70-130*	*%REC*	*1*	*15-Nov-2016 04:47*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Nov-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	16-Nov-2016 11:24
Surr: 2-Fluorobiphenyl	*75.9*		*60-135*	*%REC*	*1*	*16-Nov-2016 11:24*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	ND		5.00	mg/Kg	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**2.54**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**350**		**5.00**	**mg/L**	10	28-Nov-2016 18:05
Magnesium	**61.8**		**5.00**	**mg/L**	10	28-Nov-2016 18:05
Sodium	**196**		**5.00**	**mg/L**	10	28-Nov-2016 18:05
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**1.85**		**0.456**	**mg/Kg**	1	21-Nov-2016 16:11
Barium	**189**		**4.56**	**mg/Kg**	10	22-Nov-2016 13:04
Boron	**5.28**		**2.28**	**mg/Kg**	1	21-Nov-2016 16:11
Cadmium	ND		0.456	mg/Kg	1	21-Nov-2016 16:11
Chromium	**4.79**		**0.456**	**mg/Kg**	1	21-Nov-2016 16:11
Copper	**3.14**		**0.182**	**mg/Kg**	1	21-Nov-2016 16:11
Lead	**3.83**		**0.456**	**mg/Kg**	1	21-Nov-2016 16:11
Nickel	**6.27**		**0.456**	**mg/Kg**	1	21-Nov-2016 16:11
Selenium	ND		0.456	mg/Kg	1	21-Nov-2016 16:11
Silver	ND		0.456	mg/Kg	1	21-Nov-2016 16:11
Zinc	**13.4**		**0.456**	**mg/Kg**	1	21-Nov-2016 16:11
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 18-Nov-2016		Analyst: JCJ
Mercury	**9.46**		**3.37**	**ug/Kg**	1	18-Nov-2016 18:22

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-3-12-13-110816
Collection Date: 08-Nov-2016 16:00

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-10
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**7.14**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**4.09**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.573**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.573**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**13.1**		**0.0100**	**wt%**	1	15-Nov-2016 09:53
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		1.99	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.19**	H	**0.100**	**pH Units**	1	28-Nov-2016 14:45
Temp Deg C @pH	**22.1**	H	**0**	**°C**	1	28-Nov-2016 14:45

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-4-2-3-110816
Collection Date: 08-Nov-2016 07:40

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-11
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	16-Nov-2016 15:43
Ethylbenzene	ND		5.0	ug/Kg	1	16-Nov-2016 15:43
m,p-Xylene	ND		9.9	ug/Kg	1	16-Nov-2016 15:43
o-Xylene	ND		5.0	ug/Kg	1	16-Nov-2016 15:43
Toluene	ND		5.0	ug/Kg	1	16-Nov-2016 15:43
Xylenes, Total	ND		9.9	ug/Kg	1	16-Nov-2016 15:43
Surr: 1,2-Dichloroethane-d4	*96.7*		*70-128*	*%REC*	*1*	*16-Nov-2016 15:43*
Surr: 4-Bromofluorobenzene	*100*		*73-126*	*%REC*	*1*	*16-Nov-2016 15:43*
Surr: Dibromofluoromethane	*90.1*		*71-128*	*%REC*	*1*	*16-Nov-2016 15:43*
Surr: Toluene-d8	*98.0*		*73-127*	*%REC*	*1*	*16-Nov-2016 15:43*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 05:03
Surr: 4-Bromofluorobenzene	*90.5*		*70-130*	*%REC*	*1*	*15-Nov-2016 05:03*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Nov-2016		Analyst: AAP
TPH (Diesel Range)	**49**		**1.7**	**mg/Kg**	1	16-Nov-2016 11:49
Surr: 2-Fluorobiphenyl	*76.9*		*60-135*	*%REC*	*1*	*16-Nov-2016 11:49*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	**7.02**		**5.00**	**mg/Kg**	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**10.8**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**154**		**5.00**	**mg/L**	10	28-Nov-2016 18:08
Magnesium	**15.4**		**5.00**	**mg/L**	10	28-Nov-2016 18:08
Sodium	**525**		**5.00**	**mg/L**	10	28-Nov-2016 18:08
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.54**		**0.458**	**mg/Kg**	1	21-Nov-2016 16:15
Barium	**137**		**0.458**	**mg/Kg**	1	21-Nov-2016 16:15
Boron	**4.05**		**2.29**	**mg/Kg**	1	21-Nov-2016 16:15
Cadmium	ND		0.458	mg/Kg	1	21-Nov-2016 16:15
Chromium	**7.02**		**0.458**	**mg/Kg**	1	21-Nov-2016 16:15
Copper	**5.72**		**0.183**	**mg/Kg**	1	21-Nov-2016 16:15
Lead	**6.18**		**0.458**	**mg/Kg**	1	21-Nov-2016 16:15
Nickel	**7.45**		**0.458**	**mg/Kg**	1	21-Nov-2016 16:15
Selenium	ND		0.458	mg/Kg	1	21-Nov-2016 16:15
Silver	ND		0.458	mg/Kg	1	21-Nov-2016 16:15
Zinc	**22.9**		**0.458**	**mg/Kg**	1	21-Nov-2016 16:15
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 18-Nov-2016		Analyst: JCJ
Mercury	**11.7**		**3.37**	**ug/Kg**	1	18-Nov-2016 18:24

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-4-2-3-110816
Collection Date: 08-Nov-2016 07:40

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-11
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**7.72**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**4.03**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.522**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.522**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**11.3**		**0.0100**	**wt%**	1	15-Nov-2016 09:53
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		1.97	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**9.86**	H	**0.100**	**pH Units**	1	28-Nov-2016 14:45
Temp Deg C @pH	**22.0**	H	**0**	**°C**	1	28-Nov-2016 14:45

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-4-6-7-110816
Collection Date: 08-Nov-2016 07:50

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-12
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	16-Nov-2016 16:10
Ethylbenzene	ND		4.8	ug/Kg	1	16-Nov-2016 16:10
m,p-Xylene	**13**		**9.6**	**ug/Kg**	1	16-Nov-2016 16:10
o-Xylene	ND		4.8	ug/Kg	1	16-Nov-2016 16:10
Toluene	ND		4.8	ug/Kg	1	16-Nov-2016 16:10
Xylenes, Total	**17**		**9.6**	**ug/Kg**	1	16-Nov-2016 16:10
Surr: 1,2-Dichloroethane-d4	*103*		*70-128*	*%REC*	*1*	*16-Nov-2016 16:10*
Surr: 4-Bromofluorobenzene	*102*		*73-126*	*%REC*	*1*	*16-Nov-2016 16:10*
Surr: Dibromofluoromethane	*74.9*		*71-128*	*%REC*	*1*	*16-Nov-2016 16:10*
Surr: Toluene-d8	*97.4*		*73-127*	*%REC*	*1*	*16-Nov-2016 16:10*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	**0.73**		**0.050**	**mg/Kg**	1	15-Nov-2016 05:19
Surr: 4-Bromofluorobenzene	*99.3*		*70-130*	*%REC*	*1*	*15-Nov-2016 05:19*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Nov-2016		Analyst: AAP
TPH (Diesel Range)	**1,000**		**170**	**mg/Kg**	100	22-Nov-2016 04:01
Surr: 2-Fluorobiphenyl	*1100*	*S*	*60-135*	*%REC*	*100*	*22-Nov-2016 04:01*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	**9.17**		**5.00**	**mg/Kg**	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**91.6**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**1,770**		**50.0**	**mg/L**	100	29-Nov-2016 09:47
Magnesium	ND		5.00	mg/L	10	28-Nov-2016 18:11
Sodium	**14,000**		**50.0**	**mg/L**	100	29-Nov-2016 09:47
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**9.98**		**0.480**	**mg/Kg**	1	21-Nov-2016 16:20
Barium	**132**		**0.480**	**mg/Kg**	1	21-Nov-2016 16:20
Boron	**19.8**		**2.40**	**mg/Kg**	1	21-Nov-2016 16:20
Cadmium	ND		0.480	mg/Kg	1	21-Nov-2016 16:20
Chromium	**9.17**		**0.480**	**mg/Kg**	1	21-Nov-2016 16:20
Copper	**6.55**		**0.192**	**mg/Kg**	1	21-Nov-2016 16:20
Lead	**7.08**		**0.480**	**mg/Kg**	1	21-Nov-2016 16:20
Nickel	**6.81**		**0.480**	**mg/Kg**	1	21-Nov-2016 16:20
Selenium	ND		0.480	mg/Kg	1	21-Nov-2016 16:20
Silver	ND		0.480	mg/Kg	1	21-Nov-2016 16:20
Zinc	**349**		**4.80**	**mg/Kg**	10	22-Nov-2016 13:08
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 18-Nov-2016		Analyst: JCJ
Mercury	**9.86**		**3.46**	**ug/Kg**	1	18-Nov-2016 18:25

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-4-6-7-110816
Collection Date: 08-Nov-2016 07:50

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-12
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**142**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**94.8**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.666**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.666**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**23.9**		**0.0100**	**wt%**	1	15-Nov-2016 09:57
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		2.00	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**11.5**	H	**0.100**	**pH Units**	1	28-Nov-2016 14:45
Temp Deg C @pH	**22.1**	H	**0**	**°C**	1	28-Nov-2016 14:45

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-4-14-15-110816
Collection Date: 08-Nov-2016 08:30

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-13
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	16-Nov-2016 16:37
Ethylbenzene	ND		4.8	ug/Kg	1	16-Nov-2016 16:37
m,p-Xylene	ND		9.6	ug/Kg	1	16-Nov-2016 16:37
o-Xylene	ND		4.8	ug/Kg	1	16-Nov-2016 16:37
Toluene	ND		4.8	ug/Kg	1	16-Nov-2016 16:37
Xylenes, Total	ND		9.6	ug/Kg	1	16-Nov-2016 16:37
Surr: 1,2-Dichloroethane-d4	*99.1*		*70-128*	*%REC*	*1*	*16-Nov-2016 16:37*
Surr: 4-Bromofluorobenzene	*98.6*		*73-126*	*%REC*	*1*	*16-Nov-2016 16:37*
Surr: Dibromofluoromethane	*94.8*		*71-128*	*%REC*	*1*	*16-Nov-2016 16:37*
Surr: Toluene-d8	*98.7*		*73-127*	*%REC*	*1*	*16-Nov-2016 16:37*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 05:35
Surr: 4-Bromofluorobenzene	*86.5*		*70-130*	*%REC*	*1*	*15-Nov-2016 05:35*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Nov-2016		Analyst: AAP
TPH (Diesel Range)	**8.8**		**1.7**	**mg/Kg**	1	16-Nov-2016 12:38
Surr: 2-Fluorobiphenyl	*75.7*		*60-135*	*%REC*	*1*	*16-Nov-2016 12:38*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	ND		5.00	mg/Kg	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**4.96**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**182**		**5.00**	**mg/L**	10	28-Nov-2016 18:14
Magnesium	**22.0**		**5.00**	**mg/L**	10	28-Nov-2016 18:14
Sodium	**266**		**5.00**	**mg/L**	10	28-Nov-2016 18:14
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**1.98**		**0.471**	**mg/Kg**	1	21-Nov-2016 16:24
Barium	**364**		**4.71**	**mg/Kg**	10	22-Nov-2016 13:13
Boron	**5.52**		**2.35**	**mg/Kg**	1	21-Nov-2016 16:24
Cadmium	ND		0.471	mg/Kg	1	21-Nov-2016 16:24
Chromium	**4.14**		**0.471**	**mg/Kg**	1	21-Nov-2016 16:24
Copper	**3.47**		**0.188**	**mg/Kg**	1	21-Nov-2016 16:24
Lead	**3.70**		**0.471**	**mg/Kg**	1	21-Nov-2016 16:24
Nickel	**5.44**		**0.471**	**mg/Kg**	1	21-Nov-2016 16:24
Selenium	ND		0.471	mg/Kg	1	21-Nov-2016 16:24
Silver	ND		0.471	mg/Kg	1	21-Nov-2016 16:24
Zinc	**15.2**		**0.471**	**mg/Kg**	1	21-Nov-2016 16:24
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 18-Nov-2016		Analyst: JCJ
Mercury	**69.5**		**3.51**	**ug/Kg**	1	18-Nov-2016 18:27

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-4-14-15-110816
Collection Date: 08-Nov-2016 08:30

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-13
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**5.21**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**2.85**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.547**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.547**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**13.9**		**0.0100**	**wt%**	1	15-Nov-2016 09:57
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		1.99	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.65**	H	**0.100**	**pH Units**	1	28-Nov-2016 14:45
Temp Deg C @pH	**22.1**	H	**0**	**°C**	1	28-Nov-2016 14:45

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-5-2-3-110916
Collection Date: 09-Nov-2016 11:00

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-14
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	16-Nov-2016 17:04
Ethylbenzene	ND		5.0	ug/Kg	1	16-Nov-2016 17:04
m,p-Xylene	ND		10	ug/Kg	1	16-Nov-2016 17:04
o-Xylene	ND		5.0	ug/Kg	1	16-Nov-2016 17:04
Toluene	ND		5.0	ug/Kg	1	16-Nov-2016 17:04
Xylenes, Total	ND		10	ug/Kg	1	16-Nov-2016 17:04
Surr: 1,2-Dichloroethane-d4	*94.0*		*70-128*	*%REC*	*1*	*16-Nov-2016 17:04*
Surr: 4-Bromofluorobenzene	*99.1*		*73-126*	*%REC*	*1*	*16-Nov-2016 17:04*
Surr: Dibromofluoromethane	*95.4*		*71-128*	*%REC*	*1*	*16-Nov-2016 17:04*
Surr: Toluene-d8	*96.1*		*73-127*	*%REC*	*1*	*16-Nov-2016 17:04*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 05:51
Surr: 4-Bromofluorobenzene	*81.5*		*70-130*	*%REC*	*1*	*15-Nov-2016 05:51*
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 22:01
Surr: 2-Fluorobiphenyl	*65.6*		*60-135*	*%REC*	*1*	*18-Nov-2016 22:01*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	**6.20**		**5.00**	**mg/Kg**	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**1.61**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**52.9**		**4.99**	**mg/L**	10	28-Nov-2016 18:17
Magnesium	**15.2**		**4.99**	**mg/L**	10	28-Nov-2016 18:17
Sodium	**51.6**		**4.99**	**mg/L**	10	28-Nov-2016 18:17
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.37**		**0.472**	**mg/Kg**	1	21-Nov-2016 16:29
Barium	**307**		**4.72**	**mg/Kg**	10	22-Nov-2016 13:17
Boron	**5.82**		**2.36**	**mg/Kg**	1	21-Nov-2016 16:29
Cadmium	ND		0.472	mg/Kg	1	21-Nov-2016 16:29
Chromium	**6.20**		**0.472**	**mg/Kg**	1	21-Nov-2016 16:29
Copper	**4.91**		**0.189**	**mg/Kg**	1	21-Nov-2016 16:29
Lead	**5.20**		**0.472**	**mg/Kg**	1	21-Nov-2016 16:29
Nickel	**7.10**		**0.472**	**mg/Kg**	1	21-Nov-2016 16:29
Selenium	ND		0.472	mg/Kg	1	21-Nov-2016 16:29
Silver	ND		0.472	mg/Kg	1	21-Nov-2016 16:29
Zinc	**18.6**		**0.472**	**mg/Kg**	1	21-Nov-2016 16:29
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 18-Nov-2016		Analyst: JCJ
Mercury	**8.13**		**3.56**	**ug/Kg**	1	18-Nov-2016 18:29

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-5-2-3-110916
Collection Date: 09-Nov-2016 11:00

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-14
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**1.28**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**0.613**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.479**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.479**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**14.0**		**0.0100**	**wt%**	1	15-Nov-2016 09:57
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		1.98	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.77**	H	**0.100**	**pH Units**	1	28-Nov-2016 14:45
Temp Deg C @pH	**22.2**	H	**0**	**°C**	1	28-Nov-2016 14:45

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-5-7-8-110916
Collection Date: 09-Nov-2016 11:30

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-15
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	16-Nov-2016 17:31
Ethylbenzene	ND		5.0	ug/Kg	1	16-Nov-2016 17:31
m,p-Xylene	ND		9.9	ug/Kg	1	16-Nov-2016 17:31
o-Xylene	ND		5.0	ug/Kg	1	16-Nov-2016 17:31
Toluene	ND		5.0	ug/Kg	1	16-Nov-2016 17:31
Xylenes, Total	ND		9.9	ug/Kg	1	16-Nov-2016 17:31
Surr: 1,2-Dichloroethane-d4	*101*		*70-128*	*%REC*	*1*	*16-Nov-2016 17:31*
Surr: 4-Bromofluorobenzene	*95.6*		*73-126*	*%REC*	*1*	*16-Nov-2016 17:31*
Surr: Dibromofluoromethane	*98.6*		*71-128*	*%REC*	*1*	*16-Nov-2016 17:31*
Surr: Toluene-d8	*99.3*		*73-127*	*%REC*	*1*	*16-Nov-2016 17:31*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 06:07
Surr: 4-Bromofluorobenzene	*83.3*		*70-130*	*%REC*	*1*	*15-Nov-2016 06:07*
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 22:25
Surr: 2-Fluorobiphenyl	*72.5*		*60-135*	*%REC*	*1*	*18-Nov-2016 22:25*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	**5.36**		**5.00**	**mg/Kg**	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**1.93**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**36.4**		**5.00**	**mg/L**	10	28-Nov-2016 18:20
Magnesium	**11.5**		**5.00**	**mg/L**	10	28-Nov-2016 18:20
Sodium	**52.1**		**5.00**	**mg/L**	10	28-Nov-2016 18:20
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.23**		**0.469**	**mg/Kg**	1	21-Nov-2016 16:46
Barium	**213**		**4.69**	**mg/Kg**	10	22-Nov-2016 13:22
Boron	**6.46**		**2.35**	**mg/Kg**	1	21-Nov-2016 16:46
Cadmium	ND		0.469	mg/Kg	1	21-Nov-2016 16:46
Chromium	**5.36**		**0.469**	**mg/Kg**	1	21-Nov-2016 16:46
Copper	**4.56**		**0.188**	**mg/Kg**	1	21-Nov-2016 16:46
Lead	**4.47**		**0.469**	**mg/Kg**	1	21-Nov-2016 16:46
Nickel	**6.23**		**0.469**	**mg/Kg**	1	21-Nov-2016 16:46
Selenium	ND		0.469	mg/Kg	1	21-Nov-2016 16:46
Silver	ND		0.469	mg/Kg	1	21-Nov-2016 16:46
Zinc	**16.9**		**0.469**	**mg/Kg**	1	21-Nov-2016 16:46
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 18-Nov-2016		Analyst: JCJ
Mercury	**6.35**		**3.33**	**ug/Kg**	1	18-Nov-2016 18:34

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-5-7-8-110916
Collection Date: 09-Nov-2016 11:30

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-15
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**0.987**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**0.528**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.535**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.535**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**13.0**		**0.0100**	**wt%**	1	15-Nov-2016 09:57
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		1.99	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.67**	H	**0.100**	**pH Units**	1	28-Nov-2016 14:45
Temp Deg C @pH	**22.0**	H	**0**	**°C**	1	28-Nov-2016 14:45

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-5-10-11-110916
Collection Date: 09-Nov-2016 11:50

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-16
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	16-Nov-2016 17:58
Ethylbenzene	ND		4.8	ug/Kg	1	16-Nov-2016 17:58
m,p-Xylene	ND		9.6	ug/Kg	1	16-Nov-2016 17:58
o-Xylene	ND		4.8	ug/Kg	1	16-Nov-2016 17:58
Toluene	ND		4.8	ug/Kg	1	16-Nov-2016 17:58
Xylenes, Total	ND		9.6	ug/Kg	1	16-Nov-2016 17:58
Surr: 1,2-Dichloroethane-d4	*94.6*		*70-128*	*%REC*	*1*	*16-Nov-2016 17:58*
Surr: 4-Bromofluorobenzene	*90.9*		*73-126*	*%REC*	*1*	*16-Nov-2016 17:58*
Surr: Dibromofluoromethane	*93.4*		*71-128*	*%REC*	*1*	*16-Nov-2016 17:58*
Surr: Toluene-d8	*99.8*		*73-127*	*%REC*	*1*	*16-Nov-2016 17:58*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 06:23
Surr: 4-Bromofluorobenzene	*82.8*		*70-130*	*%REC*	*1*	*15-Nov-2016 06:23*
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 23:39
Surr: 2-Fluorobiphenyl	*71.5*		*60-135*	*%REC*	*1*	*18-Nov-2016 23:39*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	ND		5.00	mg/Kg	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**2.63**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**38.3**		**5.00**	**mg/L**	10	28-Nov-2016 18:23
Magnesium	**6.93**		**5.00**	**mg/L**	10	28-Nov-2016 18:23
Sodium	**67.3**		**5.00**	**mg/L**	10	28-Nov-2016 18:23
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.61**		**0.471**	**mg/Kg**	1	21-Nov-2016 16:51
Barium	**425**		**2.35**	**mg/Kg**	5	22-Nov-2016 13:26
Boron	**7.96**		**2.35**	**mg/Kg**	1	21-Nov-2016 16:51
Cadmium	ND		0.471	mg/Kg	1	21-Nov-2016 16:51
Chromium	**4.99**		**0.471**	**mg/Kg**	1	21-Nov-2016 16:51
Copper	**5.11**		**0.188**	**mg/Kg**	1	21-Nov-2016 16:51
Lead	**4.29**		**0.471**	**mg/Kg**	1	21-Nov-2016 16:51
Nickel	**6.17**		**0.471**	**mg/Kg**	1	21-Nov-2016 16:51
Selenium	ND		0.471	mg/Kg	1	21-Nov-2016 16:51
Silver	ND		0.471	mg/Kg	1	21-Nov-2016 16:51
Zinc	**16.2**		**0.471**	**mg/Kg**	1	21-Nov-2016 16:51
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 18-Nov-2016		Analyst: JCJ
Mercury	ND		3.50	ug/Kg	1	18-Nov-2016 18:36

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-5-10-11-110916
Collection Date: 09-Nov-2016 11:50

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-16
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**1.21**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**0.505**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.418**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.418**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**12.4**		**0.0100**	**wt%**	1	15-Nov-2016 09:57
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		1.99	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.92**	H	**0.100**	**pH Units**	1	28-Nov-2016 14:45
Temp Deg C @pH	**22.1**	H	**0**	**°C**	1	28-Nov-2016 14:45

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-6-2-3-110916
Collection Date: 09-Nov-2016 10:30

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-17
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	16-Nov-2016 18:25
Ethylbenzene	ND		4.8	ug/Kg	1	16-Nov-2016 18:25
m,p-Xylene	ND		9.5	ug/Kg	1	16-Nov-2016 18:25
o-Xylene	ND		4.8	ug/Kg	1	16-Nov-2016 18:25
Toluene	ND		4.8	ug/Kg	1	16-Nov-2016 18:25
Xylenes, Total	ND		9.5	ug/Kg	1	16-Nov-2016 18:25
Surr: 1,2-Dichloroethane-d4	*97.7*		*70-128*	*%REC*	*1*	*16-Nov-2016 18:25*
Surr: 4-Bromofluorobenzene	*95.3*		*73-126*	*%REC*	*1*	*16-Nov-2016 18:25*
Surr: Dibromofluoromethane	*105*		*71-128*	*%REC*	*1*	*16-Nov-2016 18:25*
Surr: Toluene-d8	*95.0*		*73-127*	*%REC*	*1*	*16-Nov-2016 18:25*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 06:40
Surr: 4-Bromofluorobenzene	*84.0*		*70-130*	*%REC*	*1*	*15-Nov-2016 06:40*
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 00:03
Surr: 2-Fluorobiphenyl	*62.8*		*60-135*	*%REC*	*1*	*18-Nov-2016 00:03*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	**6.59**		**5.00**	**mg/Kg**	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**3.05**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**54.8**		**5.00**	**mg/L**	10	28-Nov-2016 18:26
Magnesium	**13.0**		**5.00**	**mg/L**	10	28-Nov-2016 18:26
Sodium	**96.8**		**5.00**	**mg/L**	10	28-Nov-2016 18:26
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.39**		**0.486**	**mg/Kg**	1	21-Nov-2016 17:12
Barium	**136**		**0.486**	**mg/Kg**	1	21-Nov-2016 17:12
Boron	**4.81**		**2.43**	**mg/Kg**	1	21-Nov-2016 17:12
Cadmium	ND		0.486	mg/Kg	1	21-Nov-2016 17:12
Chromium	**6.59**		**0.486**	**mg/Kg**	1	21-Nov-2016 17:12
Copper	**5.10**		**0.194**	**mg/Kg**	1	21-Nov-2016 17:12
Lead	**6.00**		**0.486**	**mg/Kg**	1	21-Nov-2016 17:12
Nickel	**7.48**		**0.486**	**mg/Kg**	1	21-Nov-2016 17:12
Selenium	ND		0.486	mg/Kg	1	21-Nov-2016 17:12
Silver	ND		0.486	mg/Kg	1	21-Nov-2016 17:12
Zinc	**19.3**		**0.486**	**mg/Kg**	1	21-Nov-2016 17:12
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 18-Nov-2016		Analyst: JCJ
Mercury	**19.0**		**3.50**	**ug/Kg**	1	18-Nov-2016 18:37

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-6-2-3-110916
Collection Date: 09-Nov-2016 10:30

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-17
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**1.64**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**0.898**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.549**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.549**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**11.7**		**0.0100**	**wt%**	1	15-Nov-2016 09:57
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		1.99	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.45**	H	**0.100**	**pH Units**	1	28-Nov-2016 14:45
Temp Deg C @pH	**22.1**	H	**0**	**°C**	1	28-Nov-2016 14:45

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: Trip Blank - 100716-70
Collection Date: 08-Nov-2016 00:00

