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Subject:

**Summary Report for Site GP-15
McElmo Dome Unit, Southwestern Colorado**

ENVIRONMENT

Dear Mr. Hale:

Date:

February 8, 2017

Included herein is the Summary Report for site GP-15, which is part of the McElmo Dome Unit in southwestern Colorado. Arcadis U.S., Inc. (Arcadis) completed field work at site GP-15 in support of Kinder Morgan CO₂ Company, LP's (KM) efforts to evaluate how the former drill pits were reclaimed and to determine if remediation is warranted, as may be required by the Colorado Oil and Gas Conservation Commission (COGCC).

Contact:

Kelli Jo Preston

Phone:

303.471.3403

Objectives

The objective of the work completed at site GP-15 (described in the Form 27 application [**Attachment A**]) was to demonstrate that *"soils beneath the pit meet the acceptable concentration levels for various constituents of concern (COCs), as outlined in COGCC's Table 910-1 of their 900 Series Rules"*. Additionally, if groundwater was encountered during site activities, characterization would be conducted.

Email:

kellijo.preston@arcadis.com

Our ref:

CO002055

Methodology

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

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

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

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

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

Photos were also collected at the site documenting current surface vegetation; reclamation is considered successful by COGCC when vegetative cover reaches 80%. The photos provide an indication of current land use at, and surrounding the site, which can be used as reference for comparison purposes. The photo log for site GP-15 is provided in **Attachment C**.

Detailed notes were kept during the field activities completed at site GP-15 and are provided in **Attachment D**.

Results

Analytical results received from ALS for the soil samples collected at site GP-15 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-15. For comparison purposes, **Table 1** also includes screening levels (SLs) where applicable, as defined in Table 910-1 of the COGCC's 900 Series Rules. Analytical results that exceed the Table 910-1 SLs are highlighted in yellow. Key findings are summarized as follows:

- Five pH exceedances were observed in soils shallower than 3 feet from five boring locations (boring 2, boring 3, boring 4, boring 6, 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 9.37 milligrams per kilogram (mg/kg). It is generally accepted that background concentrations of arsenic may be as high as 11 mg/kg per the Colorado Department of Public Health and Environment (CDPHE 2014, **Attachment F**). All concentrations were below 11 mg/kg.
- Liner material was observed at 6 feet bgs in boring 7, but was otherwise absent from the other borings.

References

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

Mr. Aaron Hale
February 8, 2017

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

Sincerely,

Arcadis U.S., Inc.

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

Kelli Jo Preston
Project Manager

Tables

- 1 Soil Analytical Results for Samples Collected at McElmo Dome Site GP-15

Figures

- 1 GP-15 Site Features

Attachments

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

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TABLES



Table 1 - Soil Analytical Results for Samples Collected at McElmo Dome Site GP-15
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-15	Boring 1	1-2	11/16/2016	GP-15-1-1-2-111616	Soil	2.34	153	2.63	< 0.0477	6.82	4.76	5.47	7.42	< 0.172	< 0.0763	24.1	< 0.00048	< 0.00067	< 0.0015	< 0.00096	< 0.00058	< 0.00096
GP-15	Boring 1	9-10	11/16/2016	GP-15-1-9-10-111616	Soil	2.30	169	2.53	< 0.0457	6.95	4.25	4.89	7.13	< 0.165	< 0.0732	29.6	< 0.00048	< 0.00067	< 0.0015	< 0.00096	< 0.00058	< 0.00096
GP-15	Boring 1	13-14	11/16/2016	GP-15-1-13-14-111616	Soil	5.92	296	4.85	< 0.0477	3.13	6.33	4.52	6.49	< 0.172	< 0.0763	30.9	< 0.00049	< 0.00069	< 0.0016	< 0.00098	< 0.00059	< 0.00098
GP-15	Boring 2	1-2	11/16/2016	GP-15-2-1-2-111616	Soil	2.15	158	2.94	< 0.0465	6.02	4.12	5.64	7.60	< 0.167	< 0.0743	18.5	< 0.00048	< 0.00068	< 0.0016	< 0.00097	< 0.00058	< 0.00097
GP-15	Boring 2	7-8	11/16/2016	GP-15-2-7-8-111616	Soil	2.07	251	2.57	< 0.0459	5.53	3.41	4.90	6.56	< 0.165	< 0.0735	15.2	< 0.00050	< 0.00069	< 0.0016	< 0.00099	< 0.00059	< 0.00099
GP-15	Boring 2	10-11	11/16/2016	GP-15-2-10-11-111616	Soil	1.56	201	2.50	< 0.0468	1.33	1.54	1.03	1.85	< 0.169	< 0.0749	4.48	< 0.00050	< 0.00071	< 0.0016	< 0.0010	< 0.00061	< 0.0010
GP-15	Boring 3	0-1	11/16/2016	GP-15-3-0-1-111616	Soil	2.24	154	2.53	< 0.0459	6.24	4.89	5.69	6.81	< 0.165	< 0.0735	24.7	< 0.00049	< 0.00069	< 0.0016	< 0.00098	< 0.00059	< 0.00098
GP-15	Boring 3	5-6	11/16/2016	GP-15-3-5-6-111616	Soil	2.19	119	2.50	< 0.0466	6.27	4.06	6.06	9.24	< 0.168	< 0.0745	19.5	< 0.00048	< 0.00067	< 0.0015	< 0.00096	< 0.00058	< 0.00096
GP-15	Boring 3	11-12	11/16/2016	GP-15-3-11-12-111616	Soil	1.80	126	2.99	< 0.0479	4.41	3.71	4.04	5.65	< 0.172	< 0.0766	13.2	< 0.00050	< 0.00069	< 0.0016	< 0.00099	< 0.00059	< 0.00099
GP-15	Boring 4	0-1	11/16/2016	GP-15-4-0-1-111616	Soil	2.34	155	2.58	< 0.0482	6.67	4.87	6.57	7.77	< 0.173	< 0.0770	23.5	< 0.00050	< 0.00069	< 0.0016	< 0.00099	< 0.00059	< 0.00099
GP-15	Boring 4	5-6	11/16/2016	GP-15-4-5-6-111616	Soil	2.17	178	< 1.29	< 0.0462	6.47	4.37	5.93	8.71	< 0.166	< 0.0738	18.7	< 0.00050	< 0.00070	< 0.0016	< 0.0010	< 0.00060	< 0.0010
GP-15	Boring 4	11-12	11/16/2016	GP-15-4-11-12-111616	Soil	3.05	326	< 6.63	< 0.237	< 0.426	2.77	< 0.237	3.42	< 0.852	< 0.379	7.98	< 0.00050	< 0.00069	< 0.0016	< 0.00099	< 0.00059	< 0.00099
GP-15	Boring 5	2-3	11/16/2016	GP-15-5-2-3-111616	Soil	2.39	128	2.78	< 0.0456	7.00	5.49	6.16	7.86	< 0.164	< 0.0730	21.1	< 0.00048	< 0.00068	< 0.0016	< 0.00097	< 0.00058	< 0.00097
GP-15	Boring 5	4-5	11/16/2016	GP-15-5-4-5-111616	Soil	2.84	176	< 1.28	< 0.0457	6.68	5.54	5.92	7.35	< 0.165	< 0.0731	22.7	< 0.00048	< 0.00068	< 0.0016	< 0.00097	< 0.00058	< 0.00097
GP-15	Boring 5	12-13	11/16/2016	GP-15-5-12-13-111616	Soil	3.74	425	3.18	< 0.0477	3.13	3.85	2.95	4.62	< 0.172	< 0.0764	10.5	< 0.00050	< 0.00070	< 0.0016	< 0.0010	< 0.00060	< 0.0010
GP-15	Boring 6	1-2	11/16/2016	GP-15-6-1-2-111616	Soil	1.90	139	< 1.32	< 0.0473	5.31	4.05	4.27	6.63	< 0.170	< 0.0756	18.6	< 0.00048	< 0.00067	< 0.0015	< 0.00096	< 0.00058	< 0.00096
GP-15	Boring 6	4-5	11/16/2016	GP-15-6-4-5-111616	Soil	2.40	145	< 1.31	< 0.0467	6.95	5.93	5.98	7.52	< 0.168	< 0.0746	21.2	< 0.00048	< 0.00067	< 0.0015	< 0.00096	< 0.00058	< 0.00096
GP-15	Boring 6	10-11	11/16/2016	GP-15-6-10-11-111616	Soil	1.96	352	2.62	< 0.0477	2.03	2.07	1.23	2.54	< 0.172	< 0.0764	5.83	< 0.00048	< 0.00066	< 0.0015	< 0.00095	< 0.00057	< 0.00095
GP-15	Boring 7	2-3	11/16/2016	GP-15-7-2-3-111616	Soil	2.41	151	3.04	< 0.0480	6.97	5.27	5.76	7.52	< 0.173	< 0.0768	20.5	< 0.00049	< 0.00069	< 0.0016	< 0.00098	< 0.00059	< 0.00098
GP-15	Boring 7	5-6	11/16/2016	GP-15-7-5-6-111616	Soil	2.43	153	2.58	< 0.0478	7.00	5.27	6.02	7.76	< 0.172	< 0.0765	21.6	< 0.00050	< 0.00070	< 0.0016	< 0.0010	< 0.00060	< 0.0010
GP-15	Boring 7	11-12	11/16/2016	GP-15-7-11-12-111616	Soil	1.28	229	< 1.33	< 0.0475	1.44	1.78	0.795	1.83	< 0.171	< 0.0760	3.92	< 0.00050	< 0.00069	< 0.0016	< 0.00099	< 0.00059	< 0.00099
GP-15	Boring 8	1-2	11/16/2016	GP-15-8-1-2-111616	Soil	2.52	164	< 1.32	< 0.0470	7.31	5.11	6.39	7.81	< 0.169	< 0.0752	20.8	< 0.00049	< 0.00069	< 0.0016	< 0.00098	< 0.00059	< 0.00098
GP-15	Boring 8	10-11	11/16/2016	GP-15-8-10-11-111616	Soil	2.06	265	3.16	< 0.0478	5.61	4.09	4.38	6.23	< 0.172	< 0.0765	16.2	< 0.00049	< 0.00069	< 0.0016	< 0.00098	< 0.00059	< 0.00098
GP-15	Boring 8	12-13	11/16/2016	GP-15-8-12-13-111616	Soil	9.37	272	2.46	< 0.0464	1.70	2.63	7.81	4.39	< 0.167	< 0.0742	10.8	< 0.00049	< 0.00069	< 0.0016	< 0.00098	< 0.00059	< 0.00098