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-18
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	15-Nov-2016 05:33
Ethylbenzene	ND		1.0	ug/L	1	15-Nov-2016 05:33
m,p-Xylene	ND		2.0	ug/L	1	15-Nov-2016 05:33
o-Xylene	ND		1.0	ug/L	1	15-Nov-2016 05:33
Toluene	ND		1.0	ug/L	1	15-Nov-2016 05:33
Xylenes, Total	ND		1.0	ug/L	1	15-Nov-2016 05:33
Surr: 1,2-Dichloroethane-d4	*101*		*71-125*	*%REC*	*1*	*15-Nov-2016 05:33*
Surr: 4-Bromofluorobenzene	*97.5*		*70-125*	*%REC*	*1*	*15-Nov-2016 05:33*
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	*1*	*15-Nov-2016 05:33*
Surr: Toluene-d8	*109*		*75-125*	*%REC*	*1*	*15-Nov-2016 05:33*

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-6-5-6-110916
Collection Date: 09-Nov-2016 10:40

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-19
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	16-Nov-2016 18:52
Ethylbenzene	ND		5.0	ug/Kg	1	16-Nov-2016 18:52
m,p-Xylene	ND		9.9	ug/Kg	1	16-Nov-2016 18:52
o-Xylene	ND		5.0	ug/Kg	1	16-Nov-2016 18:52
Toluene	ND		5.0	ug/Kg	1	16-Nov-2016 18:52
Xylenes, Total	ND		9.9	ug/Kg	1	16-Nov-2016 18:52
Surr: 1,2-Dichloroethane-d4	*108*		*70-128*	*%REC*	*1*	*16-Nov-2016 18:52*
Surr: 4-Bromofluorobenzene	*103*		*73-126*	*%REC*	*1*	*16-Nov-2016 18:52*
Surr: Dibromofluoromethane	*86.6*		*71-128*	*%REC*	*1*	*16-Nov-2016 18:52*
Surr: Toluene-d8	*91.7*		*73-127*	*%REC*	*1*	*16-Nov-2016 18:52*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	**0.18**		**0.050**	**mg/Kg**	1	15-Nov-2016 07:12
Surr: 4-Bromofluorobenzene	*77.2*		*70-130*	*%REC*	*1*	*15-Nov-2016 07:12*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 16-Nov-2016		Analyst: AAP
TPH (Diesel Range)	**33**		**1.7**	**mg/Kg**	1	18-Nov-2016 00:27
Surr: 2-Fluorobiphenyl	*76.7*		*60-135*	*%REC*	*1*	*18-Nov-2016 00:27*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	**9.28**		**5.00**	**mg/Kg**	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**14.1**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**1,070**		**5.00**	**mg/L**	10	28-Nov-2016 18:29
Magnesium	ND		5.00	mg/L	10	28-Nov-2016 18:29
Sodium	**1,670**		**5.00**	**mg/L**	10	28-Nov-2016 18:29
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**1.90**		**0.463**	**mg/Kg**	1	21-Nov-2016 18:32
Barium	**116**		**0.463**	**mg/Kg**	1	21-Nov-2016 18:32
Boron	**7.77**		**2.32**	**mg/Kg**	1	21-Nov-2016 18:32
Cadmium	ND		0.463	mg/Kg	1	22-Nov-2016 15:18
Chromium	**9.28**		**0.463**	**mg/Kg**	1	21-Nov-2016 18:32
Copper	**5.70**		**0.185**	**mg/Kg**	1	21-Nov-2016 18:32
Lead	**4.44**		**0.463**	**mg/Kg**	1	22-Nov-2016 15:18
Nickel	**4.99**		**0.463**	**mg/Kg**	1	21-Nov-2016 18:32
Selenium	ND		0.463	mg/Kg	1	21-Nov-2016 18:32
Silver	ND		0.463	mg/Kg	1	21-Nov-2016 18:32
Zinc	**29.3**		**0.463**	**mg/Kg**	1	21-Nov-2016 18:32
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 21-Nov-2016		Analyst: JCJ
Mercury	**4.17**		**3.41**	**ug/Kg**	1	22-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-9-6-5-6-110916
Collection Date: 09-Nov-2016 10:40

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-19
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**20.3**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**16.0**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.791**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.791**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**33.2**		**0.0100**	**wt%**	1	15-Nov-2016 09:57
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		2.00	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**11.4**	H	**0.100**	**pH Units**	1	28-Nov-2016 14:45
Temp Deg C @pH	**22.0**	H	**0**	**°C**	1	28-Nov-2016 14:45

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-6-13-14-110916
Collection Date: 09-Nov-2016 10:50

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-20
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	17-Nov-2016 09:30
Ethylbenzene	ND		5.0	ug/Kg	1	17-Nov-2016 09:30
m,p-Xylene	ND		10	ug/Kg	1	17-Nov-2016 09:30
o-Xylene	ND		5.0	ug/Kg	1	17-Nov-2016 09:30
Toluene	ND		5.0	ug/Kg	1	17-Nov-2016 09:30
Xylenes, Total	ND		10	ug/Kg	1	17-Nov-2016 09:30
Surr: 1,2-Dichloroethane-d4	*101*		*70-128*	*%REC*	*1*	*17-Nov-2016 09:30*
Surr: 4-Bromofluorobenzene	*94.0*		*73-126*	*%REC*	*1*	*17-Nov-2016 09:30*
Surr: Dibromofluoromethane	*94.4*		*71-128*	*%REC*	*1*	*17-Nov-2016 09:30*
Surr: Toluene-d8	*94.7*		*73-127*	*%REC*	*1*	*17-Nov-2016 09:30*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 07:28
Surr: 4-Bromofluorobenzene	*88.5*		*70-130*	*%REC*	*1*	*15-Nov-2016 07:28*
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	*63.1*		*60-135*	*%REC*	*1*	*18-Nov-2016 00:52*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	ND		5.00	mg/Kg	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**4.42**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**33.7**		**5.00**	**mg/L**	10	28-Nov-2016 18:32
Magnesium	**10.2**		**5.00**	**mg/L**	10	28-Nov-2016 18:32
Sodium	**114**		**5.00**	**mg/L**	10	28-Nov-2016 18:32
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**3.52**		**0.459**	**mg/Kg**	1	21-Nov-2016 18:37
Barium	**290**		**4.59**	**mg/Kg**	10	22-Nov-2016 14:03
Boron	**5.17**		**2.30**	**mg/Kg**	1	21-Nov-2016 18:37
Cadmium	ND		0.459	mg/Kg	1	22-Nov-2016 15:23
Chromium	**2.40**		**0.459**	**mg/Kg**	1	21-Nov-2016 18:37
Copper	**3.40**		**0.184**	**mg/Kg**	1	21-Nov-2016 18:37
Lead	**3.50**		**0.459**	**mg/Kg**	1	22-Nov-2016 15:23
Nickel	**2.92**		**0.459**	**mg/Kg**	1	21-Nov-2016 18:37
Selenium	ND		0.459	mg/Kg	1	21-Nov-2016 18:37
Silver	ND		0.459	mg/Kg	1	21-Nov-2016 18:37
Zinc	**8.31**		**0.459**	**mg/Kg**	1	21-Nov-2016 18:37
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 21-Nov-2016		Analyst: JCJ
Mercury	**6.73**		**3.57**	**ug/Kg**	1	22-Nov-2016 16:35

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-6-13-14-110916
Collection Date: 09-Nov-2016 10:50

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-20
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**1.85**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**0.844**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.457**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.457**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**15.1**		**0.0100**	**wt%**	1	15-Nov-2016 09:57
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		2.00	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.99**	H	**0.100**	**pH Units**	1	28-Nov-2016 14:45
Temp Deg C @pH	**22.0**	H	**0**	**°C**	1	28-Nov-2016 14:45

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-7-2-3-110916
Collection Date: 09-Nov-2016 09:50

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-21
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	17-Nov-2016 09:58
Ethylbenzene	ND		5.0	ug/Kg	1	17-Nov-2016 09:58
m,p-Xylene	ND		10	ug/Kg	1	17-Nov-2016 09:58
o-Xylene	ND		5.0	ug/Kg	1	17-Nov-2016 09:58
Toluene	ND		5.0	ug/Kg	1	17-Nov-2016 09:58
Xylenes, Total	ND		10	ug/Kg	1	17-Nov-2016 09:58
Surr: 1,2-Dichloroethane-d4	*95.6*		*70-128*	*%REC*	*1*	*17-Nov-2016 09:58*
Surr: 4-Bromofluorobenzene	*96.7*		*73-126*	*%REC*	*1*	*17-Nov-2016 09:58*
Surr: Dibromofluoromethane	*94.4*		*71-128*	*%REC*	*1*	*17-Nov-2016 09:58*
Surr: Toluene-d8	*96.7*		*73-127*	*%REC*	*1*	*17-Nov-2016 09:58*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 07:44
Surr: 4-Bromofluorobenzene	*86.8*		*70-130*	*%REC*	*1*	*15-Nov-2016 07:44*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 16-Nov-2016		Analyst: AAP
TPH (Diesel Range)	**2.4**		**1.7**	**mg/Kg**	1	19-Nov-2016 01:16
Surr: 2-Fluorobiphenyl	*64.3*		*60-135*	*%REC*	*1*	*19-Nov-2016 01:16*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	**6.55**		**5.00**	**mg/Kg**	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**3.45**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:36
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**63.8**		**5.00**	**mg/L**	10	28-Nov-2016 18:52
Magnesium	**13.2**		**5.00**	**mg/L**	10	28-Nov-2016 18:52
Sodium	**116**		**5.00**	**mg/L**	10	28-Nov-2016 18:52
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.31**		**0.476**	**mg/Kg**	1	21-Nov-2016 18:41
Barium	**142**		**0.476**	**mg/Kg**	1	21-Nov-2016 18:41
Boron	**3.19**		**2.38**	**mg/Kg**	1	21-Nov-2016 18:41
Cadmium	ND		0.476	mg/Kg	1	22-Nov-2016 15:27
Chromium	**6.55**		**0.476**	**mg/Kg**	1	21-Nov-2016 18:41
Copper	**5.00**		**0.190**	**mg/Kg**	1	21-Nov-2016 18:41
Lead	**5.43**		**0.476**	**mg/Kg**	1	22-Nov-2016 15:27
Nickel	**7.16**		**0.476**	**mg/Kg**	1	21-Nov-2016 18:41
Selenium	ND		0.476	mg/Kg	1	21-Nov-2016 18:41
Silver	ND		0.476	mg/Kg	1	21-Nov-2016 18:41
Zinc	**19.1**		**0.476**	**mg/Kg**	1	21-Nov-2016 18:41
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 21-Nov-2016		Analyst: JCJ
Mercury	**14.5**		**3.55**	**ug/Kg**	1	22-Nov-2016 16:37

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-7-2-3-110916
Collection Date: 09-Nov-2016 09:50

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-21
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**1.95**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 15:00
Electrical Conductivity, 1:1 aqueous	**1.09**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 15:00
Saturation % as decimal	**0.557**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 15:00
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.557**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:45
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**8.46**		**0.0100**	**wt%**	1	15-Nov-2016 09:57
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		1.96	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.46**	H	**0.100**	**pH Units**	1	28-Nov-2016 14:45
Temp Deg C @pH	**22.1**	H	**0**	**°C**	1	28-Nov-2016 14:45

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-7-7-8-110916
Collection Date: 09-Nov-2016 10:15

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-22
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	17-Nov-2016 10:24
Ethylbenzene	ND		5.0	ug/Kg	1	17-Nov-2016 10:24
m,p-Xylene	ND		10	ug/Kg	1	17-Nov-2016 10:24
o-Xylene	ND		5.0	ug/Kg	1	17-Nov-2016 10:24
Toluene	ND		5.0	ug/Kg	1	17-Nov-2016 10:24
Xylenes, Total	ND		10	ug/Kg	1	17-Nov-2016 10:24
Surr: 1,2-Dichloroethane-d4	*92.1*		*70-128*	*%REC*	*1*	*17-Nov-2016 10:24*
Surr: 4-Bromofluorobenzene	*102*		*73-126*	*%REC*	*1*	*17-Nov-2016 10:24*
Surr: Dibromofluoromethane	*43.0*	*S*	*71-128*	*%REC*	*1*	*17-Nov-2016 10:24*
Surr: Toluene-d8	*95.8*		*73-127*	*%REC*	*1*	*17-Nov-2016 10:24*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	**0.46**		**0.050**	**mg/Kg**	1	15-Nov-2016 08:01
Surr: 4-Bromofluorobenzene	*87.4*		*70-130*	*%REC*	*1*	*15-Nov-2016 08:01*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 16-Nov-2016		Analyst: AAP
TPH (Diesel Range)	**600**		**42**	**mg/Kg**	25	22-Nov-2016 01:58
Surr: 2-Fluorobiphenyl	*623*	*S*	*60-135*	*%REC*	*25*	*22-Nov-2016 01:58*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	**10.7**		**5.00**	**mg/Kg**	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**18.9**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**510**		**5.00**	**mg/L**	10	28-Nov-2016 18:41
Magnesium	**6.46**		**5.00**	**mg/L**	10	28-Nov-2016 18:41
Sodium	**1,570**		**5.00**	**mg/L**	10	28-Nov-2016 18:41
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**3.11**		**0.477**	**mg/Kg**	1	21-Nov-2016 18:46
Barium	**100**		**0.477**	**mg/Kg**	1	21-Nov-2016 18:46
Boron	**10.4**		**2.39**	**mg/Kg**	1	21-Nov-2016 18:46
Cadmium	ND		0.477	mg/Kg	1	22-Nov-2016 15:31
Chromium	**10.7**		**0.477**	**mg/Kg**	1	21-Nov-2016 18:46
Copper	**8.95**		**0.191**	**mg/Kg**	1	21-Nov-2016 18:46
Lead	**5.75**		**0.477**	**mg/Kg**	1	22-Nov-2016 15:31
Nickel	**6.76**		**0.477**	**mg/Kg**	1	21-Nov-2016 18:46
Selenium	ND		0.477	mg/Kg	1	21-Nov-2016 18:46
Silver	ND		0.477	mg/Kg	1	21-Nov-2016 18:46
Zinc	**28.3**		**0.477**	**mg/Kg**	1	21-Nov-2016 18:46
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 21-Nov-2016		Analyst: JCJ
Mercury	**13.7**		**3.54**	**ug/Kg**	1	22-Nov-2016 16:39

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-7-7-8-110916
Collection Date: 09-Nov-2016 10:15

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-22
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**15.9**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**12.2**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.765**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.765**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**30.8**		**0.0100**	**wt%**	1	15-Nov-2016 09:57
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		1.99	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**11.8**	H	**0.100**	**pH Units**	1	29-Nov-2016 12:00
Temp Deg C @pH	**22.4**	H	**0**	**°C**	1	29-Nov-2016 12:00

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-7-12-13-110916
Collection Date: 09-Nov-2016 10:30

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-23
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	17-Nov-2016 11:45
Ethylbenzene	ND		4.8	ug/Kg	1	17-Nov-2016 11:45
m,p-Xylene	ND		9.7	ug/Kg	1	17-Nov-2016 11:45
o-Xylene	ND		4.8	ug/Kg	1	17-Nov-2016 11:45
Toluene	ND		4.8	ug/Kg	1	17-Nov-2016 11:45
Xylenes, Total	ND		9.7	ug/Kg	1	17-Nov-2016 11:45
Surr: 1,2-Dichloroethane-d4	*90.5*		*70-128*	*%REC*	*1*	*17-Nov-2016 11:45*
Surr: 4-Bromofluorobenzene	*95.8*		*73-126*	*%REC*	*1*	*17-Nov-2016 11:45*
Surr: Dibromofluoromethane	*95.4*		*71-128*	*%REC*	*1*	*17-Nov-2016 11:45*
Surr: Toluene-d8	*95.4*		*73-127*	*%REC*	*1*	*17-Nov-2016 11:45*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 08:17
Surr: 4-Bromofluorobenzene	*82.0*		*70-130*	*%REC*	*1*	*15-Nov-2016 08:17*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Nov-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	16-Nov-2016 13:02
Surr: 2-Fluorobiphenyl	*62.6*		*60-135*	*%REC*	*1*	*16-Nov-2016 13:02*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	ND		5.00	mg/Kg	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**2.16**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:22
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**72.9**		**5.00**	**mg/L**	10	28-Nov-2016 18:44
Magnesium	**10.1**		**5.00**	**mg/L**	10	28-Nov-2016 18:44
Sodium	**74.3**		**5.00**	**mg/L**	10	28-Nov-2016 18:44
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**1.78**		**0.475**	**mg/Kg**	1	21-Nov-2016 18:50
Barium	**524**		**4.75**	**mg/Kg**	10	22-Nov-2016 14:07
Boron	**4.13**		**2.37**	**mg/Kg**	1	21-Nov-2016 18:50
Cadmium	ND		0.475	mg/Kg	1	22-Nov-2016 15:36
Chromium	**3.18**		**0.475**	**mg/Kg**	1	21-Nov-2016 18:50
Copper	**2.97**		**0.190**	**mg/Kg**	1	21-Nov-2016 18:50
Lead	**2.47**		**0.475**	**mg/Kg**	1	22-Nov-2016 15:36
Nickel	**3.85**		**0.475**	**mg/Kg**	1	21-Nov-2016 18:50
Selenium	ND		0.475	mg/Kg	1	21-Nov-2016 18:50
Silver	ND		0.475	mg/Kg	1	21-Nov-2016 18:50
Zinc	**9.33**		**0.475**	**mg/Kg**	1	21-Nov-2016 18:50
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 21-Nov-2016		Analyst: JCJ
Mercury	**7.33**		**3.51**	**ug/Kg**	1	22-Nov-2016 16:44

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-7-12-13-110916
Collection Date: 09-Nov-2016 10:30

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-23
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**1.41**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Electrical Conductivity, 1:1 aqueous	**0.574**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
Saturation % as decimal	**0.407**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 14:59
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.407**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:25
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**12.6**		**0.0100**	**wt%**	1	15-Nov-2016 09:57
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		1.96	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**9.01**	H	**0.100**	**pH Units**	1	29-Nov-2016 12:00
Temp Deg C @pH	**22.5**	H	**0**	**°C**	1	29-Nov-2016 12:00

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-8-2-3-110916
Collection Date: 09-Nov-2016 09:00

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-24
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	17-Nov-2016 12:12
Ethylbenzene	ND		4.9	ug/Kg	1	17-Nov-2016 12:12
m,p-Xylene	ND		9.8	ug/Kg	1	17-Nov-2016 12:12
o-Xylene	ND		4.9	ug/Kg	1	17-Nov-2016 12:12
Toluene	ND		4.9	ug/Kg	1	17-Nov-2016 12:12
Xylenes, Total	ND		9.8	ug/Kg	1	17-Nov-2016 12:12
Surr: 1,2-Dichloroethane-d4	*96.5*		*70-128*	*%REC*	*1*	*17-Nov-2016 12:12*
Surr: 4-Bromofluorobenzene	*93.4*		*73-126*	*%REC*	*1*	*17-Nov-2016 12:12*
Surr: Dibromofluoromethane	*59.8*	*S*	*71-128*	*%REC*	*1*	*17-Nov-2016 12:12*
Surr: Toluene-d8	*96.8*		*73-127*	*%REC*	*1*	*17-Nov-2016 12:12*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 10:59
Surr: 4-Bromofluorobenzene	*72.4*		*70-130*	*%REC*	*1*	*15-Nov-2016 10:59*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 16-Nov-2016		Analyst: AAP
TPH (Diesel Range)	**1.9**		**1.7**	**mg/Kg**	1	19-Nov-2016 02:54
Surr: 2-Fluorobiphenyl	*66.7*		*60-135*	*%REC*	*1*	*19-Nov-2016 02:54*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	ND		5.00	mg/Kg	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**3.31**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:36
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**698**		**5.00**	**mg/L**	10	28-Nov-2016 18:58
Magnesium	ND		5.00	mg/L	10	28-Nov-2016 18:58
Sodium	**318**		**5.00**	**mg/L**	10	28-Nov-2016 18:58
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.77**		**0.486**	**mg/Kg**	1	21-Nov-2016 18:55
Barium	**144**		**0.486**	**mg/Kg**	1	21-Nov-2016 18:55
Boron	ND		12.2	mg/Kg	5	22-Nov-2016 14:12
Cadmium	ND		0.486	mg/Kg	1	22-Nov-2016 15:40
Chromium	**4.95**		**0.486**	**mg/Kg**	1	21-Nov-2016 18:55
Copper	**3.86**		**0.194**	**mg/Kg**	1	21-Nov-2016 18:55
Lead	**4.47**		**0.486**	**mg/Kg**	1	22-Nov-2016 15:40
Nickel	**5.73**		**0.486**	**mg/Kg**	1	21-Nov-2016 18:55
Selenium	ND		0.486	mg/Kg	1	21-Nov-2016 18:55
Silver	ND		0.486	mg/Kg	1	21-Nov-2016 18:55
Zinc	**23.1**		**0.486**	**mg/Kg**	1	21-Nov-2016 18:55
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 21-Nov-2016		Analyst: JCJ
Mercury	**13.4**		**3.45**	**ug/Kg**	1	22-Nov-2016 16:46

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-8-2-3-110916
Collection Date: 09-Nov-2016 09:00

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-24
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**9.33**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 15:00
Electrical Conductivity, 1:1 aqueous	**5.14**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 15:00
Saturation % as decimal	**0.551**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 15:00
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.551**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:45
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**12.5**		**0.0100**	**wt%**	1	15-Nov-2016 09:57
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		2.00	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**10.3**	H	**0.100**	**pH Units**	1	29-Nov-2016 12:00
Temp Deg C @pH	**22.5**	H	**0**	**°C**	1	29-Nov-2016 12:00

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-8-11-12-110916
Collection Date: 09-Nov-2016 09:30

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-25
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	17-Nov-2016 12:39
Ethylbenzene	ND		5.0	ug/Kg	1	17-Nov-2016 12:39
m,p-Xylene	ND		10	ug/Kg	1	17-Nov-2016 12:39
o-Xylene	ND		5.0	ug/Kg	1	17-Nov-2016 12:39
Toluene	ND		5.0	ug/Kg	1	17-Nov-2016 12:39
Xylenes, Total	ND		10	ug/Kg	1	17-Nov-2016 12:39
Surr: 1,2-Dichloroethane-d4	*108*		*70-128*	*%REC*	*1*	*17-Nov-2016 12:39*
Surr: 4-Bromofluorobenzene	*105*		*73-126*	*%REC*	*1*	*17-Nov-2016 12:39*
Surr: Dibromofluoromethane	*100*		*71-128*	*%REC*	*1*	*17-Nov-2016 12:39*
Surr: Toluene-d8	*96.1*		*73-127*	*%REC*	*1*	*17-Nov-2016 12:39*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	**0.12**		**0.050**	**mg/Kg**	1	15-Nov-2016 11:16
Surr: 4-Bromofluorobenzene	*80.7*		*70-130*	*%REC*	*1*	*15-Nov-2016 11:16*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 16-Nov-2016		Analyst: AAP
TPH (Diesel Range)	**11**		**1.7**	**mg/Kg**	1	19-Nov-2016 03:19
Surr: 2-Fluorobiphenyl	*62.7*		*60-135*	*%REC*	*1*	*19-Nov-2016 03:19*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	ND		5.00	mg/Kg	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**21.5**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:36
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**528**		**5.00**	**mg/L**	10	28-Nov-2016 19:01
Magnesium	**50.8**		**5.00**	**mg/L**	10	28-Nov-2016 19:01
Sodium	**1,930**		**50.0**	**mg/L**	100	29-Nov-2016 09:50
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.03**		**0.457**	**mg/Kg**	1	21-Nov-2016 18:59
Barium	**219**		**2.28**	**mg/Kg**	5	22-Nov-2016 14:16
Boron	ND		11.4	mg/Kg	5	22-Nov-2016 14:16
Cadmium	ND		0.457	mg/Kg	1	22-Nov-2016 15:45
Chromium	**4.92**		**0.457**	**mg/Kg**	1	21-Nov-2016 18:59
Copper	**3.30**		**0.183**	**mg/Kg**	1	21-Nov-2016 18:59
Lead	**4.14**		**0.457**	**mg/Kg**	1	22-Nov-2016 15:45
Nickel	**6.20**		**0.457**	**mg/Kg**	1	21-Nov-2016 18:59
Selenium	ND		0.457	mg/Kg	1	21-Nov-2016 18:59
Silver	ND		0.457	mg/Kg	1	21-Nov-2016 18:59
Zinc	**14.2**		**0.457**	**mg/Kg**	1	21-Nov-2016 18:59
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 21-Nov-2016		Analyst: JCJ
Mercury	**14.6**		**3.45**	**ug/Kg**	1	22-Nov-2016 16:56

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-8-11-12-110916
Collection Date: 09-Nov-2016 09:30

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-25
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**30.8**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 15:00
Electrical Conductivity, 1:1 aqueous	**14.5**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 15:00
Saturation % as decimal	**0.472**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 15:00
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.472**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:45
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**14.2**		**0.0100**	**wt%**	1	15-Nov-2016 09:57
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 22-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		2.00	mg/kg	1	23-Nov-2016 17:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.28**	H	**0.100**	**pH Units**	1	29-Nov-2016 12:00
Temp Deg C @pH	**22.5**	H	**0**	**°C**	1	29-Nov-2016 12:00

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-8-14-15-110916
Collection Date: 09-Nov-2016 09:50

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-26
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	17-Nov-2016 13:06
Ethylbenzene	ND		5.0	ug/Kg	1	17-Nov-2016 13:06
m,p-Xylene	ND		9.9	ug/Kg	1	17-Nov-2016 13:06
o-Xylene	ND		5.0	ug/Kg	1	17-Nov-2016 13:06
Toluene	ND		5.0	ug/Kg	1	17-Nov-2016 13:06
Xylenes, Total	ND		9.9	ug/Kg	1	17-Nov-2016 13:06
Surr: 1,2-Dichloroethane-d4	*87.5*		*70-128*	*%REC*	*1*	*17-Nov-2016 13:06*
Surr: 4-Bromofluorobenzene	*98.5*		*73-126*	*%REC*	*1*	*17-Nov-2016 13:06*
Surr: Dibromofluoromethane	*99.2*		*71-128*	*%REC*	*1*	*17-Nov-2016 13:06*
Surr: Toluene-d8	*96.5*		*73-127*	*%REC*	*1*	*17-Nov-2016 13:06*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: SFE
Gasoline Range Organics	ND		0.050	mg/Kg	1	15-Nov-2016 10:10
Surr: 4-Bromofluorobenzene	*85.7*		*70-130*	*%REC*	*1*	*15-Nov-2016 10:10*
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	*70.5*		*60-135*	*%REC*	*1*	*19-Nov-2016 03:43*
TRIVALENT CHROMIUM		**Method:Calculation**				Analyst: DQ
Chromium, Trivalent	**5.01**		**5.00**	**mg/Kg**	1	29-Nov-2016 14:34
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Sodium Adsorption Ratio	**6.01**		**0.0100**	**meq/meq**	1	29-Nov-2016 10:36
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020**		Prep:La29B-6020 / 26-Nov-2016		Analyst: RPM
Calcium	**1,200**		**5.00**	**mg/L**	10	28-Nov-2016 19:04
Magnesium	**191**		**5.00**	**mg/L**	10	28-Nov-2016 19:04
Sodium	**850**		**5.00**	**mg/L**	10	28-Nov-2016 19:04
METALS BY SW6020A		**Method:SW6020**		Prep:SW3050A / 18-Nov-2016		Analyst: JDE
Arsenic	**2.07**		**0.462**	**mg/Kg**	1	21-Nov-2016 19:03
Barium	**298**		**2.31**	**mg/Kg**	5	22-Nov-2016 14:29
Boron	ND		11.6	mg/Kg	5	22-Nov-2016 14:29
Cadmium	ND		0.462	mg/Kg	1	22-Nov-2016 15:49
Chromium	**5.01**		**0.462**	**mg/Kg**	1	21-Nov-2016 19:03
Copper	**3.61**		**0.185**	**mg/Kg**	1	21-Nov-2016 19:03
Lead	**3.85**		**0.462**	**mg/Kg**	1	22-Nov-2016 15:49
Nickel	**5.48**		**0.462**	**mg/Kg**	1	21-Nov-2016 19:03
Selenium	ND		0.462	mg/Kg	1	21-Nov-2016 19:03
Silver	ND		0.462	mg/Kg	1	21-Nov-2016 19:03
Zinc	**14.0**		**0.462**	**mg/Kg**	1	21-Nov-2016 19:03
MERCURY BY SW7471B		**Method:SW7471A**		Prep:SW7471A / 21-Nov-2016		Analyst: JCJ
Mercury	**5.82**		**3.54**	**ug/Kg**	1	22-Nov-2016 16:58

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: GP-9-8-14-15-110916
Collection Date: 09-Nov-2016 09:50

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-26
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY	**Method:LaDNR-29B EC**					Analyst: KMU
Electrical Conductivity @ saturation	**25.7**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 15:00
Electrical Conductivity, 1:1 aqueous	**14.1**		**0.0100**	**mmhos/cm @25°C**	1	29-Nov-2016 15:00
Saturation % as decimal	**0.547**		**0**	**mmhos/cm @25°C**	1	29-Nov-2016 15:00
LA29B SATURATION POINT (AS FRACTION)	**Method:LaDNR-29B SP**					Analyst: KAH
Saturation Point	**0.547**		**0.100**	**SP as fraction**	1	29-Nov-2016 10:45
MOISTURE	**Method:SW3550**					Analyst: DFF
Percent Moisture	**16.7**		**0.0100**	**wt%**	1	15-Nov-2016 09:57
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**			Prep:SW3060A / 28-Nov-2016		Analyst: KVL
Chromium, Hexavalent	ND		1.99	mg/kg	1	28-Nov-2016 15:15
PH SOIL BY SW9045D	**Method:SW9045B**					Analyst: SAP
pH	**8.10**	H	**0.100**	**pH Units**	1	29-Nov-2016 12:00
Temp Deg C @pH	**22.5**	H	**0**	**°C**	1	29-Nov-2016 12:00

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: Trip Blank - 100716-77
Collection Date: 09-Nov-2016 00:00

ANALYTICAL REPORT
WorkOrder:HS16110618
Lab ID:HS16110618-27
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	15-Nov-2016 05:58
Ethylbenzene	ND		1.0	ug/L	1	15-Nov-2016 05:58
m,p-Xylene	ND		2.0	ug/L	1	15-Nov-2016 05:58
o-Xylene	ND		1.0	ug/L	1	15-Nov-2016 05:58
Toluene	ND		1.0	ug/L	1	15-Nov-2016 05:58
Xylenes, Total	ND		1.0	ug/L	1	15-Nov-2016 05:58
Surr: 1,2-Dichloroethane-d4	*102*		*71-125*	*%REC*	*1*	*15-Nov-2016 05:58*
Surr: 4-Bromofluorobenzene	*96.3*		*70-125*	*%REC*	*1*	*15-Nov-2016 05:58*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*15-Nov-2016 05:58*
Surr: Toluene-d8	*111*		*75-125*	*%REC*	*1*	*15-Nov-2016 05:58*

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

WEIGHT LOG

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

Batch ID: 1371 **Method:** GASOLINE RANGE ORGANICS BY SW8015C **Prep:**

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS16110618-01	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110618-02	1	5.05 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110618-03	1	5.04 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110618-04	1	5.05 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110618-05	1	5.05 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110618-06	1	5.02 (g)	5 (mL)	1	Bulk (5030B)
HS16110618-07	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS16110618-08	1	5.02 (g)	5 (mL)	1	Bulk (5030B)
HS16110618-10	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS16110618-11	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110618-12	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110618-13	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110618-14	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS16110618-15	1	5 (g)	5 (mL)	1	Bulk (5030B)
HS16110618-16	1	5.02 (g)	5 (mL)	1	Bulk (5030B)
HS16110618-17	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS16110618-19	1	5.04 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110618-20	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS16110618-21	1	5.02 (g)	5 (mL)	1	Bulk (5030B)
HS16110618-22	1	5.05 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110618-23	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110618-24	1	5.04 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110618-25	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS16110618-26	1	5.02 (g)	5 (mL)	1	Bulk (5030B)

Batch ID: 1377 **Method:** VOLATILES BY SW8260C

SampID	Container	Sample Wt/Vol	Final Volume	Weight Factor	Container Type
HS16110618-01	1	5.122 (g)	5 (mL)	0.98	Bulk (5030B)
HS16110618-02	1	4.905 (g)	5 (mL)	1.02	Bulk (5030B)
HS16110618-03	1	5.008 (g)	5 (mL)	1	Bulk (5030B)
HS16110618-04	1	5.009 (g)	5 (mL)	1	Bulk (5030B)
HS16110618-05	1	4.925 (g)	5 (mL)	1.02	Bulk (5030B)
HS16110618-06	1	4.926 (g)	5 (mL)	1.02	Bulk (5030B)
HS16110618-07	1	5.078 (g)	5 (mL)	0.98	Bulk (5030B)
HS16110618-08	1	4.959 (g)	5 (mL)	1.01	Bulk (5030B)
HS16110618-10	1	5.094 (g)	5 (mL)	0.98	Bulk (5030B)
HS16110618-11	1	5.075 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110618-12	1	5.225 (g)	5 (mL)	0.96	Bulk (5030B)
HS16110618-13	1	5.202 (g)	5 (mL)	0.96	Bulk (5030B)
HS16110618-14	1	4.972 (g)	5 (mL)	1.01	Bulk (5030B)
HS16110618-15	1	5.064 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110618-16	1	5.234 (g)	5 (mL)	0.96	Bulk (5030B)
HS16110618-17	1	5.256 (g)	5 (mL)	0.95	Bulk (5030B)
HS16110618-19	1	5.036 (g)	5 (mL)	0.99	Bulk (5030B)
HS16110618-20	1	4.949 (g)	5 (mL)	1.01	Bulk (5030B)
HS16110618-21	1	4.975 (g)	5 (mL)	1.01	Bulk (5030B)
HS16110618-22	1	4.963 (g)	5 (mL)	1.01	Bulk (5030B)
HS16110618-23	1	5.138 (g)	5 (mL)	0.97	Bulk (5030B)
HS16110618-24	1	5.122 (g)	5 (mL)	0.98	Bulk (5030B)
HS16110618-25	1	5.021 (g)	5 (mL)	1	Bulk (5030B)
HS16110618-26	1	5.055 (g)	5 (mL)	0.99	Bulk (5030B)

WEIGHT LOG

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

Batch ID: 109870 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110618-23	1	30.04	1 (mL)	0.03329

Batch ID: 109871 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110618-01	1	30.03	1 (mL)	0.0333
HS16110618-02	1	30.01	1 (mL)	0.03332
HS16110618-03	1	30.08	1 (mL)	0.03324
HS16110618-04	1	30.02	1 (mL)	0.03331
HS16110618-05	1	30.09	1 (mL)	0.03323
HS16110618-06	1	30.08	1 (mL)	0.03324
HS16110618-07	1	30.05	1 (mL)	0.03328
HS16110618-08	1	30.07	1 (mL)	0.03326
HS16110618-10	1	30.09	1 (mL)	0.03323
HS16110618-11	1	30.01	1 (mL)	0.03332
HS16110618-12	1	30.03	1 (mL)	0.0333
HS16110618-13	1	30.06	1 (mL)	0.03327

Batch ID: 109913 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110618-14	1	30.07	1 (mL)	0.03326
HS16110618-15	1	30.09	1 (mL)	0.03323
HS16110618-16	1	30.01	1 (mL)	0.03332
HS16110618-17	1	30.04	1 (mL)	0.03329
HS16110618-19	1	30.07	1 (mL)	0.03326
HS16110618-20	1	30.05	1 (mL)	0.03328
HS16110618-21	1	30.01	1 (mL)	0.03332
HS16110618-22	1	30.02	1 (mL)	0.03331
HS16110618-24	1	30.08	1 (mL)	0.03324
HS16110618-25	1	30.09	1 (mL)	0.03323
HS16110618-26	1	30.02	1 (mL)	0.03331

WEIGHT LOG

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

Batch ID: 110000 **Method:** MERCURY BY SW7471B **Prep:** HG_S_LOWPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110618-01	1	0.5669	40 (mL)	70.56
HS16110618-02	1	0.5954	40 (mL)	67.18
HS16110618-03	1	0.5764	40 (mL)	69.4
HS16110618-04	1	0.584	40 (mL)	68.49
HS16110618-05	1	0.5686	40 (mL)	70.35
HS16110618-06	1	0.5618	40 (mL)	71.2
HS16110618-07	1	0.5989	40 (mL)	66.79
HS16110618-08	1	0.5987	40 (mL)	66.81
HS16110618-10	1	0.592	40 (mL)	67.57
HS16110618-11	1	0.5921	40 (mL)	67.56
HS16110618-12	1	0.5761	40 (mL)	69.43
HS16110618-13	1	0.5677	40 (mL)	70.46
HS16110618-14	1	0.5607	40 (mL)	71.34
HS16110618-15	1	0.5987	40 (mL)	66.81
HS16110618-16	1	0.5707	40 (mL)	70.09
HS16110618-17	1	0.5696	40 (mL)	70.22

Batch ID: 110001 **Method:** METALS BY SW6020A **Prep:** 3050_I_LOW

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110618-01	1	0.5146	50 (mL)	97.16
HS16110618-02	1	0.5298	50 (mL)	94.38
HS16110618-03	1	0.5215	50 (mL)	95.88
HS16110618-04	1	0.5308	50 (mL)	94.2
HS16110618-05	1	0.5309	50 (mL)	94.18
HS16110618-06	1	0.5442	50 (mL)	91.88

Batch ID: 110012 **Method:** METALS BY SW6020A **Prep:** 3050_I_LOW

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110618-07	1	0.5302	50 (mL)	94.3
HS16110618-08	1	0.5426	50 (mL)	92.15
HS16110618-10	1	0.5481	50 (mL)	91.22
HS16110618-11	1	0.5458	50 (mL)	91.61
HS16110618-12	1	0.5211	50 (mL)	95.95
HS16110618-13	1	0.5311	50 (mL)	94.14
HS16110618-14	1	0.5292	50 (mL)	94.48
HS16110618-15	1	0.5327	50 (mL)	93.86
HS16110618-16	1	0.5313	50 (mL)	94.11
HS16110618-17	1	0.5147	50 (mL)	97.14
HS16110618-19	1	0.5394	50 (mL)	92.7
HS16110618-20	1	0.5441	50 (mL)	91.89
HS16110618-21	1	0.5257	50 (mL)	95.11
HS16110618-22	1	0.5237	50 (mL)	95.47
HS16110618-23	1	0.5265	50 (mL)	94.97
HS16110618-24	1	0.5144	50 (mL)	97.2
HS16110618-25	1	0.5475	50 (mL)	91.32
HS16110618-26	1	0.5409	50 (mL)	92.44

WEIGHT LOG

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

Batch ID: 110051 **Method:** MERCURY BY SW7471B **Prep:** HG_S_LOWPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110618-19	1	0.5846	40 (mL)	68.42
HS16110618-20	1	0.5588	40 (mL)	71.58
HS16110618-21	1	0.5621	40 (mL)	71.16
HS16110618-22	1	0.5643	40 (mL)	70.88
HS16110618-23	1	0.5679	40 (mL)	70.43
HS16110618-24	1	0.5778	40 (mL)	69.23
HS16110618-25	1	0.5778	40 (mL)	69.23
HS16110618-26	1	0.5631	40 (mL)	71.04

Batch ID: 110108 **Method:** HEXAVALENT CHROMIUM BY SW7196A **Prep:** CR6_S_PR3060A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110618-01	1	2.5195	100 (mL)	39.69
HS16110618-02	1	2.5032	100 (mL)	39.95
HS16110618-03	1	2.5056	100 (mL)	39.91

Batch ID: 110111 **Method:** HEXAVALENT CHROMIUM BY SW7196A **Prep:** CR6_S_PR3060A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110618-04	1	2.5024	100 (mL)	39.96
HS16110618-05	1	2.5225	100 (mL)	39.64
HS16110618-06	1	2.5079	100 (mL)	39.87
HS16110618-07	1	2.5083	100 (mL)	39.87
HS16110618-08	1	2.5015	100 (mL)	39.98
HS16110618-10	1	2.5114	100 (mL)	39.82
HS16110618-11	1	2.534	100 (mL)	39.46
HS16110618-12	1	2.502	100 (mL)	39.97
HS16110618-13	1	2.5185	100 (mL)	39.71
HS16110618-14	1	2.5235	100 (mL)	39.63
HS16110618-15	1	2.5146	100 (mL)	39.77
HS16110618-16	1	2.5113	100 (mL)	39.82
HS16110618-17	1	2.5076	100 (mL)	39.88
HS16110618-19	1	2.5058	100 (mL)	39.91
HS16110618-20	1	2.5031	100 (mL)	39.95
HS16110618-21	1	2.5451	100 (mL)	39.29
HS16110618-22	1	2.5128	100 (mL)	39.8
HS16110618-23	1	2.546	100 (mL)	39.28
HS16110618-24	1	2.5003	100 (mL)	40
HS16110618-25	1	2.5024	100 (mL)	39.96

Batch ID: 110170 **Method:** HEXAVALENT CHROMIUM BY SW7196A **Prep:** CR6_S_PR3060A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110618-26	1	2.5083	100 (mL)	39.87

WEIGHT LOG

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

Batch ID: 110222 **Method:** LA 29B - 1:1 SOLUBLE CATIONS FOR SAR **Prep:** LA29B SAR CATPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110618-01	1	75.0012	75 (mL)	1
HS16110618-02	1	75.0025	75 (mL)	1
HS16110618-03	1	75.0292	75 (mL)	0.9996
HS16110618-04	1	75.022	75 (mL)	0.9997
HS16110618-05	1	75.002	75 (mL)	1
HS16110618-06	1	75.0099	75 (mL)	0.9999
HS16110618-07	1	75.046	75 (mL)	0.9994
HS16110618-08	1	75.036	75 (mL)	0.9995
HS16110618-10	1	75.0695	75 (mL)	0.9991
HS16110618-11	1	75.0718	75 (mL)	0.999
HS16110618-12	1	75.038	75 (mL)	0.9995
HS16110618-13	1	75.0625	75 (mL)	0.9992
HS16110618-14	1	75.0873	75 (mL)	0.9988
HS16110618-15	1	75.028	75 (mL)	0.9996
HS16110618-16	1	75.0365	75 (mL)	0.9995
HS16110618-17	1	75.0738	75 (mL)	0.999
HS16110618-19	1	75.0718	75 (mL)	0.999
HS16110618-20	1	75.0635	75 (mL)	0.9992
HS16110618-22	1	75.0038	75 (mL)	0.9999
HS16110618-23	1	75.04	75 (mL)	0.9995

Batch ID: 110223 **Method:** LA 29B - 1:1 SOLUBLE CATIONS FOR SAR **Prep:** LA29B SAR CATPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16110618-21	1	75.0289	75 (mL)	0.9996
HS16110618-24	1	75.039	75 (mL)	0.9995
HS16110618-25	1	75.0554	75 (mL)	0.9993
HS16110618-26	1	75.011	75 (mL)	0.9999