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.

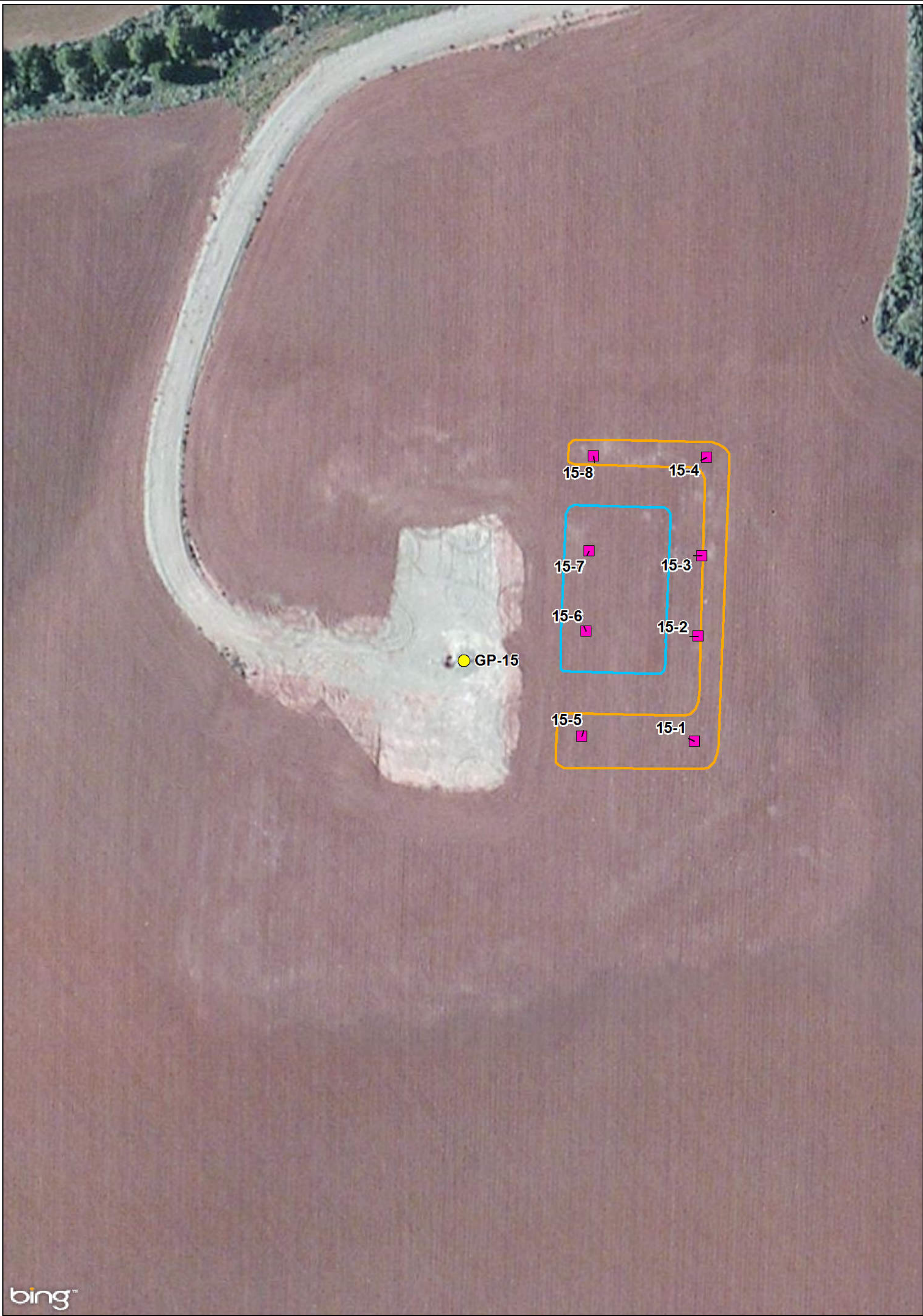
Table 1 - Soil Analytical Results for Samples Collected at McElmo Dome Site GP-15
Kinder Morgan CO2 Company LP