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 109870	**Test Name :** TPH DRO/ORO BY SW8015C			**Matrix:** Soil		
HS16110618-23	GP-9-7-12-13-110916	09 Nov 2016 10:30		15 Nov 2016 12:33	16 Nov 2016 13:02	1
Batch ID 109871	**Test Name :** TPH DRO/ORO BY SW8015C			**Matrix:** Soil		
HS16110618-01	GP-9-1-2-3-110816	08 Nov 2016 13:30		15 Nov 2016 12:40	16 Nov 2016 06:55	1
HS16110618-02	GP-9-1-6-7-110816	08 Nov 2016 14:00		15 Nov 2016 12:40	16 Nov 2016 07:19	1
HS16110618-03	GP-9-1-9-10-110816	08 Nov 2016 14:30		15 Nov 2016 12:40	16 Nov 2016 09:22	1
HS16110618-04	GP-9-2-0-1-110816	08 Nov 2016 14:40		15 Nov 2016 12:40	16 Nov 2016 09:46	1
HS16110618-05	GP-9-2-5-6-110816	08 Nov 2016 14:50		15 Nov 2016 12:40	16 Nov 2016 10:11	1
HS16110618-06	GP-9-2-9-10-110816	08 Nov 2016 15:00		15 Nov 2016 12:40	16 Nov 2016 13:02	1
HS16110618-07	GP-9-3-2-3-110816	08 Nov 2016 15:30		15 Nov 2016 12:40	16 Nov 2016 10:35	1
HS16110618-08	GP-9-3-3-4-110816	08 Nov 2016 15:40		15 Nov 2016 12:40	16 Nov 2016 11:00	1
HS16110618-10	GP-9-3-12-13-110816	08 Nov 2016 16:00		15 Nov 2016 12:40	16 Nov 2016 11:24	1
HS16110618-11	GP-9-4-2-3-110816	08 Nov 2016 07:40		15 Nov 2016 12:40	16 Nov 2016 11:49	1
HS16110618-12	GP-9-4-6-7-110816	08 Nov 2016 07:50		15 Nov 2016 12:40	22 Nov 2016 04:01	100
HS16110618-13	GP-9-4-14-15-110816	08 Nov 2016 08:30		15 Nov 2016 12:40	16 Nov 2016 12:38	1
Batch ID 109913	**Test Name :** TPH DRO/ORO BY SW8015C			**Matrix:** Soil		
HS16110618-14	GP-9-5-2-3-110916	09 Nov 2016 11:00		16 Nov 2016 11:41	18 Nov 2016 22:01	1
HS16110618-15	GP-9-5-7-8-110916	09 Nov 2016 11:30		16 Nov 2016 11:41	18 Nov 2016 22:25	1
HS16110618-16	GP-9-5-10-11-110916	09 Nov 2016 11:50		16 Nov 2016 11:41	18 Nov 2016 23:39	1
HS16110618-17	GP-9-6-2-3-110916	09 Nov 2016 10:30		16 Nov 2016 11:41	18 Nov 2016 00:03	1
HS16110618-19	GP-9-6-5-6-110916	09 Nov 2016 10:40		16 Nov 2016 11:41	18 Nov 2016 00:27	1
HS16110618-20	GP-9-6-13-14-110916	09 Nov 2016 10:50		16 Nov 2016 11:41	18 Nov 2016 00:52	1
HS16110618-21	GP-9-7-2-3-110916	09 Nov 2016 09:50		16 Nov 2016 11:41	19 Nov 2016 01:16	1
HS16110618-22	GP-9-7-7-8-110916	09 Nov 2016 10:15		16 Nov 2016 11:41	22 Nov 2016 01:58	25
HS16110618-24	GP-9-8-2-3-110916	09 Nov 2016 09:00		16 Nov 2016 11:41	19 Nov 2016 02:54	1
HS16110618-25	GP-9-8-11-12-110916	09 Nov 2016 09:30		16 Nov 2016 11:41	19 Nov 2016 03:19	1
HS16110618-26	GP-9-8-14-15-110916	09 Nov 2016 09:50		16 Nov 2016 11:41	19 Nov 2016 03:43	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 110000	**Test Name :** MERCURY BY SW7471B			**Matrix:** Soil		
HS16110618-01	GP-9-1-2-3-110816	08 Nov 2016 13:30		18 Nov 2016 11:00	18 Nov 2016 18:01	1
HS16110618-02	GP-9-1-6-7-110816	08 Nov 2016 14:00		18 Nov 2016 11:00	18 Nov 2016 18:03	1
HS16110618-03	GP-9-1-9-10-110816	08 Nov 2016 14:30		18 Nov 2016 11:00	18 Nov 2016 18:05	1
HS16110618-04	GP-9-2-0-1-110816	08 Nov 2016 14:40		18 Nov 2016 11:00	18 Nov 2016 18:06	1
HS16110618-05	GP-9-2-5-6-110816	08 Nov 2016 14:50		18 Nov 2016 11:00	18 Nov 2016 18:08	1
HS16110618-06	GP-9-2-9-10-110816	08 Nov 2016 15:00		18 Nov 2016 11:00	18 Nov 2016 18:13	1
HS16110618-07	GP-9-3-2-3-110816	08 Nov 2016 15:30		18 Nov 2016 11:00	18 Nov 2016 18:18	1
HS16110618-08	GP-9-3-3-4-110816	08 Nov 2016 15:40		18 Nov 2016 11:00	18 Nov 2016 18:20	1
HS16110618-10	GP-9-3-12-13-110816	08 Nov 2016 16:00		18 Nov 2016 11:00	18 Nov 2016 18:22	1
HS16110618-11	GP-9-4-2-3-110816	08 Nov 2016 07:40		18 Nov 2016 11:00	18 Nov 2016 18:24	1
HS16110618-12	GP-9-4-6-7-110816	08 Nov 2016 07:50		18 Nov 2016 11:00	18 Nov 2016 18:25	1
HS16110618-13	GP-9-4-14-15-110816	08 Nov 2016 08:30		18 Nov 2016 11:00	18 Nov 2016 18:27	1
HS16110618-14	GP-9-5-2-3-110916	09 Nov 2016 11:00		18 Nov 2016 11:00	18 Nov 2016 18:29	1
HS16110618-15	GP-9-5-7-8-110916	09 Nov 2016 11:30		18 Nov 2016 11:00	18 Nov 2016 18:34	1
HS16110618-16	GP-9-5-10-11-110916	09 Nov 2016 11:50		18 Nov 2016 11:00	18 Nov 2016 18:36	1
HS16110618-17	GP-9-6-2-3-110916	09 Nov 2016 10:30		18 Nov 2016 11:00	18 Nov 2016 18:37	1
Batch ID 110001	**Test Name :** METALS BY SW6020A			**Matrix:** Soil		
HS16110618-01	GP-9-1-2-3-110816	08 Nov 2016 13:30		18 Nov 2016 13:31	18 Nov 2016 19:39	1
HS16110618-02	GP-9-1-6-7-110816	08 Nov 2016 14:00		18 Nov 2016 13:31	18 Nov 2016 19:43	1
HS16110618-03	GP-9-1-9-10-110816	08 Nov 2016 14:30		18 Nov 2016 13:31	21 Nov 2016 13:30	10
HS16110618-03	GP-9-1-9-10-110816	08 Nov 2016 14:30		18 Nov 2016 13:31	18 Nov 2016 19:48	1
HS16110618-04	GP-9-2-0-1-110816	08 Nov 2016 14:40		18 Nov 2016 13:31	18 Nov 2016 19:52	1
HS16110618-05	GP-9-2-5-6-110816	08 Nov 2016 14:50		18 Nov 2016 13:31	18 Nov 2016 19:56	1
HS16110618-06	GP-9-2-9-10-110816	08 Nov 2016 15:00		18 Nov 2016 13:31	21 Nov 2016 13:34	10
HS16110618-06	GP-9-2-9-10-110816	08 Nov 2016 15:00		18 Nov 2016 13:31	18 Nov 2016 20:01	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 110012	**Test Name :** METALS BY SW6020A			**Matrix:** Soil		
HS16110618-07	GP-9-3-2-3-110816	08 Nov 2016 15:30		18 Nov 2016 14:45	22 Nov 2016 13:00	10
HS16110618-07	GP-9-3-2-3-110816	08 Nov 2016 15:30		18 Nov 2016 14:45	21 Nov 2016 16:02	1
HS16110618-08	GP-9-3-3-4-110816	08 Nov 2016 15:40		18 Nov 2016 14:45	21 Nov 2016 16:06	1
HS16110618-10	GP-9-3-12-13-110816	08 Nov 2016 16:00		18 Nov 2016 14:45	22 Nov 2016 13:04	10
HS16110618-10	GP-9-3-12-13-110816	08 Nov 2016 16:00		18 Nov 2016 14:45	21 Nov 2016 16:11	1
HS16110618-11	GP-9-4-2-3-110816	08 Nov 2016 07:40		18 Nov 2016 14:45	21 Nov 2016 16:15	1
HS16110618-12	GP-9-4-6-7-110816	08 Nov 2016 07:50		18 Nov 2016 14:45	22 Nov 2016 13:08	10
HS16110618-12	GP-9-4-6-7-110816	08 Nov 2016 07:50		18 Nov 2016 14:45	21 Nov 2016 16:20	1
HS16110618-13	GP-9-4-14-15-110816	08 Nov 2016 08:30		18 Nov 2016 14:45	22 Nov 2016 13:13	10
HS16110618-13	GP-9-4-14-15-110816	08 Nov 2016 08:30		18 Nov 2016 14:45	21 Nov 2016 16:24	1
HS16110618-14	GP-9-5-2-3-110916	09 Nov 2016 11:00		18 Nov 2016 14:45	22 Nov 2016 13:17	10
HS16110618-14	GP-9-5-2-3-110916	09 Nov 2016 11:00		18 Nov 2016 14:45	21 Nov 2016 16:29	1
HS16110618-15	GP-9-5-7-8-110916	09 Nov 2016 11:30		18 Nov 2016 14:45	22 Nov 2016 13:22	10
HS16110618-15	GP-9-5-7-8-110916	09 Nov 2016 11:30		18 Nov 2016 14:45	21 Nov 2016 16:46	1
HS16110618-16	GP-9-5-10-11-110916	09 Nov 2016 11:50		18 Nov 2016 14:45	22 Nov 2016 13:26	5
HS16110618-16	GP-9-5-10-11-110916	09 Nov 2016 11:50		18 Nov 2016 14:45	21 Nov 2016 16:51	1
HS16110618-17	GP-9-6-2-3-110916	09 Nov 2016 10:30		18 Nov 2016 14:45	21 Nov 2016 17:12	1
HS16110618-19	GP-9-6-5-6-110916	09 Nov 2016 10:40		18 Nov 2016 14:45	22 Nov 2016 15:18	1
HS16110618-19	GP-9-6-5-6-110916	09 Nov 2016 10:40		18 Nov 2016 14:45	21 Nov 2016 18:32	1
HS16110618-20	GP-9-6-13-14-110916	09 Nov 2016 10:50		18 Nov 2016 14:45	22 Nov 2016 15:23	1
HS16110618-20	GP-9-6-13-14-110916	09 Nov 2016 10:50		18 Nov 2016 14:45	22 Nov 2016 14:03	10
HS16110618-20	GP-9-6-13-14-110916	09 Nov 2016 10:50		18 Nov 2016 14:45	21 Nov 2016 18:37	1
HS16110618-21	GP-9-7-2-3-110916	09 Nov 2016 09:50		18 Nov 2016 14:45	22 Nov 2016 15:27	1
HS16110618-21	GP-9-7-2-3-110916	09 Nov 2016 09:50		18 Nov 2016 14:45	21 Nov 2016 18:41	1
HS16110618-22	GP-9-7-7-8-110916	09 Nov 2016 10:15		18 Nov 2016 14:45	22 Nov 2016 15:31	1
HS16110618-22	GP-9-7-7-8-110916	09 Nov 2016 10:15		18 Nov 2016 14:45	21 Nov 2016 18:46	1
HS16110618-23	GP-9-7-12-13-110916	09 Nov 2016 10:30		18 Nov 2016 14:45	22 Nov 2016 15:36	1
HS16110618-23	GP-9-7-12-13-110916	09 Nov 2016 10:30		18 Nov 2016 14:45	22 Nov 2016 14:07	10
HS16110618-23	GP-9-7-12-13-110916	09 Nov 2016 10:30		18 Nov 2016 14:45	21 Nov 2016 18:50	1
HS16110618-24	GP-9-8-2-3-110916	09 Nov 2016 09:00		18 Nov 2016 14:45	22 Nov 2016 15:40	1
HS16110618-24	GP-9-8-2-3-110916	09 Nov 2016 09:00		18 Nov 2016 14:45	22 Nov 2016 14:12	5
HS16110618-24	GP-9-8-2-3-110916	09 Nov 2016 09:00		18 Nov 2016 14:45	21 Nov 2016 18:55	1
HS16110618-25	GP-9-8-11-12-110916	09 Nov 2016 09:30		18 Nov 2016 14:45	22 Nov 2016 15:45	1
HS16110618-25	GP-9-8-11-12-110916	09 Nov 2016 09:30		18 Nov 2016 14:45	22 Nov 2016 14:16	5
HS16110618-25	GP-9-8-11-12-110916	09 Nov 2016 09:30		18 Nov 2016 14:45	21 Nov 2016 18:59	1
HS16110618-26	GP-9-8-14-15-110916	09 Nov 2016 09:50		18 Nov 2016 14:45	22 Nov 2016 15:49	1
HS16110618-26	GP-9-8-14-15-110916	09 Nov 2016 09:50		18 Nov 2016 14:45	22 Nov 2016 14:29	5
HS16110618-26	GP-9-8-14-15-110916	09 Nov 2016 09:50		18 Nov 2016 14:45	21 Nov 2016 19:03	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 110051	**Test Name :** MERCURY BY SW7471B			**Matrix:** Soil		
HS16110618-19	GP-9-6-5-6-110916	09 Nov 2016 10:40		21 Nov 2016 14:06	22 Nov 2016 16:34	1
HS16110618-20	GP-9-6-13-14-110916	09 Nov 2016 10:50		21 Nov 2016 14:06	22 Nov 2016 16:35	1
HS16110618-21	GP-9-7-2-3-110916	09 Nov 2016 09:50		21 Nov 2016 14:06	22 Nov 2016 16:37	1
HS16110618-22	GP-9-7-7-8-110916	09 Nov 2016 10:15		21 Nov 2016 14:06	22 Nov 2016 16:39	1
HS16110618-23	GP-9-7-12-13-110916	09 Nov 2016 10:30		21 Nov 2016 14:06	22 Nov 2016 16:44	1
HS16110618-24	GP-9-8-2-3-110916	09 Nov 2016 09:00		21 Nov 2016 14:06	22 Nov 2016 16:46	1
HS16110618-25	GP-9-8-11-12-110916	09 Nov 2016 09:30		21 Nov 2016 14:06	22 Nov 2016 16:56	1
HS16110618-26	GP-9-8-14-15-110916	09 Nov 2016 09:50		21 Nov 2016 14:06	22 Nov 2016 16:58	1
Batch ID 110108	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A			**Matrix:** Soil		
HS16110618-01	GP-9-1-2-3-110816	08 Nov 2016 13:30		22 Nov 2016 14:42	23 Nov 2016 12:45	1
HS16110618-02	GP-9-1-6-7-110816	08 Nov 2016 14:00		22 Nov 2016 14:42	23 Nov 2016 12:45	1
HS16110618-03	GP-9-1-9-10-110816	08 Nov 2016 14:30		22 Nov 2016 14:42	23 Nov 2016 12:45	1
Batch ID 110111	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A			**Matrix:** Soil		
HS16110618-04	GP-9-2-0-1-110816	08 Nov 2016 14:40		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-05	GP-9-2-5-6-110816	08 Nov 2016 14:50		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-06	GP-9-2-9-10-110816	08 Nov 2016 15:00		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-07	GP-9-3-2-3-110816	08 Nov 2016 15:30		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-08	GP-9-3-3-4-110816	08 Nov 2016 15:40		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-10	GP-9-3-12-13-110816	08 Nov 2016 16:00		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-11	GP-9-4-2-3-110816	08 Nov 2016 07:40		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-12	GP-9-4-6-7-110816	08 Nov 2016 07:50		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-13	GP-9-4-14-15-110816	08 Nov 2016 08:30		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-14	GP-9-5-2-3-110916	09 Nov 2016 11:00		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-15	GP-9-5-7-8-110916	09 Nov 2016 11:30		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-16	GP-9-5-10-11-110916	09 Nov 2016 11:50		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-17	GP-9-6-2-3-110916	09 Nov 2016 10:30		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-19	GP-9-6-5-6-110916	09 Nov 2016 10:40		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-20	GP-9-6-13-14-110916	09 Nov 2016 10:50		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-21	GP-9-7-2-3-110916	09 Nov 2016 09:50		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-22	GP-9-7-7-8-110916	09 Nov 2016 10:15		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-23	GP-9-7-12-13-110916	09 Nov 2016 10:30		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-24	GP-9-8-2-3-110916	09 Nov 2016 09:00		22 Nov 2016 15:40	23 Nov 2016 17:15	1
HS16110618-25	GP-9-8-11-12-110916	09 Nov 2016 09:30		22 Nov 2016 15:40	23 Nov 2016 17:15	1
Batch ID 110170	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A			**Matrix:** Soil		
HS16110618-26	GP-9-8-14-15-110916	09 Nov 2016 09:50		28 Nov 2016 09:00	28 Nov 2016 15:15	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 110222	**Test Name :** LA 29B - 1:1 SOLUBLE CATIONS FOR SAR			**Matrix:** Soil		
HS16110618-01	GP-9-1-2-3-110816	08 Nov 2016 13:30		26 Nov 2016 13:00	28 Nov 2016 17:33	10
HS16110618-02	GP-9-1-6-7-110816	08 Nov 2016 14:00		26 Nov 2016 13:00	28 Nov 2016 17:36	10
HS16110618-03	GP-9-1-9-10-110816	08 Nov 2016 14:30		26 Nov 2016 13:00	28 Nov 2016 17:41	10
HS16110618-04	GP-9-2-0-1-110816	08 Nov 2016 14:40		26 Nov 2016 13:00	28 Nov 2016 17:44	10
HS16110618-05	GP-9-2-5-6-110816	08 Nov 2016 14:50		26 Nov 2016 13:00	28 Nov 2016 17:47	10
HS16110618-06	GP-9-2-9-10-110816	08 Nov 2016 15:00		26 Nov 2016 13:00	28 Nov 2016 17:50	10
HS16110618-07	GP-9-3-2-3-110816	08 Nov 2016 15:30		26 Nov 2016 13:00	28 Nov 2016 17:53	10
HS16110618-08	GP-9-3-3-4-110816	08 Nov 2016 15:40		26 Nov 2016 13:00	28 Nov 2016 17:56	10
HS16110618-10	GP-9-3-12-13-110816	08 Nov 2016 16:00		26 Nov 2016 13:00	28 Nov 2016 18:05	10
HS16110618-11	GP-9-4-2-3-110816	08 Nov 2016 07:40		26 Nov 2016 13:00	28 Nov 2016 18:08	10
HS16110618-12	GP-9-4-6-7-110816	08 Nov 2016 07:50		26 Nov 2016 13:00	29 Nov 2016 09:47	100
HS16110618-12	GP-9-4-6-7-110816	08 Nov 2016 07:50		26 Nov 2016 13:00	28 Nov 2016 18:11	10
HS16110618-13	GP-9-4-14-15-110816	08 Nov 2016 08:30		26 Nov 2016 13:00	28 Nov 2016 18:14	10
HS16110618-14	GP-9-5-2-3-110916	09 Nov 2016 11:00		26 Nov 2016 13:00	28 Nov 2016 18:17	10
HS16110618-15	GP-9-5-7-8-110916	09 Nov 2016 11:30		26 Nov 2016 13:00	28 Nov 2016 18:20	10
HS16110618-16	GP-9-5-10-11-110916	09 Nov 2016 11:50		26 Nov 2016 13:00	28 Nov 2016 18:23	10
HS16110618-17	GP-9-6-2-3-110916	09 Nov 2016 10:30		26 Nov 2016 13:00	28 Nov 2016 18:26	10
HS16110618-19	GP-9-6-5-6-110916	09 Nov 2016 10:40		26 Nov 2016 13:00	28 Nov 2016 18:29	10
HS16110618-20	GP-9-6-13-14-110916	09 Nov 2016 10:50		26 Nov 2016 13:00	28 Nov 2016 18:32	10
HS16110618-22	GP-9-7-7-8-110916	09 Nov 2016 10:15		26 Nov 2016 13:00	28 Nov 2016 18:41	10
HS16110618-23	GP-9-7-12-13-110916	09 Nov 2016 10:30		26 Nov 2016 13:00	28 Nov 2016 18:44	10

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 110222A	**Test Name :** LA29B SODIUM ADSORPTION RATIO			**Matrix:** Soil		
HS16110618-01	GP-9-1-2-3-110816	08 Nov 2016 13:30		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-02	GP-9-1-6-7-110816	08 Nov 2016 14:00		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-03	GP-9-1-9-10-110816	08 Nov 2016 14:30		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-04	GP-9-2-0-1-110816	08 Nov 2016 14:40		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-05	GP-9-2-5-6-110816	08 Nov 2016 14:50		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-06	GP-9-2-9-10-110816	08 Nov 2016 15:00		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-07	GP-9-3-2-3-110816	08 Nov 2016 15:30		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-08	GP-9-3-3-4-110816	08 Nov 2016 15:40		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-10	GP-9-3-12-13-110816	08 Nov 2016 16:00		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-11	GP-9-4-2-3-110816	08 Nov 2016 07:40		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-12	GP-9-4-6-7-110816	08 Nov 2016 07:50		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-13	GP-9-4-14-15-110816	08 Nov 2016 08:30		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-14	GP-9-5-2-3-110916	09 Nov 2016 11:00		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-15	GP-9-5-7-8-110916	09 Nov 2016 11:30		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-16	GP-9-5-10-11-110916	09 Nov 2016 11:50		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-17	GP-9-6-2-3-110916	09 Nov 2016 10:30		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-19	GP-9-6-5-6-110916	09 Nov 2016 10:40		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-20	GP-9-6-13-14-110916	09 Nov 2016 10:50		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-22	GP-9-7-7-8-110916	09 Nov 2016 10:15		26 Nov 2016 13:00	29 Nov 2016 10:22	1
HS16110618-23	GP-9-7-12-13-110916	09 Nov 2016 10:30		26 Nov 2016 13:00	29 Nov 2016 10:22	1
Batch ID 110223	**Test Name :** LA 29B - 1:1 SOLUBLE CATIONS FOR SAR			**Matrix:** Soil		
HS16110618-21	GP-9-7-2-3-110916	09 Nov 2016 09:50		26 Nov 2016 15:00	28 Nov 2016 18:52	10
HS16110618-24	GP-9-8-2-3-110916	09 Nov 2016 09:00		26 Nov 2016 15:00	28 Nov 2016 18:58	10
HS16110618-25	GP-9-8-11-12-110916	09 Nov 2016 09:30		26 Nov 2016 15:00	29 Nov 2016 09:50	100
HS16110618-25	GP-9-8-11-12-110916	09 Nov 2016 09:30		26 Nov 2016 15:00	28 Nov 2016 19:01	10
HS16110618-26	GP-9-8-14-15-110916	09 Nov 2016 09:50		26 Nov 2016 15:00	28 Nov 2016 19:04	10
Batch ID 110223A	**Test Name :** LA29B SODIUM ADSORPTION RATIO			**Matrix:** Soil		
HS16110618-21	GP-9-7-2-3-110916	09 Nov 2016 09:50		26 Nov 2016 15:00	29 Nov 2016 10:36	1
HS16110618-24	GP-9-8-2-3-110916	09 Nov 2016 09:00		26 Nov 2016 15:00	29 Nov 2016 10:36	1
HS16110618-25	GP-9-8-11-12-110916	09 Nov 2016 09:30		26 Nov 2016 15:00	29 Nov 2016 10:36	1
HS16110618-26	GP-9-8-14-15-110916	09 Nov 2016 09:50		26 Nov 2016 15:00	29 Nov 2016 10:36	1
Batch ID R284788	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS16110618-09	Trip Blank - 100716-54	08 Nov 2016 00:00			15 Nov 2016 05:08	1
HS16110618-18	Trip Blank - 100716-70	08 Nov 2016 00:00			15 Nov 2016 05:33	1
HS16110618-27	Trip Blank - 100716-77	09 Nov 2016 00:00			15 Nov 2016 05:58	1
Batch ID R284792	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C			**Matrix:** Soil		
HS16110618-01	GP-9-1-2-3-110816	08 Nov 2016 13:30			15 Nov 2016 00:14	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R284804	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C			**Matrix:** Soil		
HS16110618-02	GP-9-1-6-7-110816	08 Nov 2016 14:00			15 Nov 2016 02:54	1
HS16110618-03	GP-9-1-9-10-110816	08 Nov 2016 14:30			15 Nov 2016 03:11	1
HS16110618-04	GP-9-2-0-1-110816	08 Nov 2016 14:40			15 Nov 2016 02:06	1
HS16110618-05	GP-9-2-5-6-110816	08 Nov 2016 14:50			15 Nov 2016 03:27	1
HS16110618-06	GP-9-2-9-10-110816	08 Nov 2016 15:00			15 Nov 2016 03:43	1
HS16110618-07	GP-9-3-2-3-110816	08 Nov 2016 15:30			15 Nov 2016 04:15	1
HS16110618-08	GP-9-3-3-4-110816	08 Nov 2016 15:40			15 Nov 2016 04:31	1
HS16110618-10	GP-9-3-12-13-110816	08 Nov 2016 16:00			15 Nov 2016 04:47	1
HS16110618-11	GP-9-4-2-3-110816	08 Nov 2016 07:40			15 Nov 2016 05:03	1
HS16110618-12	GP-9-4-6-7-110816	08 Nov 2016 07:50			15 Nov 2016 05:19	1
HS16110618-13	GP-9-4-14-15-110816	08 Nov 2016 08:30			15 Nov 2016 05:35	1
HS16110618-14	GP-9-5-2-3-110916	09 Nov 2016 11:00			15 Nov 2016 05:51	1
HS16110618-15	GP-9-5-7-8-110916	09 Nov 2016 11:30			15 Nov 2016 06:07	1
HS16110618-16	GP-9-5-10-11-110916	09 Nov 2016 11:50			15 Nov 2016 06:23	1
HS16110618-17	GP-9-6-2-3-110916	09 Nov 2016 10:30			15 Nov 2016 06:40	1
HS16110618-19	GP-9-6-5-6-110916	09 Nov 2016 10:40			15 Nov 2016 07:12	1
HS16110618-20	GP-9-6-13-14-110916	09 Nov 2016 10:50			15 Nov 2016 07:28	1
HS16110618-21	GP-9-7-2-3-110916	09 Nov 2016 09:50			15 Nov 2016 07:44	1
HS16110618-22	GP-9-7-7-8-110916	09 Nov 2016 10:15			15 Nov 2016 08:01	1
HS16110618-23	GP-9-7-12-13-110916	09 Nov 2016 10:30			15 Nov 2016 08:17	1
Batch ID R284873	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C			**Matrix:** Soil		
HS16110618-24	GP-9-8-2-3-110916	09 Nov 2016 09:00			15 Nov 2016 10:59	1
HS16110618-25	GP-9-8-11-12-110916	09 Nov 2016 09:30			15 Nov 2016 11:16	1
HS16110618-26	GP-9-8-14-15-110916	09 Nov 2016 09:50			15 Nov 2016 10:10	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R284889	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS16110618-01	GP-9-1-2-3-110816	08 Nov 2016 13:30			16 Nov 2016 09:53	1
HS16110618-02	GP-9-1-6-7-110816	08 Nov 2016 14:00			16 Nov 2016 10:20	1
HS16110618-03	GP-9-1-9-10-110816	08 Nov 2016 14:30			16 Nov 2016 12:34	1
HS16110618-04	GP-9-2-0-1-110816	08 Nov 2016 14:40			16 Nov 2016 13:01	1
HS16110618-05	GP-9-2-5-6-110816	08 Nov 2016 14:50			16 Nov 2016 13:29	1
HS16110618-06	GP-9-2-9-10-110816	08 Nov 2016 15:00			16 Nov 2016 13:56	1
HS16110618-07	GP-9-3-2-3-110816	08 Nov 2016 15:30			16 Nov 2016 14:22	1
HS16110618-08	GP-9-3-3-4-110816	08 Nov 2016 15:40			16 Nov 2016 14:49	1
HS16110618-10	GP-9-3-12-13-110816	08 Nov 2016 16:00			16 Nov 2016 15:16	1
HS16110618-11	GP-9-4-2-3-110816	08 Nov 2016 07:40			16 Nov 2016 15:43	1
HS16110618-12	GP-9-4-6-7-110816	08 Nov 2016 07:50			16 Nov 2016 16:10	1
HS16110618-13	GP-9-4-14-15-110816	08 Nov 2016 08:30			16 Nov 2016 16:37	1
HS16110618-14	GP-9-5-2-3-110916	09 Nov 2016 11:00			16 Nov 2016 17:04	1
HS16110618-15	GP-9-5-7-8-110916	09 Nov 2016 11:30			16 Nov 2016 17:31	1
HS16110618-16	GP-9-5-10-11-110916	09 Nov 2016 11:50			16 Nov 2016 17:58	1
HS16110618-17	GP-9-6-2-3-110916	09 Nov 2016 10:30			16 Nov 2016 18:25	1
HS16110618-19	GP-9-6-5-6-110916	09 Nov 2016 10:40			16 Nov 2016 18:52	1
Batch ID R284958	**Test Name :** MOISTURE			**Matrix:** Soil		
HS16110618-01	GP-9-1-2-3-110816	08 Nov 2016 13:30			15 Nov 2016 09:53	1
HS16110618-02	GP-9-1-6-7-110816	08 Nov 2016 14:00			15 Nov 2016 09:53	1
HS16110618-03	GP-9-1-9-10-110816	08 Nov 2016 14:30			15 Nov 2016 09:53	1
HS16110618-04	GP-9-2-0-1-110816	08 Nov 2016 14:40			15 Nov 2016 09:53	1
HS16110618-05	GP-9-2-5-6-110816	08 Nov 2016 14:50			15 Nov 2016 09:53	1
HS16110618-06	GP-9-2-9-10-110816	08 Nov 2016 15:00			15 Nov 2016 09:53	1
HS16110618-07	GP-9-3-2-3-110816	08 Nov 2016 15:30			15 Nov 2016 09:53	1
HS16110618-08	GP-9-3-3-4-110816	08 Nov 2016 15:40			15 Nov 2016 09:53	1
HS16110618-10	GP-9-3-12-13-110816	08 Nov 2016 16:00			15 Nov 2016 09:53	1
HS16110618-11	GP-9-4-2-3-110816	08 Nov 2016 07:40			15 Nov 2016 09:53	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R284959	**Test Name :** MOISTURE			**Matrix:** Soil		
HS16110618-12	GP-9-4-6-7-110816	08 Nov 2016 07:50			15 Nov 2016 09:57	1
HS16110618-13	GP-9-4-14-15-110816	08 Nov 2016 08:30			15 Nov 2016 09:57	1
HS16110618-14	GP-9-5-2-3-110916	09 Nov 2016 11:00			15 Nov 2016 09:57	1
HS16110618-15	GP-9-5-7-8-110916	09 Nov 2016 11:30			15 Nov 2016 09:57	1
HS16110618-16	GP-9-5-10-11-110916	09 Nov 2016 11:50			15 Nov 2016 09:57	1
HS16110618-17	GP-9-6-2-3-110916	09 Nov 2016 10:30			15 Nov 2016 09:57	1
HS16110618-19	GP-9-6-5-6-110916	09 Nov 2016 10:40			15 Nov 2016 09:57	1
HS16110618-20	GP-9-6-13-14-110916	09 Nov 2016 10:50			15 Nov 2016 09:57	1
HS16110618-21	GP-9-7-2-3-110916	09 Nov 2016 09:50			15 Nov 2016 09:57	1
HS16110618-22	GP-9-7-7-8-110916	09 Nov 2016 10:15			15 Nov 2016 09:57	1
HS16110618-23	GP-9-7-12-13-110916	09 Nov 2016 10:30			15 Nov 2016 09:57	1
HS16110618-24	GP-9-8-2-3-110916	09 Nov 2016 09:00			15 Nov 2016 09:57	1
HS16110618-25	GP-9-8-11-12-110916	09 Nov 2016 09:30			15 Nov 2016 09:57	1
HS16110618-26	GP-9-8-14-15-110916	09 Nov 2016 09:50			15 Nov 2016 09:57	1
Batch ID R284975	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS16110618-20	GP-9-6-13-14-110916	09 Nov 2016 10:50			17 Nov 2016 09:30	1
HS16110618-21	GP-9-7-2-3-110916	09 Nov 2016 09:50			17 Nov 2016 09:58	1
HS16110618-22	GP-9-7-7-8-110916	09 Nov 2016 10:15			17 Nov 2016 10:24	1
HS16110618-23	GP-9-7-12-13-110916	09 Nov 2016 10:30			17 Nov 2016 11:45	1
HS16110618-24	GP-9-8-2-3-110916	09 Nov 2016 09:00			17 Nov 2016 12:12	1
HS16110618-25	GP-9-8-11-12-110916	09 Nov 2016 09:30			17 Nov 2016 12:39	1
HS16110618-26	GP-9-8-14-15-110916	09 Nov 2016 09:50			17 Nov 2016 13:06	1
Batch ID R285312	**Test Name :** PH SOIL BY SW9045D			**Matrix:** Soil		
HS16110618-01	GP-9-1-2-3-110816	08 Nov 2016 13:30			22 Nov 2016 14:00	1
HS16110618-03	GP-9-1-9-10-110816	08 Nov 2016 14:30			22 Nov 2016 14:00	1
HS16110618-04	GP-9-2-0-1-110816	08 Nov 2016 14:40			22 Nov 2016 14:00	1
HS16110618-05	GP-9-2-5-6-110816	08 Nov 2016 14:50			22 Nov 2016 14:00	1
HS16110618-06	GP-9-2-9-10-110816	08 Nov 2016 15:00			22 Nov 2016 14:00	1
HS16110618-07	GP-9-3-2-3-110816	08 Nov 2016 15:30			22 Nov 2016 14:00	1
HS16110618-08	GP-9-3-3-4-110816	08 Nov 2016 15:40			22 Nov 2016 14:00	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R285535	**Test Name :** PH SOIL BY SW9045D			**Matrix:** Soil		
HS16110618-02	GP-9-1-6-7-110816	08 Nov 2016 14:00			28 Nov 2016 14:45	1
HS16110618-10	GP-9-3-12-13-110816	08 Nov 2016 16:00			28 Nov 2016 14:45	1
HS16110618-11	GP-9-4-2-3-110816	08 Nov 2016 07:40			28 Nov 2016 14:45	1
HS16110618-12	GP-9-4-6-7-110816	08 Nov 2016 07:50			28 Nov 2016 14:45	1
HS16110618-13	GP-9-4-14-15-110816	08 Nov 2016 08:30			28 Nov 2016 14:45	1
HS16110618-14	GP-9-5-2-3-110916	09 Nov 2016 11:00			28 Nov 2016 14:45	1
HS16110618-15	GP-9-5-7-8-110916	09 Nov 2016 11:30			28 Nov 2016 14:45	1
HS16110618-16	GP-9-5-10-11-110916	09 Nov 2016 11:50			28 Nov 2016 14:45	1
HS16110618-17	GP-9-6-2-3-110916	09 Nov 2016 10:30			28 Nov 2016 14:45	1
HS16110618-19	GP-9-6-5-6-110916	09 Nov 2016 10:40			28 Nov 2016 14:45	1
HS16110618-20	GP-9-6-13-14-110916	09 Nov 2016 10:50			28 Nov 2016 14:45	1
HS16110618-21	GP-9-7-2-3-110916	09 Nov 2016 09:50			28 Nov 2016 14:45	1
Batch ID R285606	**Test Name :** PH SOIL BY SW9045D			**Matrix:** Soil		
HS16110618-22	GP-9-7-7-8-110916	09 Nov 2016 10:15			29 Nov 2016 12:00	1
HS16110618-23	GP-9-7-12-13-110916	09 Nov 2016 10:30			29 Nov 2016 12:00	1
HS16110618-24	GP-9-8-2-3-110916	09 Nov 2016 09:00			29 Nov 2016 12:00	1
HS16110618-25	GP-9-8-11-12-110916	09 Nov 2016 09:30			29 Nov 2016 12:00	1
HS16110618-26	GP-9-8-14-15-110916	09 Nov 2016 09:50			29 Nov 2016 12:00	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R285616	**Test Name :** TRIVALENT CHROMIUM			**Matrix:** Soil		
HS16110618-01	GP-9-1-2-3-110816	08 Nov 2016 13:30			29 Nov 2016 14:34	1
HS16110618-02	GP-9-1-6-7-110816	08 Nov 2016 14:00			29 Nov 2016 14:34	1
HS16110618-03	GP-9-1-9-10-110816	08 Nov 2016 14:30			29 Nov 2016 14:34	1
HS16110618-04	GP-9-2-0-1-110816	08 Nov 2016 14:40			29 Nov 2016 14:34	1
HS16110618-05	GP-9-2-5-6-110816	08 Nov 2016 14:50			29 Nov 2016 14:34	1
HS16110618-06	GP-9-2-9-10-110816	08 Nov 2016 15:00			29 Nov 2016 14:34	1
HS16110618-07	GP-9-3-2-3-110816	08 Nov 2016 15:30			29 Nov 2016 14:34	1
HS16110618-08	GP-9-3-3-4-110816	08 Nov 2016 15:40			29 Nov 2016 14:34	1
HS16110618-10	GP-9-3-12-13-110816	08 Nov 2016 16:00			29 Nov 2016 14:34	1
HS16110618-11	GP-9-4-2-3-110816	08 Nov 2016 07:40			29 Nov 2016 14:34	1
HS16110618-12	GP-9-4-6-7-110816	08 Nov 2016 07:50			29 Nov 2016 14:34	1
HS16110618-13	GP-9-4-14-15-110816	08 Nov 2016 08:30			29 Nov 2016 14:34	1
HS16110618-14	GP-9-5-2-3-110916	09 Nov 2016 11:00			29 Nov 2016 14:34	1
HS16110618-15	GP-9-5-7-8-110916	09 Nov 2016 11:30			29 Nov 2016 14:34	1
HS16110618-16	GP-9-5-10-11-110916	09 Nov 2016 11:50			29 Nov 2016 14:34	1
HS16110618-17	GP-9-6-2-3-110916	09 Nov 2016 10:30			29 Nov 2016 14:34	1
HS16110618-19	GP-9-6-5-6-110916	09 Nov 2016 10:40			29 Nov 2016 14:34	1
HS16110618-20	GP-9-6-13-14-110916	09 Nov 2016 10:50			29 Nov 2016 14:34	1
HS16110618-21	GP-9-7-2-3-110916	09 Nov 2016 09:50			29 Nov 2016 14:34	1
HS16110618-22	GP-9-7-7-8-110916	09 Nov 2016 10:15			29 Nov 2016 14:34	1
HS16110618-23	GP-9-7-12-13-110916	09 Nov 2016 10:30			29 Nov 2016 14:34	1
HS16110618-24	GP-9-8-2-3-110916	09 Nov 2016 09:00			29 Nov 2016 14:34	1
HS16110618-25	GP-9-8-11-12-110916	09 Nov 2016 09:30			29 Nov 2016 14:34	1
HS16110618-26	GP-9-8-14-15-110916	09 Nov 2016 09:50			29 Nov 2016 14:34	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R285621	**Test Name :** LA29B SATURATION POINT (AS FRACTION)			**Matrix:** Soil		
HS16110618-01	GP-9-1-2-3-110816	08 Nov 2016 13:30			29 Nov 2016 10:25	1
HS16110618-02	GP-9-1-6-7-110816	08 Nov 2016 14:00			29 Nov 2016 10:25	1
HS16110618-03	GP-9-1-9-10-110816	08 Nov 2016 14:30			29 Nov 2016 10:25	1
HS16110618-04	GP-9-2-0-1-110816	08 Nov 2016 14:40			29 Nov 2016 10:25	1
HS16110618-05	GP-9-2-5-6-110816	08 Nov 2016 14:50			29 Nov 2016 10:25	1
HS16110618-06	GP-9-2-9-10-110816	08 Nov 2016 15:00			29 Nov 2016 10:25	1
HS16110618-07	GP-9-3-2-3-110816	08 Nov 2016 15:30			29 Nov 2016 10:25	1
HS16110618-08	GP-9-3-3-4-110816	08 Nov 2016 15:40			29 Nov 2016 10:25	1
HS16110618-10	GP-9-3-12-13-110816	08 Nov 2016 16:00			29 Nov 2016 10:25	1
HS16110618-11	GP-9-4-2-3-110816	08 Nov 2016 07:40			29 Nov 2016 10:25	1
HS16110618-12	GP-9-4-6-7-110816	08 Nov 2016 07:50			29 Nov 2016 10:25	1
HS16110618-13	GP-9-4-14-15-110816	08 Nov 2016 08:30			29 Nov 2016 10:25	1
HS16110618-14	GP-9-5-2-3-110916	09 Nov 2016 11:00			29 Nov 2016 10:25	1
HS16110618-15	GP-9-5-7-8-110916	09 Nov 2016 11:30			29 Nov 2016 10:25	1
HS16110618-16	GP-9-5-10-11-110916	09 Nov 2016 11:50			29 Nov 2016 10:25	1
HS16110618-17	GP-9-6-2-3-110916	09 Nov 2016 10:30			29 Nov 2016 10:25	1
HS16110618-19	GP-9-6-5-6-110916	09 Nov 2016 10:40			29 Nov 2016 10:25	1
HS16110618-20	GP-9-6-13-14-110916	09 Nov 2016 10:50			29 Nov 2016 10:25	1
HS16110618-22	GP-9-7-7-8-110916	09 Nov 2016 10:15			29 Nov 2016 10:25	1
HS16110618-23	GP-9-7-12-13-110916	09 Nov 2016 10:30			29 Nov 2016 10:25	1
Batch ID R285622	**Test Name :** LA29B SATURATION POINT (AS FRACTION)			**Matrix:** Soil		
HS16110618-21	GP-9-7-2-3-110916	09 Nov 2016 09:50			29 Nov 2016 10:45	1
HS16110618-24	GP-9-8-2-3-110916	09 Nov 2016 09:00			29 Nov 2016 10:45	1
HS16110618-25	GP-9-8-11-12-110916	09 Nov 2016 09:30			29 Nov 2016 10:45	1
HS16110618-26	GP-9-8-14-15-110916	09 Nov 2016 09:50			29 Nov 2016 10:45	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R285629	**Test Name :** LA29B ELECTRICAL CONDUCTIVITY			**Matrix:** Soil		
HS16110618-01	GP-9-1-2-3-110816	08 Nov 2016 13:30			29 Nov 2016 14:59	1
HS16110618-02	GP-9-1-6-7-110816	08 Nov 2016 14:00			29 Nov 2016 14:59	1
HS16110618-03	GP-9-1-9-10-110816	08 Nov 2016 14:30			29 Nov 2016 14:59	1
HS16110618-04	GP-9-2-0-1-110816	08 Nov 2016 14:40			29 Nov 2016 14:59	1
HS16110618-05	GP-9-2-5-6-110816	08 Nov 2016 14:50			29 Nov 2016 14:59	1
HS16110618-06	GP-9-2-9-10-110816	08 Nov 2016 15:00			29 Nov 2016 14:59	1
HS16110618-07	GP-9-3-2-3-110816	08 Nov 2016 15:30			29 Nov 2016 14:59	1
HS16110618-08	GP-9-3-3-4-110816	08 Nov 2016 15:40			29 Nov 2016 14:59	1
HS16110618-10	GP-9-3-12-13-110816	08 Nov 2016 16:00			29 Nov 2016 14:59	1
HS16110618-11	GP-9-4-2-3-110816	08 Nov 2016 07:40			29 Nov 2016 14:59	1
HS16110618-12	GP-9-4-6-7-110816	08 Nov 2016 07:50			29 Nov 2016 14:59	1
HS16110618-13	GP-9-4-14-15-110816	08 Nov 2016 08:30			29 Nov 2016 14:59	1
HS16110618-14	GP-9-5-2-3-110916	09 Nov 2016 11:00			29 Nov 2016 14:59	1
HS16110618-15	GP-9-5-7-8-110916	09 Nov 2016 11:30			29 Nov 2016 14:59	1
HS16110618-16	GP-9-5-10-11-110916	09 Nov 2016 11:50			29 Nov 2016 14:59	1
HS16110618-17	GP-9-6-2-3-110916	09 Nov 2016 10:30			29 Nov 2016 14:59	1
HS16110618-19	GP-9-6-5-6-110916	09 Nov 2016 10:40			29 Nov 2016 14:59	1
HS16110618-20	GP-9-6-13-14-110916	09 Nov 2016 10:50			29 Nov 2016 14:59	1
HS16110618-22	GP-9-7-7-8-110916	09 Nov 2016 10:15			29 Nov 2016 14:59	1
HS16110618-23	GP-9-7-12-13-110916	09 Nov 2016 10:30			29 Nov 2016 14:59	1
Batch ID R285630	**Test Name :** LA29B ELECTRICAL CONDUCTIVITY			**Matrix:** Soil		
HS16110618-21	GP-9-7-2-3-110916	09 Nov 2016 09:50			29 Nov 2016 15:00	1
HS16110618-24	GP-9-8-2-3-110916	09 Nov 2016 09:00			29 Nov 2016 15:00	1
HS16110618-25	GP-9-8-11-12-110916	09 Nov 2016 09:30			29 Nov 2016 15:00	1
HS16110618-26	GP-9-8-14-15-110916	09 Nov 2016 09:50			29 Nov 2016 15:00	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 109870 **Instrument: FID-7** **Method: SW8015M**

MBLK Sample ID: **MBLK-109870** Units: **mg/Kg** Analysis Date: **16-Nov-2016 02:50**
Client ID: Run ID: **FID-7_285183** SeqNo: **3900314** PrepDate: **15-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	*2.155*	*0.10*	*3.33*	*0*	*64.7*	*60 - 135*				

LCS Sample ID: **LCS-109870** Units: **mg/Kg** Analysis Date: **16-Nov-2016 03:15**
Client ID: Run ID: **FID-7_285183** SeqNo: **3900315** PrepDate: **15-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)	29.76	1.7	33.33	0	89.3	70 - 130				
Surr: 2-Fluorobiphenyl	*2.371*	*0.10*	*3.33*	*0*	*71.2*	*60 - 135*				

MS Sample ID: **HS16110554-18MS** Units: **mg/Kg** Analysis Date: **16-Nov-2016 11:24**
Client ID: Run ID: **FID-7_285183** SeqNo: **3900332** PrepDate: **15-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)	29.45	1.7	33.26	0	88.5	70 - 130				
Surr: 2-Fluorobiphenyl	*2.319*	*0.10*	*3.323*	*0*	*69.8*	*60 - 135*				

MSD Sample ID: **HS16110554-18MSD** Units: **mg/Kg** Analysis Date: **16-Nov-2016 11:49**
Client ID: Run ID: **FID-7_285183** SeqNo: **3900333** PrepDate: **15-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)	28.45	1.7	33.24	0	85.6	70 - 130	29.45	3.44	30	
Surr: 2-Fluorobiphenyl	*2.248*	*0.10*	*3.321*	*0*	*67.7*	*60 - 135*	*2.319*	*3.09*	*30*	

The following samples were analyzed in this batch: HS16110618-23

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 109871 **Instrument: FID-8** **Method: SW8015M**

MBLK Sample ID: **MBLK-109871** Units: **mg/Kg** Analysis Date: **16-Nov-2016 02:50**
Client ID: Run ID: **FID-8_285318** SeqNo: **3902830** PrepDate: **15-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	*2.969*	*0.10*	*3.33*	*0*	*89.2*	*60 - 135*				

LCS Sample ID: **LCS-109871** Units: **mg/Kg** Analysis Date: **16-Nov-2016 03:15**
Client ID: Run ID: **FID-8_285318** SeqNo: **3902831** PrepDate: **15-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)	27.02	1.7	33.33	0	81.1	70 - 130				
Surr: 2-Fluorobiphenyl	*3.386*	*0.10*	*3.33*	*0*	*102*	*60 - 135*				

MS Sample ID: **HS16110618-02MS** Units: **mg/Kg** Analysis Date: **16-Nov-2016 07:44**
Client ID: **GP-9-1-6-7-110816** Run ID: **FID-8_285318** SeqNo: **3902842** PrepDate: **15-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)	27.51	1.7	33.27	1.229	79.0	70 - 130				
Surr: 2-Fluorobiphenyl	*3.071*	*0.10*	*3.324*	*0*	*92.4*	*60 - 135*				

MSD Sample ID: **HS16110618-02MSD** Units: **mg/Kg** Analysis Date: **16-Nov-2016 08:08**
Client ID: **GP-9-1-6-7-110816** Run ID: **FID-8_285318** SeqNo: **3902843** PrepDate: **15-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)	27.13	1.7	33.25	1.229	77.9	70 - 130	27.51	1.38	30	
Surr: 2-Fluorobiphenyl	*2.774*	*0.10*	*3.322*	*0*	*83.5*	*60 - 135*	*3.071*	*10.2*	*30*	

The following samples were analyzed in this batch:

HS16110618-01	HS16110618-02	HS16110618-03	HS16110618-04
HS16110618-05	HS16110618-06	HS16110618-07	HS16110618-08
HS16110618-10	HS16110618-11	HS16110618-12	HS16110618-13

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 109913 **Instrument: FID-7** **Method: SW8015M**

MBLK Sample ID: **MBLK-109913** Units: **mg/Kg** Analysis Date: **18-Nov-2016 17:56**
Client ID: Run ID: **FID-7_285304** SeqNo: **3902493** 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	*2.005*	*0.10*	*3.33*	*0*	*60.2*	*60 - 135*				

LCS Sample ID: **LCS-109913** Units: **mg/Kg** Analysis Date: **18-Nov-2016 18:21**
Client ID: Run ID: **FID-7_285304** SeqNo: **3902494** 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)	31.23	1.7	33.33	0	93.7	70 - 130				
Surr: 2-Fluorobiphenyl	*2.546*	*0.10*	*3.33*	*0*	*76.5*	*60 - 135*				

MS Sample ID: **HS16110618-21MS** Units: **mg/Kg** Analysis Date: **19-Nov-2016 01:41**
Client ID: **GP-9-7-2-3-110916** Run ID: **FID-7_285304** SeqNo: **3902505** 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)	41.73	1.7	33.27	2.389	118	70 - 130				
Surr: 2-Fluorobiphenyl	*2.626*	*0.10*	*3.324*	*0*	*79.0*	*60 - 135*				

MSD Sample ID: **HS16110618-21MSD** Units: **mg/Kg** Analysis Date: **19-Nov-2016 02:05**
Client ID: **GP-9-7-2-3-110916** Run ID: **FID-7_285304** SeqNo: **3902506** 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)	35.14	1.7	33.3	2.389	98.4	70 - 130	41.73	17.1	30	
Surr: 2-Fluorobiphenyl	*2.076*	*0.10*	*3.327*	*0*	*62.4*	*60 - 135*	*2.626*	*23.4*	*30*	

The following samples were analyzed in this batch:

HS16110618-14	HS16110618-15	HS16110618-16	HS16110618-17
HS16110618-19	HS16110618-20	HS16110618-21	HS16110618-22
HS16110618-24	HS16110618-25	HS16110618-26	

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: R284792 **Instrument: FID-14** **Method: SW8015**

MBLK Sample ID: **GBLK-161114** Units: **mg/Kg** Analysis Date: **14-Nov-2016 17:34**
Client ID: Run ID: **FID-14_284792** SeqNo: **3892206** 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	*0.07047*	*0.0050*	*0.1*	*0*	*70.5*	*70 - 130*				

LCS Sample ID: **GLCS-161114** Units: **mg/Kg** Analysis Date: **14-Nov-2016 17:02**
Client ID: Run ID: **FID-14_284792** SeqNo: **3892205** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9497	0.050	1	0	95.0	70 - 130				
Surr: 4-Bromofluorobenzene	*0.08468*	*0.0050*	*0.1*	*0*	*84.7*	*70 - 130*				

MS Sample ID: **HS16110554-10MS** Units: **mg/Kg** Analysis Date: **14-Nov-2016 18:06**
Client ID: Run ID: **FID-14_284792** SeqNo: **3892208** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.919	0.050	1	0	91.9	70 - 130				
Surr: 4-Bromofluorobenzene	*0.08538*	*0.0050*	*0.1*	*0*	*85.4*	*70 - 130*				

MSD Sample ID: **HS16110554-10MSD** Units: **mg/Kg** Analysis Date: **14-Nov-2016 18:22**
Client ID: Run ID: **FID-14_284792** SeqNo: **3892209** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8877	0.050	1	0	88.8	70 - 130	0.919	3.46	30	
Surr: 4-Bromofluorobenzene	*0.08166*	*0.0050*	*0.1*	*0*	*81.7*	*70 - 130*	*0.08538*	*4.45*	*30*	

The following samples were analyzed in this batch: HS16110618-01

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: R284804 **Instrument: FID-14** **Method: SW8015**

MBLK Sample ID: **GBLK-161114** Units: **mg/Kg** Analysis Date: **15-Nov-2016 01:50**
Client ID: Run ID: **FID-14_284804** SeqNo: **3892493** 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	*0.07517*	*0.0050*	*0.1*	*0*	*75.2*	*70 - 130*				

LCS Sample ID: **GLCS-161114** Units: **mg/Kg** Analysis Date: **15-Nov-2016 01:18**
Client ID: Run ID: **FID-14_284804** SeqNo: **3892492** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8533	0.050	1	0	85.3	70 - 130				
Surr: 4-Bromofluorobenzene	*0.08174*	*0.0050*	*0.1*	*0*	*81.7*	*70 - 130*				

MS Sample ID: **HS16110618-04MS** Units: **mg/Kg** Analysis Date: **15-Nov-2016 02:22**
Client ID: **GP-9-2-0-1-110816** Run ID: **FID-14_284804** SeqNo: **3892553** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.7073	0.050	1	0	70.7	70 - 130				
Surr: 4-Bromofluorobenzene	*0.0572*	*0.0050*	*0.1*	*0*	*57.2*	*70 - 130*				S

MSD Sample ID: **HS16110618-04MSD** Units: **mg/Kg** Analysis Date: **15-Nov-2016 02:38**
Client ID: **GP-9-2-0-1-110816** Run ID: **FID-14_284804** SeqNo: **3892554** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.7626	0.050	1	0	76.3	70 - 130	0.7073	7.52	30	
Surr: 4-Bromofluorobenzene	*0.06206*	*0.0050*	*0.1*	*0*	*62.1*	*70 - 130*	*0.0572*	*8.15*	*30*	S

The following samples were analyzed in this batch:

HS16110618-02	HS16110618-03	HS16110618-04	HS16110618-05
HS16110618-06	HS16110618-07	HS16110618-08	HS16110618-10
HS16110618-11	HS16110618-12	HS16110618-13	HS16110618-14
HS16110618-15	HS16110618-16	HS16110618-17	HS16110618-19
HS16110618-20	HS16110618-21	HS16110618-22	HS16110618-23

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: R284873 **Instrument: FID-14** **Method: SW8015**

MBLK Sample ID: **GBLK-161114** Units: **mg/Kg** Analysis Date: **15-Nov-2016 09:54**
Client ID: Run ID: **FID-14_284873** SeqNo: **3894023** 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	*0.07476*	*0.0050*	*0.1*	*0*	*74.8*	*70 - 130*				

LCS Sample ID: **GLCS-161114** Units: **mg/Kg** Analysis Date: **15-Nov-2016 09:22**
Client ID: Run ID: **FID-14_284873** SeqNo: **3894022** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8175	0.050	1	0	81.7	70 - 130				
Surr: 4-Bromofluorobenzene	*0.07872*	*0.0050*	*0.1*	*0*	*78.7*	*70 - 130*				

MS Sample ID: **HS16110618-26MS** Units: **mg/Kg** Analysis Date: **15-Nov-2016 10:26**
Client ID: **GP-9-8-14-15-110916** Run ID: **FID-14_284873** SeqNo: **3894025** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.7361	0.050	1	0	73.6	70 - 130				
Surr: 4-Bromofluorobenzene	*0.07235*	*0.0050*	*0.1*	*0*	*72.4*	*70 - 130*				

MSD Sample ID: **HS16110618-26MSD** Units: **mg/Kg** Analysis Date: **15-Nov-2016 10:43**
Client ID: **GP-9-8-14-15-110916** Run ID: **FID-14_284873** SeqNo: **3894026** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.7869	0.050	1	0	78.7	70 - 130	0.7361	6.67	30	
Surr: 4-Bromofluorobenzene	*0.06671*	*0.0050*	*0.1*	*0*	*66.7*	*70 - 130*	*0.07235*	*8.11*	*30*	S

The following samples were analyzed in this batch: HS16110618-24 HS16110618-25 HS16110618-26

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110000 **Instrument: HG03** **Method: SW7471A**

MBLK Sample ID: **MBLK-110000** Units: **ug/Kg** Analysis Date: **18-Nov-2016 17:48**
Client ID: Run ID: **HG03_285127** SeqNo: **3899990** PrepDate: **18-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	3.32								

LCS Sample ID: **LCS-110000** Units: **ug/Kg** Analysis Date: **18-Nov-2016 17:49**
Client ID: Run ID: **HG03_285127** SeqNo: **3899991** PrepDate: **18-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	340.7	3.32	333.3	0	102	85 - 115				

MS Sample ID: **HS16110618-06MS** Units: **ug/Kg** Analysis Date: **18-Nov-2016 18:15**
Client ID: **GP-9-2-9-10-110816** Run ID: **HG03_285127** SeqNo: **3900006** PrepDate: **18-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	358.6	3.39	339.6	4.699	104	85 - 115				

MSD Sample ID: **HS16110618-06MSD** Units: **ug/Kg** Analysis Date: **18-Nov-2016 18:17**
Client ID: **GP-9-2-9-10-110816** Run ID: **HG03_285127** SeqNo: **3900007** PrepDate: **18-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	369.7	3.58	358.9	4.699	102	85 - 115	358.6	3.06	20	

The following samples were analyzed in this batch:

HS16110618-01	HS16110618-02	HS16110618-03	HS16110618-04
HS16110618-05	HS16110618-06	HS16110618-07	HS16110618-08
HS16110618-10	HS16110618-11	HS16110618-12	HS16110618-13
HS16110618-14	HS16110618-15	HS16110618-16	HS16110618-17

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110001 **Instrument: ICPMS04** **Method: SW6020**

MBLK Sample ID: **MBLK-110001** Units: **mg/Kg** Analysis Date: **18-Nov-2016 19:30**
Client ID: Run ID: **ICPMS04_285070** SeqNo: **3899595** PrepDate: **18-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-110001** Units: **mg/Kg** Analysis Date: **21-Nov-2016 12:18**
Client ID: Run ID: **ICPMS04_285165** SeqNo: **3900164** PrepDate: **18-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.01	0.500	10	0	100	80 - 120				
Barium	10.14	0.500	10	0	101	80 - 120				
Boron	52.74	2.50	50	0	105	80 - 120				
Cadmium	10.11	0.500	10	0	101	80 - 120				
Chromium	9.983	0.500	10	0	99.8	80 - 120				
Copper	10.01	0.200	10	0	100	80 - 120				
Lead	10.14	0.500	10	0	101	80 - 120				
Nickel	10.26	0.500	10	0	103	80 - 120				
Selenium	9.813	0.500	10	0	98.1	80 - 120				
Silver	10.46	0.500	10	0	105	80 - 120				
Zinc	10.26	0.500	10	0	103	80 - 120				

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110001 **Instrument: ICPMS04** **Method: SW6020**