						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
GP-15	Boring 1	1-2	11/16/2016	GP-15-1-1-2-111616	Soil	39.1	7.05	35.6	6.82	< 0.296	0.813	< 0.010	< 0.50	0.0148	8.76	1.38	
GP-15	Boring 1	9-10	11/16/2016	GP-15-1-9-10-111616	Soil	31.2	6.44	116	6.95	< 0.299	1.34	< 0.010	< 0.50	0.0117	8.89	4.94	
GP-15	Boring 1	13-14	11/16/2016	GP-15-1-13-14-111616	Soil	277	28.3	111	< 0.700	< 0.295	4.24	< 0.0099	< 0.50	0.0370	8.25	1.70	
GP-15	Boring 2	1-2	11/16/2016	GP-15-2-1-2-111616	Soil	142	12.1	104	6.02	< 0.297	1.21	< 0.0099	< 0.50	0.0149	9.44	2.25	
GP-15	Boring 2	7-8	11/16/2016	GP-15-2-7-8-111616	Soil	59.0	< 5.00	216	5.53	< 0.300	2.35	< 0.0099	< 0.50	0.141	9.65	7.74	
GP-15	Boring 2	10-11	11/16/2016	GP-15-2-10-11-111616	Soil	28.0	< 5.00	221	< 0.700	< 0.299	3.55	< 0.0099	12	0.0152	9.37	11.5	
GP-15	Boring 3	0-1	11/16/2016	GP-15-3-0-1-111616	Soil	48.9	5.21	46.9	6.24	< 0.298	0.754	< 0.010	< 0.50	0.0128	9.06	1.70	
GP-15	Boring 3	5-6	11/16/2016	GP-15-3-5-6-111616	Soil	18.0	< 5.00	315	6.27	< 0.297	3.77	< 0.0099	< 0.50	0.0446	9.08	20.4	
GP-15	Boring 3	11-12	11/16/2016	GP-15-3-11-12-111616	Soil	1000	133	379	< 0.700	< 0.299	16.5	< 0.010	< 0.50	0.00749	7.86	2.99	
GP-15	Boring 4	0-1	11/16/2016	GP-15-4-0-1-111616	Soil	63.0	5.61	82.7	6.67	< 0.297	0.915	< 0.010	< 0.50	0.0135	9.28	2.68	
GP-15	Boring 4	5-6	11/16/2016	GP-15-4-5-6-111616	Soil	215	66.0	90.4	6.47	< 0.297	4.86	< 0.0099	< 0.50	0.0146	7.93	1.38	
GP-15	Boring 4	11-12	11/16/2016	GP-15-4-11-12-111616	Soil	21.0	< 5.00	70.1	< 0.700	< 0.300	1.23	< 0.0099	< 0.50	0.0200	9.40	4.21	
GP-15	Boring 5	2-3	11/16/2016	GP-15-5-2-3-111616	Soil	136	26.6	93.3	7.00	< 0.300	2.99	< 0.0099	< 0.50	0.0137	7.49	1.91	
GP-15	Boring 5	4-5	11/16/2016	GP-15-5-4-5-111616	Soil	167	26.4	104	6.68	< 0.298	4.06	< 0.0099	< 0.50	0.0111	8.18	1.97	
GP-15	Boring 5	12-13	11/16/2016	GP-15-5-12-13-111616	Soil	90.4	19.1	81.7	< 0.700	< 0.300	2.59	< 0.010	< 0.50	0.0184	8.52	2.04	
GP-15	Boring 6	1-2	11/16/2016	GP-15-6-1-2-111616	Soil	145	6.31	214	5.31	< 0.300	3.73	< 0.0099	5.7	0.0142	9.17	4.73	
GP-15	Boring 6	4-5	11/16/2016	GP-15-6-4-5-111616	Soil	138	21.3	78.8	6.95	< 0.300	3.03	< 0.0099	2.3	0.0119	8.57	1.65	
GP-15	Boring 6	10-11	11/16/2016	GP-15-6-10-11-111616	Soil	125	22.4	65.1	< 0.700	< 0.299	3.05	< 0.0099	< 0.50	0.0224	8.54	1.41	
GP-15	Boring 7	2-3	11/16/2016	GP-15-7-2-3-111616	Soil	180	27.0	94.5	6.97	< 0.299	3.60	< 0.010	< 0.60	0.0114	8.51	1.74	
GP-15	Boring 7	5-6	11/16/2016	GP-15-7-5-6-111616	Soil	216	36.1	157	7.00	< 0.299	4.84	< 0.010	< 0.50	0.0124	8.43	2.60	
GP-15	Boring 7	11-12	11/16/2016	GP-15-7-11-12-111616	Soil	171	51.1	86.3	< 0.700	< 0.299	4.92	< 0.0099	< 0.50	0.0258	8.56	1.49	
GP-15	Boring 8	1-2	11/16/2016	GP-15-8-1-2-111616	Soil	39.5	6.60	27.0	7.31	< 0.300	0.691	< 0.010	< 0.50	0.0120	9.20	1.05	
GP-15	Boring 8	10-11	11/16/2016	GP-15-8-10-11-111616	Soil	763	147	519	5.61	< 0.300	16.0	< 0.0099	< 0.60	0.0145	8.10	4.51	
GP-15	Boring 8	12-13	11/16/2016	GP-15-8-12-13-111616	Soil	95.4	19.2	1460	< 0.700	< 0.300	23.4	< 0.0099	< 0.50	0.0740	8.80	35.7	