MS Sample ID: **HS16110784-09MS** Units: **mg/Kg** Analysis Date: **18-Nov-2016 21:08**
Client ID: Run ID: **ICPMS04_285070** SeqNo: **3899617** PrepDate: **18-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.303	0.478	9.555	2.046	75.9	75 - 125				
Barium	120.7	0.478	9.555	166.5	-479	75 - 125				SO
Boron	39.84	2.39	47.77	2.572	78.0	75 - 125				
Cadmium	8.341	0.478	9.555	0.04171	86.9	75 - 125				
Chromium	19.39	0.478	9.555	5.29	148	75 - 125				S
Copper	13.04	0.191	9.555	4.383	90.6	75 - 125				
Lead	19.47	0.478	9.555	11.76	80.6	75 - 125				
Nickel	14.8	0.478	9.555	5.184	101	75 - 125				
Selenium	8.05	0.478	9.555	0.5602	78.4	75 - 125				
Silver	7.765	0.478	9.555	0.03445	80.9	75 - 125				
Zinc	26.83	0.478	9.555	12.16	154	75 - 125				S

MSD Sample ID: **HS16110784-09MSD** Units: **mg/Kg** Analysis Date: **21-Nov-2016 13:56**
Client ID: Run ID: **ICPMS04_285165** SeqNo: **3900438** PrepDate: **18-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.01	0.456	9.112	2.046	87.4	75 - 125	9.303	7.29	20	
Barium	122.5	0.456	9.112	166.5	-483	75 - 125	120.7	1.46	20	SO
Boron	45.64	2.28	45.56	2.572	94.5	75 - 125	39.84	13.6	20	
Cadmium	8.642	0.456	9.112	0	94.8	75 - 125	8.341	3.55	20	
Chromium	20.81	0.456	9.112	5.29	170	75 - 125	19.39	7.03	20	S
Copper	13.97	0.182	9.112	4.383	105	75 - 125	13.04	6.9	20	
Lead	19.87	0.456	9.112	11.76	89.0	75 - 125	19.47	2.05	20	
Nickel	16.03	0.456	9.112	5.184	119	75 - 125	14.8	7.99	20	
Selenium	8.588	0.456	9.112	0.5602	88.1	75 - 125	8.05	6.47	20	
Silver	8.511	0.456	9.112	0	93.4	75 - 125	7.765	9.16	20	
Zinc	28.48	0.456	9.112	12.16	179	75 - 125	26.83	5.99	20	S

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110001 **Instrument: ICPMS04** **Method: SW6020**

PDS Sample ID: **HS16110784-09BS** Units: **mg/Kg** Analysis Date: **18-Nov-2016 21:16**
Client ID: Run ID: **ICPMS04_285070** SeqNo: **3899619** PrepDate: **18-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.171	0.459	9.188	2.046	77.5	75 - 125				
Boron	39.29	2.30	45.94	2.572	79.9	75 - 125				
Cadmium	7.583	0.459	9.188	0	82.5	75 - 125				
Chromium	12.62	0.459	9.188	5.29	79.8	75 - 125				
Copper	11.29	0.184	9.188	4.383	75.2	75 - 125				
Lead	19.91	0.459	9.188	11.76	88.7	75 - 125				
Nickel	12.24	0.459	9.188	5.184	76.8	75 - 125				
Selenium	7.671	0.459	9.188	0.5602	77.4	75 - 125				
Silver	7.172	0.459	9.188	0	78.1	75 - 125				

PDS Sample ID: **HS16110784-09BS** Units: **mg/Kg** Analysis Date: **21-Nov-2016 13:52**
Client ID: Run ID: **ICPMS04_285165** SeqNo: **3900437** PrepDate: **18-Nov-2016** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	289	4.59	91.88	202.2	94.4	75 - 125				

PDS Sample ID: **HS16110784-09BS** Units: **mg/Kg** Analysis Date: **21-Nov-2016 15:33**
Client ID: Run ID: **ICPMS04_285165** SeqNo: **3900826** PrepDate: **18-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Zinc	23.1	0.459	9.188	12.16	119	75 - 125				

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110001 **Instrument: ICPMS04** **Method: SW6020**

SD Sample ID: **HS16110784-09 DIL SX** Units: **mg/Kg** Analysis Date: **18-Nov-2016 21:03**
Client ID: Run ID: **ICPMS04_285070** SeqNo: **3899616** PrepDate: **18-Nov-2016** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Arsenic	2.138	2.30					2.046	0	10	J
Boron	ND	11.5					2.572	0	10	
Cadmium	ND	2.30					0.04171	0	10	
Chromium	5.538	2.30					5.29	4.68	10	
Copper	4.668	0.919					4.383	6.51	10	
Lead	11.77	2.30					11.76	0.0804	10	
Nickel	5.611	2.30					5.184	8.23	10	
Selenium	ND	2.30					0.5602	0	10	
Silver	ND	2.30					0.03445	0	10	
Zinc	12.67	2.30					12.16	4.24	10	

SD Sample ID: **HS16110784-09 DIL SX** Units: **mg/Kg** Analysis Date: **21-Nov-2016 15:38**
Client ID: Run ID: **ICPMS04_285165** SeqNo: **3900827** PrepDate: **18-Nov-2016** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Barium	187.2	23.0					202.2	7.44	10	

The following samples were analyzed in this batch: HS16110618-01 HS16110618-02 HS16110618-03 HS16110618-04 HS16110618-05 HS16110618-06

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110012 **Instrument: ICPMS04** **Method: SW6020**

MBLK Sample ID: **MBLK-110012** Units: **mg/Kg** Analysis Date: **21-Nov-2016 15:53**
Client ID: Run ID: **ICPMS04_285165** SeqNo: **3901609** PrepDate: **18-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-110012** Units: **mg/Kg** Analysis Date: **21-Nov-2016 15:58**
Client ID: Run ID: **ICPMS04_285165** SeqNo: **3901610** PrepDate: **18-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.642	0.500	10	0	96.4	80 - 120				
Barium	10.24	0.500	10	0	102	80 - 120				
Boron	54.57	2.50	50	0	109	80 - 120				
Cadmium	10.16	0.500	10	0	102	80 - 120				
Chromium	9.682	0.500	10	0	96.8	80 - 120				
Copper	9.744	0.200	10	0	97.4	80 - 120				
Lead	10.36	0.500	10	0	104	80 - 120				
Nickel	9.945	0.500	10	0	99.4	80 - 120				
Selenium	9.391	0.500	10	0	93.9	80 - 120				
Silver	10.2	0.500	10	0	102	80 - 120				
Zinc	10.13	0.500	10	0	101	80 - 120				

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110012 **Instrument: ICPMS04** **Method: SW6020**

MS Sample ID: **HS16110618-16MS** Units: **mg/Kg** Analysis Date: **21-Nov-2016 16:59**
Client ID: **GP-9-5-10-11-110916** Run ID: **ICPMS04_285165** SeqNo: **3901624** PrepDate: **18-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.25	0.474	9.482	2.612	80.6	75 - 125				
Barium	521.2	0.474	9.482	422	1050	75 - 125				SEO
Cadmium	7.783	0.474	9.482	0.08978	81.1	75 - 125				
Chromium	13.79	0.474	9.482	4.987	92.8	75 - 125				
Copper	12.35	0.190	9.482	5.112	76.3	75 - 125				
Lead	12	0.474	9.482	4.288	81.4	75 - 125				
Nickel	13.83	0.474	9.482	6.174	80.8	75 - 125				
Selenium	7.774	0.474	9.482	0.3363	78.4	75 - 125				
Silver	7.518	0.474	9.482	-0.009599	79.4	75 - 125				
Zinc	24.77	0.474	9.482	16.25	89.8	75 - 125				

MS Sample ID: **HS16110618-16MS** Units: **mg/Kg** Analysis Date: **22-Nov-2016 13:45**
Client ID: **GP-9-5-10-11-110916** Run ID: **ICPMS04_285279** SeqNo: **3902606** PrepDate: **18-Nov-2016** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	49.7	11.9	47.41	8.617	86.7	75 - 125				

MSD Sample ID: **HS16110618-16MSD** Units: **mg/Kg** Analysis Date: **21-Nov-2016 17:04**
Client ID: **GP-9-5-10-11-110916** Run ID: **ICPMS04_285165** SeqNo: **3901625** PrepDate: **18-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.84	0.459	9.183	2.612	78.7	75 - 125	10.25	4.13	20	
Barium	619.7	0.459	9.183	422	2150	75 - 125	521.2	17.3	20	SEO
Cadmium	7.56	0.459	9.183	0.08978	81.4	75 - 125	7.783	2.9	20	
Chromium	13.1	0.459	9.183	4.987	88.3	75 - 125	13.79	5.15	20	
Copper	11.88	0.184	9.183	5.112	73.7	75 - 125	12.35	3.85	20	S
Lead	11.73	0.459	9.183	4.288	81.0	75 - 125	12	2.34	20	
Nickel	13.29	0.459	9.183	6.174	77.5	75 - 125	13.83	4.02	20	
Selenium	7.295	0.459	9.183	0.3363	75.8	75 - 125	7.774	6.36	20	
Silver	7.221	0.459	9.183	-0.009599	78.7	75 - 125	7.518	4.03	20	
Zinc	24.11	0.459	9.183	16.25	85.7	75 - 125	24.77	2.67	20	

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110012 **Instrument: ICPMS04** **Method: SW6020**

MSD Sample ID: **HS16110618-16MSD** Units: **mg/Kg** Analysis Date: **22-Nov-2016 13:50**
Client ID: **GP-9-5-10-11-110916** Run ID: **ICPMS04_285279** SeqNo: **3902607** PrepDate: **18-Nov-2016** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	47.45	11.5	45.91	8.617	84.6	75 - 125	49.7	4.64	20	

PDS Sample ID: **HS16110618-16BS** Units: **mg/Kg** Analysis Date: **21-Nov-2016 17:08**
Client ID: **GP-9-5-10-11-110916** Run ID: **ICPMS04_285165** SeqNo: **3901626** PrepDate: **18-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	11.04	0.471	9.411	2.612	89.6	75 - 125				
Cadmium	8.215	0.471	9.411	0.08978	86.3	75 - 125				
Chromium	13.12	0.471	9.411	4.987	86.5	75 - 125				
Copper	12.7	0.188	9.411	5.112	80.7	75 - 125				
Lead	12.78	0.471	9.411	4.288	90.2	75 - 125				
Nickel	14.05	0.471	9.411	6.174	83.7	75 - 125				
Selenium	8.619	0.471	9.411	0.3363	88.0	75 - 125				
Silver	8.063	0.471	9.411	-0.009599	85.8	75 - 125				
Zinc	24.3	0.471	9.411	16.25	85.5	75 - 125				

PDS Sample ID: **HS16110618-16BS** Units: **mg/Kg** Analysis Date: **22-Nov-2016 13:54**
Client ID: **GP-9-5-10-11-110916** Run ID: **ICPMS04_285279** SeqNo: **3902608** PrepDate: **18-Nov-2016** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	468.4	2.35	47.05	425.2	91.8	75 - 125				O
Boron	220.1	11.8	235.3	8.617	89.9	75 - 125				

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110012 **Instrument: ICPMS04** **Method: SW6020**

SD Sample ID: **HS16110618-16 DIL SX** Units: **mg/Kg** Analysis Date: **21-Nov-2016 16:55**
Client ID: **GP-9-5-10-11-110916** Run ID: **ICPMS04_285165** SeqNo: **3901623** PrepDate: **18-Nov-2016** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Arsenic	2.669	2.35					2.612	2.19	10	
Boron	10.89	11.8					7.958	0	10	J
Cadmium	ND	2.35					0.08978	0	10	
Chromium	5.071	2.35					4.987	1.68	10	
Lead	4.451	2.35					4.288	3.81	10	
Nickel	6.699	2.35					6.174	8.5	10	
Selenium	ND	2.35					0.3363	0	10	
Silver	ND	2.35					-0.009599	0	10	

SD Sample ID: **HS16110618-16 DIL SX** Units: **mg/Kg** Analysis Date: **22-Nov-2016 13:31**
Client ID: **GP-9-5-10-11-110916** Run ID: **ICPMS04_285279** SeqNo: **3902463** PrepDate: **18-Nov-2016** DF: **25**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Barium	392.6	11.8					425.2	7.66	10	

SD Sample ID: **HS16110618-16 DIL SX** Units: **mg/Kg** Analysis Date: **22-Nov-2016 13:58**
Client ID: **GP-9-5-10-11-110916** Run ID: **ICPMS04_285279** SeqNo: **3902609** PrepDate: **18-Nov-2016** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Copper	5.378	0.941					5.112	5.2	10	
Zinc	17.17	2.35					16.25	5.65	10	

The following samples were analyzed in this batch:

HS16110618-07	HS16110618-08	HS16110618-10	HS16110618-11
HS16110618-12	HS16110618-13	HS16110618-14	HS16110618-15
HS16110618-16	HS16110618-17	HS16110618-19	HS16110618-20
HS16110618-21	HS16110618-22	HS16110618-23	HS16110618-24
HS16110618-25	HS16110618-26		

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110051 **Instrument: HG03** **Method: SW7471A**

MBLK Sample ID: **MBLK-110051** Units: **ug/Kg** Analysis Date: **22-Nov-2016 16:27**
Client ID: Run ID: **HG03_285355** SeqNo: **3903506** PrepDate: **21-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	3.38								

LCS Sample ID: **LCS-110051** Units: **ug/Kg** Analysis Date: **22-Nov-2016 16:29**
Client ID: Run ID: **HG03_285355** SeqNo: **3903507** PrepDate: **21-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	331.4	3.33	334.1	0	99.2	85 - 115				

MS Sample ID: **HS16110618-22MS** Units: **ug/Kg** Analysis Date: **22-Nov-2016 16:41**
Client ID: **GP-9-7-7-8-110916** Run ID: **HG03_285355** SeqNo: **3903512** PrepDate: **21-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	353	3.52	353	13.68	96.1	85 - 115				

MSD Sample ID: **HS16110618-22MSD** Units: **ug/Kg** Analysis Date: **22-Nov-2016 16:42**
Client ID: **GP-9-7-7-8-110916** Run ID: **HG03_285355** SeqNo: **3903513** PrepDate: **21-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	349.1	3.46	347	13.68	96.7	85 - 115	353	1.12	20	

The following samples were analyzed in this batch:

HS16110618-19	HS16110618-20	HS16110618-21	HS16110618-22
HS16110618-23	HS16110618-24	HS16110618-25	HS16110618-26

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110222 **Instrument: ICPMS05** **Method: La29B-6020**

MBLK Sample ID: **MBLK-110222** Units: **mg/L** Analysis Date: **28-Nov-2016 17:30**
Client ID: Run ID: **ICPMS05_285514** SeqNo: **3907724** PrepDate: **26-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: **HS16110618-02DUP** Units: **mg/L** Analysis Date: **28-Nov-2016 17:39**
Client ID: **GP-9-1-6-7-110816** Run ID: **ICPMS05_285514** SeqNo: **3907727** PrepDate: **26-Nov-2016** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	98.62	5.00					82.03	18.4	30	
Magnesium	14.39	5.00					12.85	11.3	30	
Sodium	57.33	5.00					56.91	0.732	30	

The following samples were analyzed in this batch:

HS16110618-01	HS16110618-02	HS16110618-03	HS16110618-04
HS16110618-05	HS16110618-06	HS16110618-07	HS16110618-08
HS16110618-10	HS16110618-11	HS16110618-12	HS16110618-13
HS16110618-14	HS16110618-15	HS16110618-16	HS16110618-17
HS16110618-19	HS16110618-20	HS16110618-22	HS16110618-23

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110222A **Instrument: MISC-Metals** **Method: La29B SAR**

DUP Sample ID: **HS16110618-02DUP** Units: **meq/meq** Analysis Date: **29-Nov-2016 10:22**
Client ID: **GP-9-1-6-7-110816** Run ID: **MISC-Metals_285580** SeqNo: **3908236** PrepDate: **26-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	1.427	0.0100					1.542	7.75	30	

The following samples were analyzed in this batch:

HS16110618-01	HS16110618-02	HS16110618-03	HS16110618-04
HS16110618-05	HS16110618-06	HS16110618-07	HS16110618-08
HS16110618-10	HS16110618-11	HS16110618-12	HS16110618-13
HS16110618-14	HS16110618-15	HS16110618-16	HS16110618-17
HS16110618-19	HS16110618-20	HS16110618-22	HS16110618-23

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110223 **Instrument: ICPMS05** **Method: La29B-6020**

MBLK Sample ID: **MBLK-110223** Units: **mg/L** Analysis Date: **28-Nov-2016 18:49**
Client ID: Run ID: **ICPMS05_285514** SeqNo: **3907751** PrepDate: **26-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: **HS16110618-21DUP** Units: **mg/L** Analysis Date: **28-Nov-2016 18:55**
Client ID: **GP-9-7-2-3-110916** Run ID: **ICPMS05_285514** SeqNo: **3907753** PrepDate: **26-Nov-2016** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	62.64	5.00					63.8	1.83	30	
Magnesium	12.81	5.00					13.18	2.88	30	
Sodium	113.6	5.00					116.4	2.38	30	

The following samples were analyzed in this batch: HS16110618-21 HS16110618-24 HS16110618-25 HS16110618-26

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110223A **Instrument: MISC-Metals** **Method: La29B SAR**

DUP Sample ID: **HS16110618-21DUP** Units: **meq/meq** Analysis Date: **29-Nov-2016 10:36**
Client ID: **GP-9-7-2-3-110916** Run ID: **MISC-Metals_285582** SeqNo: **3908275** PrepDate: **26-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	3.431	0.0100					3.453	0.639	30	

The following samples were analyzed in this batch: HS16110618-21 HS16110618-24 HS16110618-25 HS16110618-26

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: R284788 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-161114** Units: **ug/L** Analysis Date: **14-Nov-2016 23:40**
Client ID: Run ID: **VOA4_284788** SeqNo: **3892062** 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	*49.49*	*1.0*	*50*	*0*	*99.0*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.95*	*1.0*	*50*	*0*	*97.9*	*70 - 125*				
Surr: Dibromofluoromethane	*50.66*	*1.0*	*50*	*0*	*101*	*74 - 125*				
Surr: Toluene-d8	*54.34*	*1.0*	*50*	*0*	*109*	*75 - 125*				

LCS Sample ID: **VLCSW-161114** Units: **ug/L** Analysis Date: **14-Nov-2016 22:49**
Client ID: Run ID: **VOA4_284788** SeqNo: **3892061** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	53.41	1.0	50	0	107	75 - 122				
Ethylbenzene	56.55	1.0	50	0	113	80 - 120				
m,p-Xylene	115.9	2.0	100	0	116	80 - 120				
o-Xylene	57.93	1.0	50	0	116	80 - 120				
Toluene	56.51	1.0	50	0	113	75 - 121				
Xylenes, Total	173.8	1.0	150	0	116	79 - 124				
Surr: 1,2-Dichloroethane-d4	*49.33*	*1.0*	*50*	*0*	*98.7*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*55.04*	*1.0*	*50*	*0*	*110*	*70 - 125*				
Surr: Dibromofluoromethane	*52.07*	*1.0*	*50*	*0*	*104*	*74 - 125*				
Surr: Toluene-d8	*55.45*	*1.0*	*50*	*0*	*111*	*75 - 125*				

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: R284788 **Instrument: VOA4** **Method: SW8260**

MS Sample ID: **HS16110624-02MS** Units: **ug/L** Analysis Date: **15-Nov-2016 00:55**
Client ID: Run ID: **VOA4_284788** SeqNo: **3892065** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	49.08	1.0	50	0	98.2	75 - 122				
Ethylbenzene	51.34	1.0	50	0	103	80 - 120				
m,p-Xylene	104	2.0	100	0	104	80 - 120				
o-Xylene	50.88	1.0	50	0	102	80 - 120				
Toluene	51.34	1.0	50	0	103	75 - 121				
Xylenes, Total	154.9	1.0	150	0	103	80 - 124				
Surr: 1,2-Dichloroethane-d4	*49.46*	*1.0*	*50*	*0*	*98.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*53.05*	*1.0*	*50*	*0*	*106*	*70 - 125*				
Surr: Dibromofluoromethane	*52.84*	*1.0*	*50*	*0*	*106*	*74 - 125*				
Surr: Toluene-d8	*54.34*	*1.0*	*50*	*0*	*109*	*75 - 125*				

MSD Sample ID: **HS16110624-02MSD** Units: **ug/L** Analysis Date: **15-Nov-2016 01:20**
Client ID: Run ID: **VOA4_284788** SeqNo: **3892066** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	48.65	1.0	50	0	97.3	75 - 122	49.08	0.88	20	
Ethylbenzene	53.3	1.0	50	0	107	80 - 120	51.34	3.76	20	
m,p-Xylene	105	2.0	100	0	105	80 - 120	104	0.926	20	
o-Xylene	51.78	1.0	50	0	104	80 - 120	50.88	1.77	20	
Toluene	51.95	1.0	50	0	104	75 - 121	51.34	1.18	20	
Xylenes, Total	156.7	1.0	150	0	104	80 - 124	154.9	1.2	20	
Surr: 1,2-Dichloroethane-d4	*51.42*	*1.0*	*50*	*0*	*103*	*71 - 125*	*49.46*	*3.88*	*20*	
Surr: 4-Bromofluorobenzene	*53.59*	*1.0*	*50*	*0*	*107*	*70 - 125*	*53.05*	*0.996*	*20*	
Surr: Dibromofluoromethane	*50.93*	*1.0*	*50*	*0*	*102*	*74 - 125*	*52.84*	*3.67*	*20*	
Surr: Toluene-d8	*54.15*	*1.0*	*50*	*0*	*108*	*75 - 125*	*54.34*	*0.36*	*20*	

The following samples were analyzed in this batch: HS16110618-09 HS16110618-18 HS16110618-27

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: R284889 **Instrument: VOA8** **Method: SW8260**

MBLK Sample ID: **VBLKS1-111616** Units: **ug/Kg** Analysis Date: **16-Nov-2016 08:59**
Client ID: Run ID: **VOA8_284889** SeqNo: **3894394** 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	*57.18*	*0*	*50*	*0*	*114*	*70 - 128*				
Surr: 4-Bromofluorobenzene	*46.9*	*0*	*50*	*0*	*93.8*	*73 - 126*				
Surr: Dibromofluoromethane	*55.46*	*0*	*50*	*0*	*111*	*71 - 128*				
Surr: Toluene-d8	*46.51*	*0*	*50*	*0*	*93.0*	*73 - 127*				

LCS Sample ID: **VLCSS1-111616** Units: **ug/Kg** Analysis Date: **16-Nov-2016 08:05**
Client ID: Run ID: **VOA8_284889** SeqNo: **3894393** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	48.72	5.0	50	0	97.4	79 - 122				
Ethylbenzene	48.13	5.0	50	0	96.3	80 - 122				
m,p-Xylene	96.87	10	100	0	96.9	79 - 122				
o-Xylene	47.35	5.0	50	0	94.7	80 - 123				
Toluene	47.74	5.0	50	0	95.5	79 - 120				
Xylenes, Total	144.2	5.0	150	0	96.1	79 - 123				
Surr: 1,2-Dichloroethane-d4	*60.37*	*0*	*50*	*0*	*121*	*70 - 128*				
Surr: 4-Bromofluorobenzene	*51.26*	*0*	*50*	*0*	*103*	*73 - 126*				
Surr: Dibromofluoromethane	*53.01*	*0*	*50*	*0*	*106*	*71 - 128*				
Surr: Toluene-d8	*48.23*	*0*	*50*	*0*	*96.5*	*73 - 127*				

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: R284889 **Instrument: VOA8** **Method: SW8260**

MS Sample ID: **HS16110618-01MS** Units: **ug/Kg** Analysis Date: **16-Nov-2016 11:40**
Client ID: **GP-9-1-2-3-110816** Run ID: **VOA8_284889** SeqNo: **3894400** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	55.46	5.0	49.5	0	112	79 - 122				
Ethylbenzene	55.31	5.0	49.5	0	112	80 - 122				
m,p-Xylene	116.8	9.9	99	0	118	79 - 122				
o-Xylene	55.01	5.0	49.5	0	111	80 - 123				
Toluene	52.82	5.0	49.5	0	107	79 - 120				
Xylenes, Total	171.8	5.0	148.5	0	116	79 - 123				
Surr: 1,2-Dichloroethane-d4	*53.25*	*0*	*49.5*	*0*	*108*	*70 - 128*				
Surr: 4-Bromofluorobenzene	*51.57*	*0*	*49.5*	*0*	*104*	*73 - 126*				
Surr: Dibromofluoromethane	*52.11*	*0*	*49.5*	*0*	*105*	*71 - 128*				
Surr: Toluene-d8	*46.5*	*0*	*49.5*	*0*	*93.9*	*73 - 127*				

MSD Sample ID: **HS16110618-01MSD** Units: **ug/Kg** Analysis Date: **16-Nov-2016 12:08**
Client ID: **GP-9-1-2-3-110816** Run ID: **VOA8_284889** SeqNo: **3894401** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	48.13	5.0	49.5	0	97.2	79 - 122	55.46	14.1	30	
Ethylbenzene	50.96	5.0	49.5	0	103	80 - 122	55.31	8.19	30	
m,p-Xylene	103.1	9.9	99	0	104	79 - 122	116.8	12.5	30	
o-Xylene	50.32	5.0	49.5	0	102	80 - 123	55.01	8.91	30	
Toluene	49.02	5.0	49.5	0	99.0	79 - 120	52.82	7.46	30	
Xylenes, Total	153.4	5.0	148.5	0	103	79 - 123	171.8	11.3	30	
Surr: 1,2-Dichloroethane-d4	*55.76*	*0*	*49.5*	*0*	*113*	*70 - 128*	*53.25*	*4.6*	*30*	
Surr: 4-Bromofluorobenzene	*52.3*	*0*	*49.5*	*0*	*106*	*73 - 126*	*51.57*	*1.4*	*30*	
Surr: Dibromofluoromethane	*51.47*	*0*	*49.5*	*0*	*104*	*71 - 128*	*52.11*	*1.23*	*30*	
Surr: Toluene-d8	*47.96*	*0*	*49.5*	*0*	*96.9*	*73 - 127*	*46.5*	*3.09*	*30*	