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

FIGURES





LEGEND

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

KINDER MORGAN
CORTEZ, CO

GP-15 SITE FEATURES

ARCADIS

FIGURE
1

ATTACHMENT A

Form 27 Application



State of Colorado
Oil and Gas Conservation Commission

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



FOR OGCC USE ONLY

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.

OGCC Employee:

☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV

Tracking No: REM #9885

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:

James Conway

No: 970-882-5505

Fax: 970-882-5521

API Number: 05-083-06641

County: Montezuma

Facility Name: N/A

Facility Number: N/A

Well Name: Goodman Point (GP-15)

Well Number: 15

Location: (QtrQtr, Sec, Twp, Rng, Meridian): NW 1/4, NE 1/4, Sec 18, T36N, R17W Latitude: 37.383815 N Longitude: 108.761536 W

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Potential for CO2 well drill cuttings exceeding 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.): Crop land, dry land

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

Potential receptors (water wells within 1/4 mi, surface waters, etc.): One residences identified within 1/2 mile of location.

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

Impacted Media (check):



Soils



Vegetation



Groundwater



Surface Water

Extent of Impact:

Not yet determined

How Determined:

See attached assessment scope

REMEDIALTION WORKPLAN

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

Kinder Morgan conducted a water well review and no water wells were found within a 1/2 mile of the location. Kinder Morgan has also prepared the attached scope of work for the assessment of the former drilling pit location.

Describe how source is to be removed:

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

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

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



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

Page 2

REMEDIATION WORKPLAN (Cont.)

OGCC Employee: _____

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

There are no anticipated impacts to groundwater at this location. Please see Groundwater Evaluation section of the attached General Scope of Work.

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

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

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

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

No soil samples are available at this time. Proposed soil boring locations are presented on the figure included within the attached General Scope of Work.

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

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

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 3Q 2016 Date Site Investigation Completed: _____ Date Remediation Plan Submitted: 10/5/16
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: James Conway

Signed: _____

Title: Operations Engineering & Regulatory Manager

Date: 10/5/16

OGCC Approved: _____

Title: Environmental Protection Specialist

Date: 10/21/16



General Scope of Work for Goodman Point (GP-15)

Kinder Morgan CO2 –McElmo Dome Unit
API Number – 05-083-06641
Montezuma County, Colorado

General Well Location Information

Kinder Morgan's Goodman Point Well GP-15 was drilled in 2008. This well was drilled as a CO2 production well. A lined, earthen pit was constructed to hold the water-based drilling fluids for this well. Kinder Morgan's records indicate that the physical pit closure occurred in 2009.

The land use immediately surrounding the well location consists of non-irrigated farm land. There are two residences within ½ mile of this well location.

Groundwater Evaluation

Using the COGCC GIS Online mapping system and knowledge of the area, no groundwater wells were identified or located within ½ mile of this well location. An aerial photo from the COGCC mapping system is included with this work plan.

A review of US Geological Survey data identifies the Dakota-Glen Canyon aquifer system as the major aquifer system in this area of Colorado (Ground Water Atlas of the United States; Arizona, Colorado, New Mexico Utah HA 730-C; US Geological Survey, 1995). The regional direction of flow of the Dakota-Glen Canyon aquifer system in this area is typically to the west and estimated depth of this regional aquifer is between 800-1,200 feet below ground surface. The Mancos Shale confining unit is located between the surface and the Dakota-Glen Canyon aquifer systems which should prohibit any downward migration of surface water into the Dakota-Glen Canyon aquifer system. The major recharge areas for the Dakota-Glen Canyon aquifer system lie well outside of the GP-15 location.

A water well review in this area of GP-15 identified 1 water well within 0.5 miles of this location. The water well is located approximately 0.4 miles to the northeast of GP-15. This well location (permit 237556) was permitted in 2001 to a depth of 1,600 feet. Kinder Morgan is not aware of this well being drilled; however, it was to be drilled into the much deeper regional water table. An additional water well location (permit 1425) is approximately 0.75 miles to the east of GP-15. This water well location is on the Canyons of the Ancients National Monument. An aerial photo search of the area of this well does not show roads or any evidence of this well existing in this area. Kinder Morgan believes that this water well documentation contains an error for the location. For this reason, Kinder Morgan does not anticipate that any shallow groundwater would be located at the GP-15 location.

In addition, Kinder Morgan does not anticipate any hydrocarbon impact could migrate to groundwater from the former pits at this location since oil-based drilling mud was not used and the well was drilled for production of CO₂. Kinder Morgan does not anticipate encountering any perched water within the former drilling pit, however, if perched water is encountered in the bottom of the hole a sample will be submitted for analysis of BTEX, TDS, Chlorides, and Sulfates per Table 910-1.

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
 - 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 soil or bedrock below the former drilling pit.
- GPS coordinates of each soil boring location.
- Summary report

Soil Boring Program:

Eight soil borings will be advanced to native soil or bedrock below the former drilling pit location to assess the current soil conditions in the former drilling pit location. Borings may extend 2 feet below the bottom of the former drilling pit. A soil boring location map is also included as an attachment to this work plan. 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 per the Laboratory Analysis Plan below. 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 of BTEX, TDS, Chlorides, and Sulfates per Table 910-1.
- Collect the GPS coordinates for each boring.

- Backfill each boring with removed material plus bentonite chips near the ground surface, as needed.