The following samples were analyzed in this batch:

HS16110618-01	HS16110618-02	HS16110618-03	HS16110618-04
HS16110618-05	HS16110618-06	HS16110618-07	HS16110618-08
HS16110618-10	HS16110618-11	HS16110618-12	HS16110618-13
HS16110618-14	HS16110618-15	HS16110618-16	HS16110618-17
HS16110618-19			

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: R284975 **Instrument: VOA8** **Method: SW8260**

MBLK Sample ID: **VBLKS1-111716** Units: **ug/Kg** Analysis Date: **17-Nov-2016 09:04**
Client ID: Run ID: **VOA8_284975** SeqNo: **3896083** 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	*51.8*	*0*	*50*	*0*	*104*	*70 - 128*				
Surr: 4-Bromofluorobenzene	*47.67*	*0*	*50*	*0*	*95.3*	*73 - 126*				
Surr: Dibromofluoromethane	*47.34*	*0*	*50*	*0*	*94.7*	*71 - 128*				
Surr: Toluene-d8	*50.27*	*0*	*50*	*0*	*101*	*73 - 127*				

LCS Sample ID: **VLCSS1-111716** Units: **ug/Kg** Analysis Date: **17-Nov-2016 08:10**
Client ID: Run ID: **VOA8_284975** SeqNo: **3896082** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	51.46	5.0	50	0	103	79 - 122				
Ethylbenzene	47.45	5.0	50	0	94.9	80 - 122				
m,p-Xylene	95.13	10	100	0	95.1	79 - 122				
o-Xylene	47.22	5.0	50	0	94.4	80 - 123				
Toluene	46.89	5.0	50	0	93.8	79 - 120				
Xylenes, Total	142.3	5.0	150	0	94.9	79 - 123				
Surr: 1,2-Dichloroethane-d4	*54.95*	*0*	*50*	*0*	*110*	*70 - 128*				
Surr: 4-Bromofluorobenzene	*51.99*	*0*	*50*	*0*	*104*	*73 - 126*				
Surr: Dibromofluoromethane	*50.4*	*0*	*50*	*0*	*101*	*71 - 128*				
Surr: Toluene-d8	*47.99*	*0*	*50*	*0*	*96.0*	*73 - 127*				

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: R284975 **Instrument: VOA8** **Method: SW8260**

MS Sample ID: **HS16110618-20MS** Units: **ug/Kg** Analysis Date: **17-Nov-2016 10:51**
Client ID: **GP-9-6-13-14-110916** Run ID: **VOA8_284975** SeqNo: **3896317** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	40.87	5.0	50.5	0	80.9	79 - 122				
Ethylbenzene	39.03	5.0	50.5	0	77.3	80 - 122				S
m,p-Xylene	76.53	10	101	0	75.8	79 - 122				S
o-Xylene	38.31	5.0	50.5	0	75.9	80 - 123				S
Toluene	39.46	5.0	50.5	0	78.1	79 - 120				S
Xylenes, Total	114.8	5.0	151.5	0	75.8	79 - 123				S
Surr: 1,2-Dichloroethane-d4	*59.34*	*0*	*50.5*	*0*	*117*	*70 - 128*				
Surr: 4-Bromofluorobenzene	*52.76*	*0*	*50.5*	*0*	*104*	*73 - 126*				
Surr: Dibromofluoromethane	*54.88*	*0*	*50.5*	*0*	*109*	*71 - 128*				
Surr: Toluene-d8	*48*	*0*	*50.5*	*0*	*95.0*	*73 - 127*				

MSD Sample ID: **HS16110618-20MSD** Units: **ug/Kg** Analysis Date: **17-Nov-2016 11:18**
Client ID: **GP-9-6-13-14-110916** Run ID: **VOA8_284975** SeqNo: **3896318** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	44.18	5.0	50	0	88.4	79 - 122	40.87	7.79	30	
Ethylbenzene	41.33	5.0	50	0	82.7	80 - 122	39.03	5.71	30	
m,p-Xylene	81.4	10	100	0	81.4	79 - 122	76.53	6.16	30	
o-Xylene	40.46	5.0	50	0	80.9	80 - 123	38.31	5.46	30	
Toluene	42.27	5.0	50	0	84.5	79 - 120	39.46	6.87	30	
Xylenes, Total	121.9	5.0	150	0	81.2	79 - 123	114.8	5.93	30	
Surr: 1,2-Dichloroethane-d4	*59.31*	*0*	*50*	*0*	*119*	*70 - 128*	*59.34*	*0.0479*	*30*	
Surr: 4-Bromofluorobenzene	*52.97*	*0*	*50*	*0*	*106*	*73 - 126*	*52.76*	*0.385*	*30*	
Surr: Dibromofluoromethane	*52.47*	*0*	*50*	*0*	*105*	*71 - 128*	*54.88*	*4.48*	*30*	
Surr: Toluene-d8	*46.79*	*0*	*50*	*0*	*93.6*	*73 - 127*	*48*	*2.56*	*30*	

The following samples were analyzed in this batch: HS16110618-20 HS16110618-21 HS16110618-22 HS16110618-23 HS16110618-24 HS16110618-25 HS16110618-26

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110108 **Instrument: UV-2450** **Method: SW7196**

MBLK Sample ID: **MBLK-110108** Units: **mg/kg** Analysis Date: **23-Nov-2016 12:45**
Client ID: Run ID: **UV-2450_285408** SeqNo: **3904712** PrepDate: **22-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-110108** Units: **mg/kg** Analysis Date: **23-Nov-2016 12:45**
Client ID: Run ID: **UV-2450_285408** SeqNo: **3904711** PrepDate: **22-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	9.2	2.00	10	0	92.0	80 - 120				

MS Sample ID: **HS16110784-02MS** Units: **mg/kg** Analysis Date: **23-Nov-2016 12:45**
Client ID: Run ID: **UV-2450_285408** SeqNo: **3904709** PrepDate: **22-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	8.545	2.00	9.982	0	85.6	75 - 125				

MSD Sample ID: **HS16110784-02MSD** Units: **mg/kg** Analysis Date: **23-Nov-2016 12:45**
Client ID: Run ID: **UV-2450_285408** SeqNo: **3904710** PrepDate: **22-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	9.271	2.00	9.99	0	92.8	75 - 125	8.545	8.15	20	

The following samples were analyzed in this batch: HS16110618-01 HS16110618-02 HS16110618-03

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110111 **Instrument: UV-2450** **Method: SW7196**

MBLK Sample ID: **MBLK-110111** Units: **mg/kg** Analysis Date: **23-Nov-2016 17:15**
Client ID: Run ID: **UV-2450_285587** SeqNo: **3908408** PrepDate: **22-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-110111** Units: **mg/kg** Analysis Date: **23-Nov-2016 17:15**
Client ID: Run ID: **UV-2450_285587** SeqNo: **3908407** PrepDate: **22-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	10.04	2.00	10	0	100	80 - 120				

MS Sample ID: **HS16110618-20MS** Units: **mg/kg** Analysis Date: **23-Nov-2016 17:15**
Client ID: **GP-9-6-13-14-110916** Run ID: **UV-2450_285587** SeqNo: **3908405** PrepDate: **22-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	9.474	2.00	9.994	0	94.8	75 - 125				

MSD Sample ID: **HS16110618-20MSD** Units: **mg/kg** Analysis Date: **23-Nov-2016 17:15**
Client ID: **GP-9-6-13-14-110916** Run ID: **UV-2450_285587** SeqNo: **3908406** PrepDate: **22-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	8.348	1.99	9.938	0	84.0	75 - 125	9.474	12.6	20	

The following samples were analyzed in this batch:

HS16110618-04	HS16110618-05	HS16110618-06	HS16110618-07
HS16110618-08	HS16110618-10	HS16110618-11	HS16110618-12
HS16110618-13	HS16110618-14	HS16110618-15	HS16110618-16
HS16110618-17	HS16110618-19	HS16110618-20	HS16110618-21
HS16110618-22	HS16110618-23	HS16110618-24	HS16110618-25

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: 110170 **Instrument: UV-2450** **Method: SW7196**

MBLK Sample ID: **MBLK-110170** Units: **mg/kg** Analysis Date: **28-Nov-2016 15:15**
Client ID: Run ID: **UV-2450_285589** SeqNo: **3908453** PrepDate: **28-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-110170** Units: **mg/kg** Analysis Date: **28-Nov-2016 15:15**
Client ID: Run ID: **UV-2450_285589** SeqNo: **3908452** PrepDate: **28-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	10	2.00	10	0	100	80 - 120				

MS Sample ID: **HS16110876-11MS** Units: **mg/kg** Analysis Date: **28-Nov-2016 15:15**
Client ID: Run ID: **UV-2450_285589** SeqNo: **3908450** PrepDate: **28-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	5.514	2.00	9.99	-0.3591	58.8	75 - 125				S

MSD Sample ID: **HS16110876-11MSD** Units: **mg/kg** Analysis Date: **28-Nov-2016 15:15**
Client ID: Run ID: **UV-2450_285589** SeqNo: **3908451** PrepDate: **28-Nov-2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	7.144	2.00	9.978	-0.3591	75.2	75 - 125	5.514	25.7	20	R

PDS Sample ID: **HS16110876-11PDS** Units: **mg/kg** Analysis Date: **28-Nov-2016 15:15**
Client ID: Run ID: **UV-2450_285589** SeqNo: **3908476** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	9.177	1.99	9.974	-0.3591	95.6	80 - 120				

The following samples were analyzed in this batch: HS16110618-26

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: R284958 **Instrument: Balance1** **Method: SW3550**

DUP Sample ID: **HS16110569-07DUP** Units: **wt%** Analysis Date: **15-Nov-2016 09:53**
Client ID: Run ID: **Balance1_284958** SeqNo: **3895718** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	21.3	0.0100					19.8	7.3	20	

The following samples were analyzed in this batch:

HS16110618-01	HS16110618-02	HS16110618-03	HS16110618-04
HS16110618-05	HS16110618-06	HS16110618-07	HS16110618-08
HS16110618-10	HS16110618-11		

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: R284959 **Instrument: Balance1** **Method: SW3550**

DUP Sample ID: **HS16110620-06DUP** Units: **wt%** Analysis Date: **15-Nov-2016 09:57**
Client ID: Run ID: **Balance1_284959** SeqNo: **3895749** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	5.54	0.0100					5.56	0.36	20	

The following samples were analyzed in this batch:

HS16110618-12	HS16110618-13	HS16110618-14	HS16110618-15
HS16110618-16	HS16110618-17	HS16110618-19	HS16110618-20
HS16110618-21	HS16110618-22	HS16110618-23	HS16110618-24
HS16110618-25	HS16110618-26		

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: R285312 **Instrument:** WetChem_HS **Method:** SW9045B

DUP Sample ID: **HS16110618-08DUP** Units: **pH Units** Analysis Date: **22-Nov-2016 14:00**
Client ID: **GP-9-3-3-4-110816** Run ID: **WetChem_HS_285312** SeqNo: **3902725** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.43	0.100					8.41	0.238	10	
Temp Deg C @pH	22.6	0					22.6	0	10	

The following samples were analyzed in this batch: HS16110618-01 HS16110618-03 HS16110618-04 HS16110618-05 HS16110618-06 HS16110618-07 HS16110618-08

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: R285535 **Instrument:** WetChem_HS **Method:** SW9045B

DUP Sample ID: **HS16110618-15DUP** Units: **pH Units** Analysis Date: **28-Nov-2016 14:45**
Client ID: **GP-9-5-7-8-110916** Run ID: **WetChem_HS_285535** SeqNo: **3907180** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.69	0.100					8.67	0.23	10	
Temp Deg C @pH	21.9	0					22	0.456	10	

The following samples were analyzed in this batch:

HS16110618-02	HS16110618-10	HS16110618-11	HS16110618-12
HS16110618-13	HS16110618-14	HS16110618-15	HS16110618-16
HS16110618-17	HS16110618-19	HS16110618-20	HS16110618-21

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: R285606 **Instrument: WetChem_HS** **Method: SW9045B**

DUP Sample ID: **HS16110891-02DUP** Units: **pH Units** Analysis Date: **29-Nov-2016 12:00**
Client ID: Run ID: **WetChem_HS_285606** SeqNo: **3908831** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.22	0.100					8.24	0.243	10	
Temp Deg C @pH	22.4	0					22.5	0.445	10	

The following samples were analyzed in this batch: HS16110618-22 HS16110618-23 HS16110618-24 HS16110618-25 HS16110618-26

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: R285621 **Instrument: Balance1** **Method: LaDNR-29B SP**

DUP Sample ID: **HS16110618-02DUP** Units: **SP as fraction** Analysis Date: **29-Nov-2016 10:25**
Client ID: **GP-9-1-6-7-110816** Run ID: **Balance1_285621** SeqNo: **3908984** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Saturation Point	0.493	0.100					0.521	5.52	30	

The following samples were analyzed in this batch:

HS16110618-01	HS16110618-02	HS16110618-03	HS16110618-04
HS16110618-05	HS16110618-06	HS16110618-07	HS16110618-08
HS16110618-10	HS16110618-11	HS16110618-12	HS16110618-13
HS16110618-14	HS16110618-15	HS16110618-16	HS16110618-17
HS16110618-19	HS16110618-20	HS16110618-22	HS16110618-23

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: **R285622** **Instrument:** **Balance1** **Method:** **LaDNR-29B SP**

DUP Sample ID: **HS16110618-21DUP** Units: **SP as fraction** Analysis Date: **29-Nov-2016 10:45**
Client ID: **GP-9-7-2-3-110916** Run ID: **Balance1_285622** SeqNo: **3909000** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Saturation Point	0.557	0.100					0.557	0	30	

The following samples were analyzed in this batch: HS16110618-21 HS16110618-24 HS16110618-25 HS16110618-26

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: R285629 **Instrument: WetChem_HS** **Method: LaDNR-29B EC**

DUP Sample ID: **HS16110618-02DUP** Units: **mmhos/cm @25° C** Analysis Date: **29-Nov-2016 14:59**

Client ID: **GP-9-1-6-7-110816** Run ID: **WetChem_HS_285629** SeqNo: **3909107** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ saturation	0.788	0.0100					0.745	5.61	20	
Electrical Conductivity, 1:1 aqueous	0.388	0.0100					0.388	0	20	
Saturation % as decimal	0.493	0					0.521	5.52	20	

The following samples were analyzed in this batch:

HS16110618-01	HS16110618-02	HS16110618-03	HS16110618-04
HS16110618-05	HS16110618-06	HS16110618-07	HS16110618-08
HS16110618-10	HS16110618-11	HS16110618-12	HS16110618-13
HS16110618-14	HS16110618-15	HS16110618-16	HS16110618-17
HS16110618-19	HS16110618-20	HS16110618-22	HS16110618-23

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16110618

QC BATCH REPORT

Batch ID: **R285630** **Instrument:** **WetChem_HS** **Method:** **LaDNR-29B EC**

DUP Sample ID: **HS16110618-21DUP** Units: **mmhos/cm @25° C** Analysis Date: **29-Nov-2016 15:00**

Client ID: **GP-9-7-2-3-110916** Run ID: **WetChem_HS_285630** SeqNo: **3909128** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ saturation	1.965	0.0100					1.949	0.818	20	
Electrical Conductivity, 1:1 aqueous	1.095	0.0100					1.086	0.825	20	
Saturation % as decimal	0.557	0					0.557	0	20	

The following samples were analyzed in this batch: HS16110618-21 HS16110618-24 HS16110618-25 HS16110618-26

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: **HS16110618**

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 Quantitaion 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: HS16110618

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS16110618-01	GP-9-1-2-3-110816	Login	11/12/2016 11:25:20 AM	PMG	4D
HS16110618-01	GP-9-1-2-3-110816	Login	11/12/2016 11:25:20 AM	PMG	VW-2
HS16110618-01	GP-9-1-2-3-110816	Login	11/12/2016 11:25:20 AM	PMG	BTEX B1
HS16110618-01	GP-9-1-2-3-110816	Login	11/12/2016 11:25:20 AM	PMG	4D
HS16110618-02	GP-9-1-6-7-110816	Login	11/12/2016 11:29:55 AM	PMG	4D
HS16110618-02	GP-9-1-6-7-110816	Login	11/12/2016 11:29:55 AM	PMG	VW-2
HS16110618-02	GP-9-1-6-7-110816	Login	11/12/2016 11:29:55 AM	PMG	BTEX B1
HS16110618-02	GP-9-1-6-7-110816	Login	11/12/2016 11:29:55 AM	PMG	4D
HS16110618-03	GP-9-1-9-10-110816	Login	11/12/2016 11:29:58 AM	PMG	4D
HS16110618-03	GP-9-1-9-10-110816	Login	11/12/2016 11:29:58 AM	PMG	VW-2
HS16110618-03	GP-9-1-9-10-110816	Login	11/12/2016 11:29:58 AM	PMG	BTEX B1
HS16110618-03	GP-9-1-9-10-110816	Login	11/12/2016 11:29:58 AM	PMG	4D
HS16110618-04	GP-9-2-0-1-110816	Login	11/12/2016 11:29:59 AM	PMG	4D
HS16110618-04	GP-9-2-0-1-110816	Login	11/12/2016 11:29:59 AM	PMG	VW-2
HS16110618-04	GP-9-2-0-1-110816	Login	11/12/2016 11:29:59 AM	PMG	BTEX B1
HS16110618-04	GP-9-2-0-1-110816	Login	11/12/2016 11:29:59 AM	PMG	4D
HS16110618-05	GP-9-2-5-6-110816	Login	11/12/2016 11:30:03 AM	PMG	4D
HS16110618-05	GP-9-2-5-6-110816	Login	11/12/2016 11:30:03 AM	PMG	VW-2
HS16110618-05	GP-9-2-5-6-110816	Login	11/12/2016 11:30:03 AM	PMG	BTEX B1
HS16110618-05	GP-9-2-5-6-110816	Login	11/12/2016 11:30:03 AM	PMG	4D
HS16110618-06	GP-9-2-9-10-110816	Login	11/12/2016 11:30:06 AM	PMG	4D
HS16110618-06	GP-9-2-9-10-110816	Login	11/12/2016 11:30:06 AM	PMG	VW-2
HS16110618-06	GP-9-2-9-10-110816	Login	11/12/2016 11:30:06 AM	PMG	BTEX B1
HS16110618-06	GP-9-2-9-10-110816	Login	11/12/2016 11:30:06 AM	PMG	4D
HS16110618-07	GP-9-3-2-3-110816	Login	11/12/2016 11:30:08 AM	PMG	4D
HS16110618-07	GP-9-3-2-3-110816	Login	11/12/2016 11:30:08 AM	PMG	VW-2
HS16110618-07	GP-9-3-2-3-110816	Login	11/12/2016 11:30:08 AM	PMG	BTEX B1
HS16110618-07	GP-9-3-2-3-110816	Login	11/12/2016 11:30:08 AM	PMG	4D
HS16110618-08	GP-9-3-3-4-110816	Login	11/12/2016 11:30:10 AM	PMG	4D
HS16110618-08	GP-9-3-3-4-110816	Login	11/12/2016 11:30:10 AM	PMG	VW-2
HS16110618-08	GP-9-3-3-4-110816	Login	11/12/2016 11:30:10 AM	PMG	BTEX B1
HS16110618-08	GP-9-3-3-4-110816	Login	11/12/2016 11:30:10 AM	PMG	4D
HS16110618-09	Trip Blank - 100716-54	Login	11/12/2016 11:30:59 AM	PMG	VW-3
HS16110618-10	GP-9-3-12-13-110816	Login	11/12/2016 11:35:54 AM	PMG	4D
HS16110618-10	GP-9-3-12-13-110816	Login	11/12/2016 11:35:54 AM	PMG	VW-2
HS16110618-10	GP-9-3-12-13-110816	Login	11/12/2016 11:35:54 AM	PMG	BTEX B1
HS16110618-10	GP-9-3-12-13-110816	Login	11/12/2016 11:35:54 AM	PMG	4D
HS16110618-11	GP-9-4-2-3-110816	Login	11/12/2016 11:35:56 AM	PMG	4D
HS16110618-11	GP-9-4-2-3-110816	Login	11/12/2016 11:35:56 AM	PMG	VW-2
HS16110618-11	GP-9-4-2-3-110816	Login	11/12/2016 11:35:56 AM	PMG	BTEX B1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16110618

SAMPLE TRACKING

HS16110618-11	GP-9-4-2-3-110816	Login	11/12/2016 11:35:56 AM	PMG	4D
HS16110618-12	GP-9-4-6-7-110816	Login	11/12/2016 11:35:58 AM	PMG	4D
HS16110618-12	GP-9-4-6-7-110816	Login	11/12/2016 11:35:58 AM	PMG	VW-2
HS16110618-12	GP-9-4-6-7-110816	Login	11/12/2016 11:35:58 AM	PMG	BTEX B1
HS16110618-12	GP-9-4-6-7-110816	Login	11/12/2016 11:35:58 AM	PMG	4D
HS16110618-13	GP-9-4-14-15-110816	Login	11/12/2016 11:36:01 AM	PMG	4D
HS16110618-13	GP-9-4-14-15-110816	Login	11/12/2016 11:36:01 AM	PMG	VW-2
HS16110618-13	GP-9-4-14-15-110816	Login	11/12/2016 11:36:01 AM	PMG	BTEX B1
HS16110618-13	GP-9-4-14-15-110816	Login	11/12/2016 11:36:01 AM	PMG	4D
HS16110618-14	GP-9-5-2-3-110916	Login	11/12/2016 11:36:04 AM	PMG	4D
HS16110618-14	GP-9-5-2-3-110916	Login	11/12/2016 11:36:04 AM	PMG	VW-2
HS16110618-14	GP-9-5-2-3-110916	Login	11/12/2016 11:36:04 AM	PMG	BTEX B1
HS16110618-14	GP-9-5-2-3-110916	Login	11/12/2016 11:36:04 AM	PMG	4D
HS16110618-15	GP-9-5-7-8-110916	Login	11/12/2016 11:36:05 AM	PMG	4D
HS16110618-15	GP-9-5-7-8-110916	Login	11/12/2016 11:36:05 AM	PMG	VW-2
HS16110618-15	GP-9-5-7-8-110916	Login	11/12/2016 11:36:05 AM	PMG	BTEX B1
HS16110618-15	GP-9-5-7-8-110916	Login	11/12/2016 11:36:05 AM	PMG	4D
HS16110618-16	GP-9-5-10-11-110916	Login	11/12/2016 11:36:07 AM	PMG	4D
HS16110618-16	GP-9-5-10-11-110916	Login	11/12/2016 11:36:07 AM	PMG	VW-2
HS16110618-16	GP-9-5-10-11-110916	Login	11/12/2016 11:36:07 AM	PMG	BTEX B1
HS16110618-16	GP-9-5-10-11-110916	Login	11/12/2016 11:36:07 AM	PMG	4D
HS16110618-17	GP-9-6-2-3-110916	Login	11/12/2016 11:36:09 AM	PMG	4D
HS16110618-17	GP-9-6-2-3-110916	Login	11/12/2016 11:36:09 AM	PMG	VW-2
HS16110618-17	GP-9-6-2-3-110916	Login	11/12/2016 11:36:09 AM	PMG	BTEX B1
HS16110618-17	GP-9-6-2-3-110916	Login	11/12/2016 11:36:09 AM	PMG	4D
HS16110618-18	Trip Blank - 100716-70	Login	11/12/2016 11:36:55 AM	PMG	VW-3
HS16110618-19	GP-9-6-5-6-110916	Login	11/12/2016 11:41:08 AM	PMG	4D
HS16110618-19	GP-9-6-5-6-110916	Login	11/12/2016 11:41:08 AM	PMG	VW-2
HS16110618-19	GP-9-6-5-6-110916	Login	11/12/2016 11:41:08 AM	PMG	BTEX B1
HS16110618-19	GP-9-6-5-6-110916	Login	11/12/2016 11:41:08 AM	PMG	4D
HS16110618-20	GP-9-6-13-14-110916	Login	11/12/2016 11:41:10 AM	PMG	4D
HS16110618-20	GP-9-6-13-14-110916	Login	11/12/2016 11:41:10 AM	PMG	VW-2
HS16110618-20	GP-9-6-13-14-110916	Login	11/12/2016 11:41:10 AM	PMG	BTEX B1
HS16110618-20	GP-9-6-13-14-110916	Login	11/12/2016 11:41:10 AM	PMG	4D
HS16110618-21	GP-9-7-2-3-110916	Login	11/12/2016 11:41:12 AM	PMG	4D
HS16110618-21	GP-9-7-2-3-110916	Login	11/12/2016 11:41:12 AM	PMG	VW-2
HS16110618-21	GP-9-7-2-3-110916	Login	11/12/2016 11:41:12 AM	PMG	BTEX B1
HS16110618-21	GP-9-7-2-3-110916	Login	11/12/2016 11:41:12 AM	PMG	4D
HS16110618-22	GP-9-7-7-8-110916	Login	11/12/2016 11:41:15 AM	PMG	4D
HS16110618-22	GP-9-7-7-8-110916	Login	11/12/2016 11:41:15 AM	PMG	VW-2
HS16110618-22	GP-9-7-7-8-110916	Login	11/12/2016 11:41:15 AM	PMG	BTEX B1
HS16110618-22	GP-9-7-7-8-110916	Login	11/12/2016 11:41:15 AM	PMG	4D