Laboratory Analysis Plan

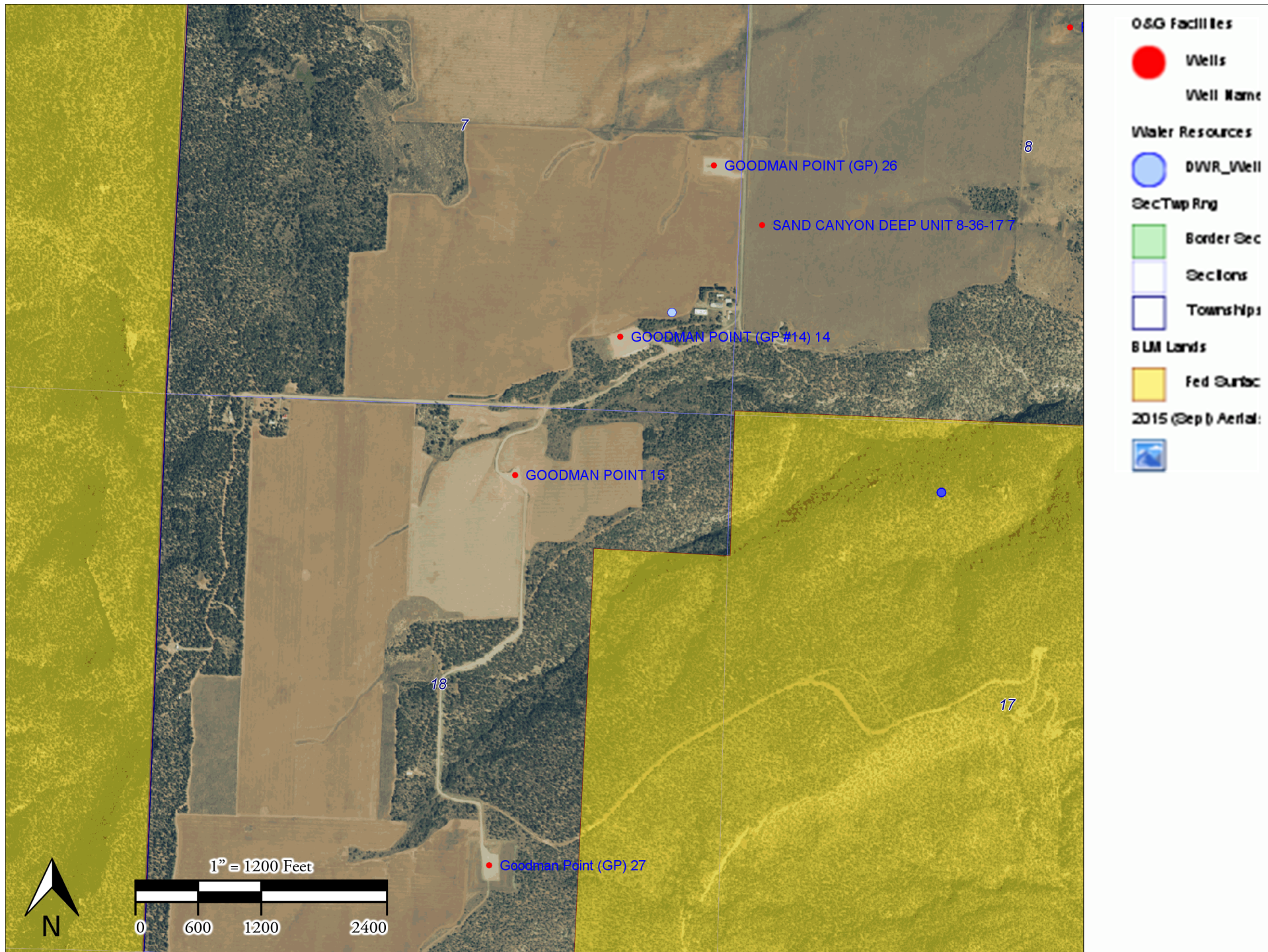
Kinder Morgan proposes to submit each soil sample for analysis of all applicable constituents on COGCC Table 910-1 with the exception of PAHs (Acenaphthene, Anthracene, Benz(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Chrysene, Dibenzo(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3,c,d)pyrene, Naphthalene, and Pyrene). The rationale for omitting the PAH analysis is based on the fact that Kinder Morgan did not use any oil based drilling fluids nor were any PAHs listed as chemical ingredients on any of the Safety Data Sheets of the drilling fluid additives.

Per COGCC Rule 910.b(3)C, Kinder Morgan is requesting the COGCC approve this proposed laboratory analysis plan.

Summary Report:

Upon completion of the site assessment activities, a summary report will be prepared and submitted to the COGCC accompanied by an updated Form 27. The summary report will contain all sampling information, including sampling data from the laboratory, field notes, and site photographs.

Kinder Morgan GP-15



COGCC

pad planview



0' 1' 60

Scale 1 - 60

cut slope

- ☐ set wooden stake

front
South

7020

C. A. J.

C/23

7010*

born 15

slope

- 10 ft water pit 10' deep:

slope

slope

fresh water
reserve pit
10 deep

salt water pit 10 deep

slope

berm 150

Reference Pt
200' North

rear

Reference Pt
200 West
— right C □
... 70102

5500

approximate area of disturbance
41 acres

D

C: left

B

A

5

D

B

A

Proposed Soil Boring Location

Kinder Morgan CO₂ Co., NWNE Section 18, T36N, R17W, 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.