HS16110618-23	GP-9-7-12-13-110916	Login	11/12/2016 11:41:17 AM	PMG	4D
HS16110618-23	GP-9-7-12-13-110916	Login	11/12/2016 11:41:17 AM	PMG	VW-2
HS16110618-23	GP-9-7-12-13-110916	Login	11/12/2016 11:41:17 AM	PMG	BTEX B1
HS16110618-23	GP-9-7-12-13-110916	Login	11/12/2016 11:41:17 AM	PMG	4D
HS16110618-24	GP-9-8-2-3-110916	Login	11/12/2016 11:41:19 AM	PMG	4D
HS16110618-24	GP-9-8-2-3-110916	Login	11/12/2016 11:41:19 AM	PMG	VW-2
HS16110618-24	GP-9-8-2-3-110916	Login	11/12/2016 11:41:19 AM	PMG	BTEX B1
HS16110618-24	GP-9-8-2-3-110916	Login	11/12/2016 11:41:19 AM	PMG	4D
HS16110618-25	GP-9-8-11-12-110916	Login	11/12/2016 11:41:22 AM	PMG	4D
HS16110618-25	GP-9-8-11-12-110916	Login	11/12/2016 11:41:22 AM	PMG	VW-2
HS16110618-25	GP-9-8-11-12-110916	Login	11/12/2016 11:41:22 AM	PMG	BTEX B1
HS16110618-25	GP-9-8-11-12-110916	Login	11/12/2016 11:41:22 AM	PMG	4D
HS16110618-26	GP-9-8-14-15-110916	Login	11/12/2016 11:41:24 AM	PMG	4D
HS16110618-26	GP-9-8-14-15-110916	Login	11/12/2016 11:41:24 AM	PMG	VW-2
HS16110618-26	GP-9-8-14-15-110916	Login	11/12/2016 11:41:24 AM	PMG	BTEX B1
HS16110618-26	GP-9-8-14-15-110916	Login	11/12/2016 11:41:24 AM	PMG	4D
HS16110618-27	Trip Blank - 100716-77	Login	11/12/2016 11:42:25 AM	PMG	VW-3
HS16110618-01	GP-9-1-2-3-110816	Out	11/18/2016 11:02:08 AM	JCJ	METPREP
HS16110618-02	GP-9-1-6-7-110816	Out	11/18/2016 11:02:08 AM	JCJ	METPREP
HS16110618-03	GP-9-1-9-10-110816	Out	11/18/2016 11:02:08 AM	JCJ	METPREP
HS16110618-04	GP-9-2-0-1-110816	Out	11/18/2016 11:02:08 AM	JCJ	METPREP
HS16110618-05	GP-9-2-5-6-110816	Out	11/18/2016 11:02:08 AM	JCJ	METPREP
HS16110618-06	GP-9-2-9-10-110816	Out	11/18/2016 11:02:08 AM	JCJ	METPREP
HS16110618-07	GP-9-3-2-3-110816	Out	11/18/2016 11:02:08 AM	JCJ	METPREP
HS16110618-08	GP-9-3-3-4-110816	Out	11/18/2016 11:02:08 AM	JCJ	METPREP
HS16110618-10	GP-9-3-12-13-110816	Out	11/18/2016 11:02:08 AM	JCJ	METPREP
HS16110618-11	GP-9-4-2-3-110816	Out	11/18/2016 11:02:08 AM	JCJ	METPREP
HS16110618-12	GP-9-4-6-7-110816	Out	11/18/2016 11:02:08 AM	JCJ	METPREP
HS16110618-13	GP-9-4-14-15-110816	Out	11/18/2016 11:02:08 AM	JCJ	METPREP
HS16110618-14	GP-9-5-2-3-110916	Out	11/18/2016 11:02:08 AM	JCJ	METPREP
HS16110618-15	GP-9-5-7-8-110916	Out	11/18/2016 11:02:08 AM	JCJ	METPREP
HS16110618-16	GP-9-5-10-11-110916	Out	11/18/2016 11:02:08 AM	JCJ	METPREP
HS16110618-17	GP-9-6-2-3-110916	Out	11/18/2016 11:02:08 AM	JCJ	METPREP
HS16110618-01	GP-9-1-2-3-110816	Out	11/18/2016 11:02:34 AM	JCJ	METPREP
HS16110618-02	GP-9-1-6-7-110816	Out	11/18/2016 11:02:34 AM	JCJ	METPREP
HS16110618-03	GP-9-1-9-10-110816	Out	11/18/2016 11:02:34 AM	JCJ	METPREP
HS16110618-04	GP-9-2-0-1-110816	Out	11/18/2016 11:02:34 AM	JCJ	METPREP
HS16110618-05	GP-9-2-5-6-110816	Out	11/18/2016 11:02:34 AM	JCJ	METPREP
HS16110618-06	GP-9-2-9-10-110816	Out	11/18/2016 11:02:34 AM	JCJ	METPREP
HS16110618-07	GP-9-3-2-3-110816	Out	11/18/2016 11:02:34 AM	JCJ	METPREP
HS16110618-08	GP-9-3-3-4-110816	Out	11/18/2016 11:02:34 AM	JCJ	METPREP
HS16110618-10	GP-9-3-12-13-110816	Out	11/18/2016 11:02:34 AM	JCJ	METPREP

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16110618

SAMPLE TRACKING

HS16110618-11	GP-9-4-2-3-110816	Out	11/18/2016 11:02:34 AM	JCJ	METPREP
HS16110618-12	GP-9-4-6-7-110816	Out	11/18/2016 11:02:34 AM	JCJ	METPREP
HS16110618-13	GP-9-4-14-15-110816	Out	11/18/2016 11:02:34 AM	JCJ	METPREP
HS16110618-14	GP-9-5-2-3-110916	Out	11/18/2016 11:02:34 AM	JCJ	METPREP
HS16110618-15	GP-9-5-7-8-110916	Out	11/18/2016 11:02:34 AM	JCJ	METPREP
HS16110618-16	GP-9-5-10-11-110916	Out	11/18/2016 11:02:34 AM	JCJ	METPREP
HS16110618-17	GP-9-6-2-3-110916	Out	11/18/2016 11:02:34 AM	JCJ	METPREP
HS16110618-01	GP-9-1-2-3-110816	Return	11/18/2016 11:02:57 AM	JCJ	4D
HS16110618-02	GP-9-1-6-7-110816	Return	11/18/2016 11:02:57 AM	JCJ	4D
HS16110618-03	GP-9-1-9-10-110816	Return	11/18/2016 11:02:57 AM	JCJ	4D
HS16110618-04	GP-9-2-0-1-110816	Return	11/18/2016 11:02:57 AM	JCJ	4D
HS16110618-05	GP-9-2-5-6-110816	Return	11/18/2016 11:02:57 AM	JCJ	4D
HS16110618-06	GP-9-2-9-10-110816	Return	11/18/2016 11:02:57 AM	JCJ	4D
HS16110618-07	GP-9-3-2-3-110816	Return	11/18/2016 11:02:57 AM	JCJ	4D
HS16110618-08	GP-9-3-3-4-110816	Return	11/18/2016 11:02:57 AM	JCJ	4D
HS16110618-10	GP-9-3-12-13-110816	Return	11/18/2016 11:02:57 AM	JCJ	4D
HS16110618-11	GP-9-4-2-3-110816	Return	11/18/2016 11:02:57 AM	JCJ	4D
HS16110618-12	GP-9-4-6-7-110816	Return	11/18/2016 11:02:57 AM	JCJ	4D
HS16110618-13	GP-9-4-14-15-110816	Return	11/18/2016 11:02:57 AM	JCJ	4D
HS16110618-14	GP-9-5-2-3-110916	Return	11/18/2016 11:02:57 AM	JCJ	4D
HS16110618-15	GP-9-5-7-8-110916	Return	11/18/2016 11:02:57 AM	JCJ	4D
HS16110618-16	GP-9-5-10-11-110916	Return	11/18/2016 11:02:57 AM	JCJ	4D
HS16110618-17	GP-9-6-2-3-110916	Return	11/18/2016 11:02:57 AM	JCJ	4D
HS16110618-01	GP-9-1-2-3-110816	Out	11/18/2016 11:33:03 AM	PVL	METPREP
HS16110618-02	GP-9-1-6-7-110816	Out	11/18/2016 11:33:03 AM	PVL	METPREP
HS16110618-03	GP-9-1-9-10-110816	Out	11/18/2016 11:33:03 AM	PVL	METPREP
HS16110618-04	GP-9-2-0-1-110816	Out	11/18/2016 11:33:03 AM	PVL	METPREP
HS16110618-05	GP-9-2-5-6-110816	Out	11/18/2016 11:33:03 AM	PVL	METPREP
HS16110618-06	GP-9-2-9-10-110816	Out	11/18/2016 11:33:03 AM	PVL	METPREP
HS16110618-01	GP-9-1-2-3-110816	Return	11/18/2016 11:33:21 AM	PVL	4D
HS16110618-02	GP-9-1-6-7-110816	Return	11/18/2016 11:33:21 AM	PVL	4D
HS16110618-03	GP-9-1-9-10-110816	Return	11/18/2016 11:33:21 AM	PVL	4D
HS16110618-04	GP-9-2-0-1-110816	Return	11/18/2016 11:33:21 AM	PVL	4D
HS16110618-05	GP-9-2-5-6-110816	Return	11/18/2016 11:33:21 AM	PVL	4D
HS16110618-06	GP-9-2-9-10-110816	Return	11/18/2016 11:33:21 AM	PVL	4D
HS16110618-07	GP-9-3-2-3-110816	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-08	GP-9-3-3-4-110816	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-10	GP-9-3-12-13-110816	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-11	GP-9-4-2-3-110816	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-12	GP-9-4-6-7-110816	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-13	GP-9-4-14-15-110816	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-14	GP-9-5-2-3-110916	Out	11/18/2016 2:00:52 PM	PVL	METPREP

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16110618

SAMPLE TRACKING

HS16110618-15	GP-9-5-7-8-110916	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-16	GP-9-5-10-11-110916	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-17	GP-9-6-2-3-110916	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-19	GP-9-6-5-6-110916	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-20	GP-9-6-13-14-110916	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-21	GP-9-7-2-3-110916	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-22	GP-9-7-7-8-110916	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-23	GP-9-7-12-13-110916	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-24	GP-9-8-2-3-110916	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-25	GP-9-8-11-12-110916	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-26	GP-9-8-14-15-110916	Out	11/18/2016 2:00:52 PM	PVL	METPREP
HS16110618-07	GP-9-3-2-3-110816	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-08	GP-9-3-3-4-110816	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-10	GP-9-3-12-13-110816	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-11	GP-9-4-2-3-110816	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-12	GP-9-4-6-7-110816	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-13	GP-9-4-14-15-110816	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-14	GP-9-5-2-3-110916	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-15	GP-9-5-7-8-110916	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-16	GP-9-5-10-11-110916	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-17	GP-9-6-2-3-110916	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-19	GP-9-6-5-6-110916	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-20	GP-9-6-13-14-110916	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-21	GP-9-7-2-3-110916	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-22	GP-9-7-7-8-110916	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-23	GP-9-7-12-13-110916	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-24	GP-9-8-2-3-110916	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-25	GP-9-8-11-12-110916	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-26	GP-9-8-14-15-110916	Return	11/18/2016 2:01:14 PM	PVL	4D
HS16110618-19	GP-9-6-5-6-110916	Out	11/21/2016 2:08:39 PM	JCJ	METPREP
HS16110618-20	GP-9-6-13-14-110916	Out	11/21/2016 2:08:39 PM	JCJ	METPREP
HS16110618-21	GP-9-7-2-3-110916	Out	11/21/2016 2:08:39 PM	JCJ	METPREP
HS16110618-22	GP-9-7-7-8-110916	Out	11/21/2016 2:08:39 PM	JCJ	METPREP
HS16110618-23	GP-9-7-12-13-110916	Out	11/21/2016 2:08:39 PM	JCJ	METPREP
HS16110618-24	GP-9-8-2-3-110916	Out	11/21/2016 2:08:39 PM	JCJ	METPREP
HS16110618-25	GP-9-8-11-12-110916	Out	11/21/2016 2:08:39 PM	JCJ	METPREP
HS16110618-26	GP-9-8-14-15-110916	Out	11/21/2016 2:08:39 PM	JCJ	METPREP
HS16110618-19	GP-9-6-5-6-110916	Return	11/21/2016 2:09:01 PM	JCJ	4D
HS16110618-20	GP-9-6-13-14-110916	Return	11/21/2016 2:09:01 PM	JCJ	4D
HS16110618-21	GP-9-7-2-3-110916	Return	11/21/2016 2:09:01 PM	JCJ	4D
HS16110618-22	GP-9-7-7-8-110916	Return	11/21/2016 2:09:01 PM	JCJ	4D
HS16110618-23	GP-9-7-12-13-110916	Return	11/21/2016 2:09:01 PM	JCJ	4D

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16110618

SAMPLE TRACKING

HS16110618-24	GP-9-8-2-3-110916	Return	11/21/2016 2:09:01 PM	JCJ	4D
HS16110618-25	GP-9-8-11-12-110916	Return	11/21/2016 2:09:01 PM	JCJ	4D
HS16110618-26	GP-9-8-14-15-110916	Return	11/21/2016 2:09:01 PM	JCJ	4D

Sample Receipt Checklist

Client Name: Kinder Morgan
Work Order: HS16110618
Date/Time Received: **11-Nov-2016 08:35**
Received by: **Raegen Giga**

Checklist completed by: *Paresh M. Giga* eSignature — 12-Nov-2016 Date
Reviewed by: *Corey Grandits* eSignature — 15-Nov-2016 Date

Matrices: **Soil/water**
Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☑	N/A ☐
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	0.9c/1.4c,0.7c/1.2c,0.5c/1.0c U/C	IR5	
Cooler(s)/Kit(s):	23878,5631,42547		
Date/Time sample(s) sent to storage:	11/12/16 12:20		
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: Sampling dates differ for - GP-9-4-2-3-110816, GP-9-4-6-7-110816 & GP-9-4-14-15-110816. COC dates - 11/8/16 & Jars labels - 11/9/16

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

ALS Environmental

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Page 1 of 1

COC ID: 147529

HS16110618

Kinder Morgan

McElmo Dome & Doe Canyon

ston, WV
168
280

ALS Project Manager:

Customer Information		Project Information	
Purchase Order	Workorder Dir. 47971	Project Name	McElmo Dome & Doe Canyon
Work Order		Project Number	CO002255.0001
Company Name	Kinder Morgan	Bill To Company	Kinder Morgan CO2 Company, L.P.
Send Report To	Aaron Hale	Invoice Attn	Mike Hannigan
Address	1001 Louisiana Street Suite 740D	Address	17801 Highway 491
City/State/Zip	Houston, TX 77002	City/State/Zip	Cortez, CO 81321
Phone	(713) 369-9193	Phone	(970) 882-5532
Fax	(713) 495-2835	Fax	
e-Mail Address		e-Mail Address	

A	8260_S (BTEX 8260)
B	8015_GRO_S (GRO 8015)
C	8015M_S_LL (DRO 8015)
D	LA29B SAR (SAR & EC)
E	PH_S (pH)
F	ICP_S_Low (As,Ba,B,Cd,Cr,Cu,Pb,Ni,Se,Ag,Zn)
G	HG_S_Low (Mercury)
H	Cr3_S (Trivalent Chromium)
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-9-1-2-3-110816	11/8/16	1330	Soil	n/a	4	X	X	X	X	X	X	X	X	X	X	
2	GP-9-1-6-7-110816		1400														
3	GP-9-1-9-10-110816		1430														
4	GP-9-2-0-1-110816		1440														
5	GP-9-2-5-6-110816		1450														
6	GP-9-2-9-10-110816		1500														
7	GP-9-3-2-3-110816		1530														
8	GP-9-3-3-4-110816		1540														
9	Trip Blank		—			2											
10																	

Sampler(s) Please Print & Sign: Bethany Draeger

Shipment Method: Fed Ex

Required Turnaround Time: (Check Box) TAT: 10 days Other:

Results Due Date:

Relinquished by: Bethany Draeger Date: 11/9/16 Time: 2200 Received by:

Relinquished by: Date: Time: Received by (Laboratory): RG 11/11/16 08:35

Logged by (Laboratory): Date: Time: Checked by (Laboratory):

Notes: [KM CO2 RFP 16MDLRFP077]

Cooler ID	Cooler Temp.
23878	0.9
	1.2.5
	CF0.5

QC Package: (Check One Box Below)
QC Level: STD
Other:

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

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Page 1 of 1

COC ID: 147528

HS16110618

Kinder Morgan

McElmo Dome & Doe Canyon

ton, WV 68

:80

ALS Project Manager:

Customer Information		Project Information	
Purchase Order	Workorder Dir. 47971	Project Name	McElmo Dome & Doe Canyon
Work Order		Project Number	CO002255.0001
Company Name	Kinder Morgan	Bill To Company	Kinder Morgan CO2 Company, L.P.
Send Report To	Aaron Hale	Invoice Attn	Mike Hannigan
Address	1001 Louisiana Street Suite 740D	Address	17801 Highway 491
City/State/Zip	Houston, TX 77002	City/State/Zip	Cortez, CO 81321
Phone	(713) 369-9193	Phone	(970) 882-5532
Fax	(713) 495-2835	Fax	
e-Mail Address		e-Mail Address	

A	8260_S (BTEX 8260)
B	8015_GRO_S (GRO 8015)
C	8015M_S_LL (DRO 8015)
D	LA29B SAR (SAR & EC)
E	PH_S (pH)
F	ICP_S_Low (As,Ba,B,Cd,Cr,Cu,Pb,Ni,Se,Ag,Zn)
G	HG_S_Low (Mercury)
H	Cr3_S (Trivalent Chromium)
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-9-3-12-13-110816	11/8/16	1680	Soil	n/a	4	X	X	X	X	X	X	X	X	X	X	
2	GP-9-4-2-3-110816		0740														
3	GP-9-4-6-7-110816		0750														
4	GP-9-4-14-15-110816		0830														
5	GP-9-5-2-3-110916	11/9/16	1100														
6	GP-9-5-7-8-110916		1130														
7	GP-9-5-10-11-110916		1150														
8	GP-9-6-2-3-110916		1030														
9	Trip Blank					2											
10																	

Sampler(s) Please Print & Sign: Bethany Draeger

Shipment Method: FedEx

Required Turnaround Time: (Check Box) TAT: 10 days Other:

Results Due Date:

Relinquished by: Bethany Draeger Date: 11/9/16 Time: 2200

Received by:

Relinquished by: Date: Time:

Received by (Laboratory): RG 11/11/16 08:35

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Notes: [KM CO2 RFP 16MDLRFP077]

Cooler ID	Cooler Temp.
5631	0.7
	IR5
	CF0.5

QC Package: (Check One Box Below)

QC Level: STD

Other:

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

ote: 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

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Page 1 of 1

COC ID: 147527

HS16110618

Kinder Morgan

McElmo Dome & Doe Canyon

ALS Project Manager:

Customer Information		Project Information	
Purchase Order	Workorder Dir. 47971	Project Name	McElmo Dome & Doe Canyon
Work Order		Project Number	CO002255.0001
Company Name	Kinder Morgan	Bill To Company	Kinder Morgan CO2 Company, L.P.
Send Report To	Aaron Hale	Invoice Attn	Mike Hannigan
Address	1001 Louisiana Street Suite 740D	Address	17801 Highway 491
City/State/Zip	Houston, TX 77002	City/State/Zip	Cortez, CO 81321
Phone	(713) 369-9193	Phone	(970) 882-5532
Fax	(713) 495-2835	Fax	
e-Mail Address		e-Mail Address	

A	8260_S (BTEX 8260)
B	8015_GRO_S (GRO 8015)
C	8015M_S_LL (DRO 8015)
D	LA29B SAR (SAR & EC)
E	PH_S (pH)
F	ICP_S_Low (As,Ba,B,Cd,Cr,Cu,Pb,Ni,Se,Ag,Zn)
G	HG_S_Low (Mercury)
H	Cr3_S (Trivalent Chromium)
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-9-6-5-6-110916	11/9/16	1040	Soil	n/a	4	X	X	X	X	X	X	X	X	X	X	
2	GP-9-6-13-14-110916		1050														
3	GP-9-7-2-3-110916		0950														
4	GP-9-7-7-8-110916		1015														
5	GP-9-7-12-13-110916		1030														
6	GP-9-8-2-3-110916		0900														
7	GP-9-8-11-12-110916		0930														
8	GP-9-8-14-15-110916		0950														
9	Trip Blank		—			2											
10																	

Sampler(s) Please Print & Sign: Bethany Draeger

Shipment Method: FedEx

Required Turnaround Time: (Check Box) TAT 10 days Other

Results Due Date:

Relinquished by: Bethany Draeger Date: 11/9/16 Time: 2200 Received by:

Relinquished by: Date: Time: Received by (Laboratory): RG 11/11/16 08:35

Logged by (Laboratory): Date: Time: Checked by (Laboratory):

Notes: [KM CO2 RFP 16MDLRFP077]

Cooler ID	Cooler Temp.
42547	0.5
	IR5
	CF0.5

QC Package: (Check One Box Below)

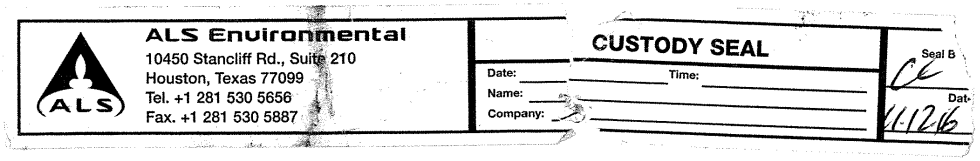
QC Level STD

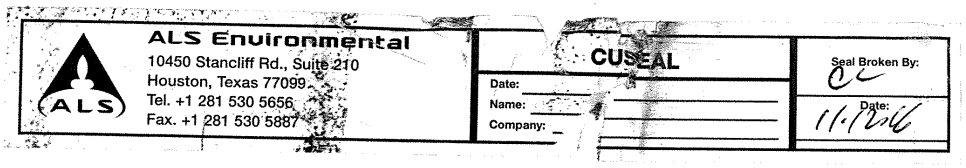
Other:

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

23878





5631

ALS Environmen
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: CL

Date: 11.11.16

42547

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:

Date: 11-12-16

ATTACHMENT F

CDPHE White Paper on Arsenic Concentrations in Soil

Colorado Department of Public Health and Environment

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.

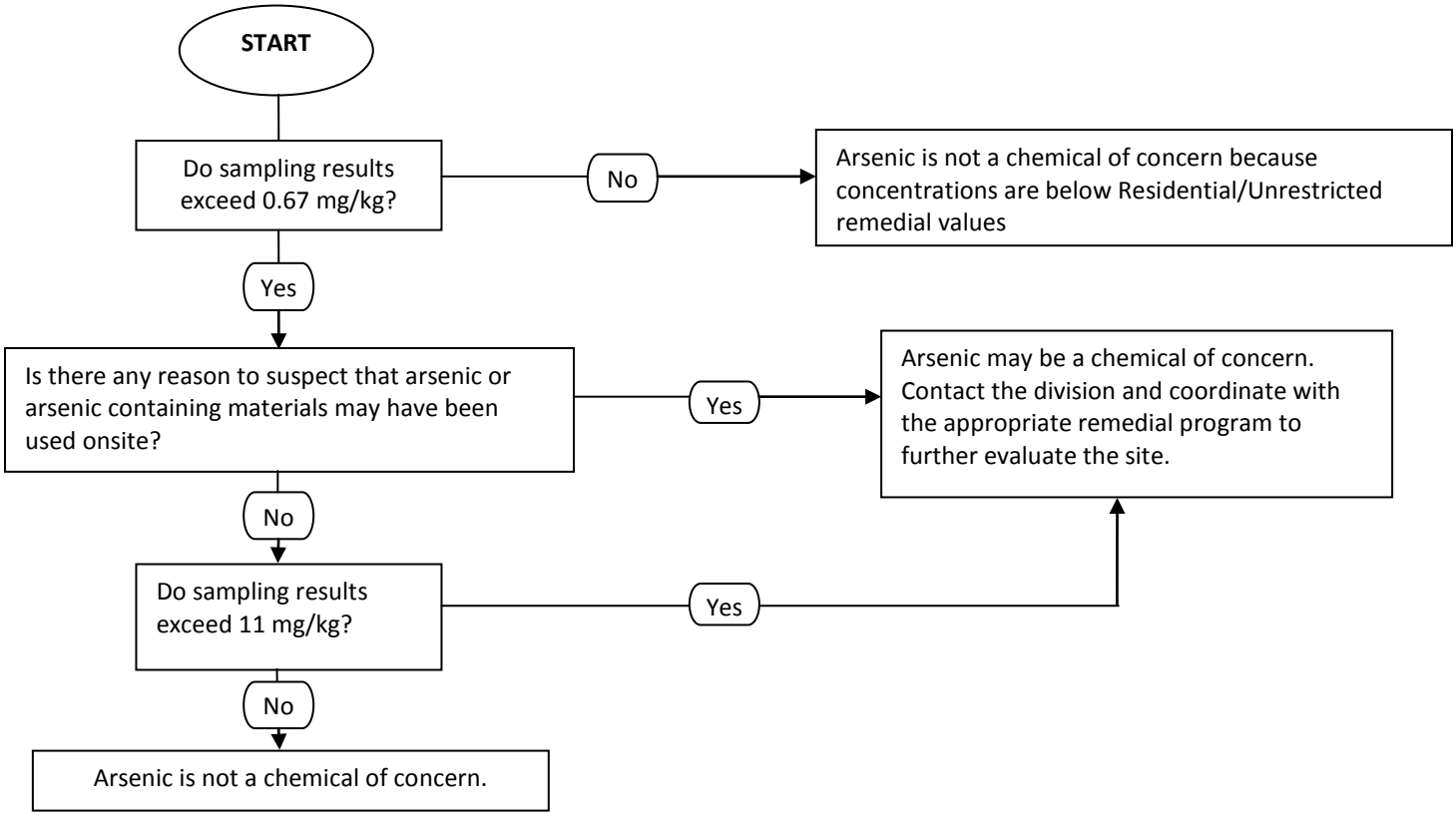
Region 8 U.S. EPA 95% UCLM Background Soil Arsenic Concentrations in Colorado

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**