Review of Colorado Division of Water Resources water well information indicates that while drilling the nearest domestic water well, "strong flow surface water" was encountered in what was categorized as surface alluvium from a depth of 0 – 43 ft. This location is less than 0.3 miles from a tributary of Goodman Canyon. Kinder Morgan shall advance an additional boring to a depth of 50 ft. bgs at the location to evaluate the potential for shallow groundwater, contingent on the findings of the shallow groundwater investigative boring at the GP-14 location. If groundwater is encountered in the shallow pit area borings, water samples shall be collected and analyzed for Table 910-1 constituents.

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

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

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

Kinder Morgan CO₂ Co., NWNE Section 18, T36N, R17W, N PM, Montezuma County, Colorado, Form 27 Conditions of Approval (COAs)

After discussions with KM representatives, it is the understanding of the COGCC that PAHs have not been encountered in other site investigations that have been conducted by the operator thus far. An abbreviated Table 910-1 constituent list, excluding PAHs, shall be accepted at this location. Laboratory results, documenting non-detect of PAHs in previous investigations, shall be provided to COGCC SW EPS prior to commencing sampling for this closure project.

ATTACHMENT B

Boring Logs



EXPLORATORY BORING LOG

project no: C0002255.0001 date: 11 - 14 - 16 boring number: GP-15-1
 client: Kinder Morgan
 location: Cortez, CO
 logged by: B. Draeger
 filler/helper: Kyvek

page 1 of 1

field location of boring:

N: 763630.66'
 E: -8640563.85'

drilling method: Hollow Stem Auger

hole diameter:


casing diameter:

well completion data:

0845 - 0915

ground elevation: 6942.47'

datum: NAD 1983

boring/well construction	headsace:  FID ppm	Conductivity sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level	time	date
	7.5	0.09	3						
	9.3	0.19	6	1	①				
	4.3	0.11	4	2					
	9.1	0.56	4	3					
	2.6	0.49	3	4					
	13.5	0.31	4	5					
	12.9	0.11	6	6					
	7.0	0.07	16	7					
	3.8	0.18	5	8					
	15.0	0.36	17	9	②				
	11.7	0.13	5	10					
	6.1	0.23	23	11					
	11.0	4.43	2	12					
	11.1	0.40	10	13	③				
			8	14					
				15					
				16					
				17					
				18					
				19					
				20					

water level

time

date

Top Soil

Clayey silt, damp, med hard, v. poorly graded, non plastic brown reddish brown

mixed w/ lighter reddish ^{fine bls} contaminated sandy silt, med sand, off med to c. sand, poorly graded, non-plastic, dry, hard

Just clayey silt, increase in moisture content, soft

Hardness/cohesiveness increases

Pockets of f. sandy silt

Becomes dry and v. hard

Silty sand, f. to med sand, dry, hard (but crumbly when broken), non plastic, poorly graded, tan to light brown

Sandy silt, f. to med sand, moist, soft, med plasticity, poorly graded, whitish tan

Same unit but dry, med hard, non plastic, flakey

End Boring

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

EXPLORATORY BORING LOG

project no: C0002255.0001 date: 11 - 16 - 16 boring number: GP
 client: Kinder Morgan DE-15-2
 location: Cortez, CO
 logged by: B. Draeger
 filler/helper: Kyvek

page 1 of 1

field location of boring:

N: 763684.43'

E: -8640537.56'

ground elevation: 6942.31'

datum: NAD 1983

drilling method: Hollow Stem Auger

hole diameter:

casing diameter:

well completion data:

0920 - 0945

boring/well construction	headspace: gastech FID ppm	Conductivity sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level	time	date
	6.6	0.22	2						
			5	1					
	8.6	0.02	4						
			4	2					
	8.0	0.51							
				3					
	8.9	0.21							
				4					
	9.7	0.25	3						
			4	5					
	8.5	0.63	4						
			4	6					
	8.6	0.67	6						
			9	7					
	10.6	0.23	12						
			15	8					
	10.5	0.24	8						
			15	9					
	8.0	0.23	18						
			15	10					
	10.0	0.14	5						
			20	11					
				12					
				13					
				14					
				15					
				16					
				17					
				18					
				19					
				20					

Top Soil

Clayey silt, damp, mod soft, v. poorly graded, non plastic, ~~ss~~ dark reddish brown

mixed w/ light reddish brown (possibly contaminated)

Sandy silt, med to c. sand, poorly graded, non plastic, dry, hard

Moisture content and softness increases w/ depth

Pocket (3") of dark gray ~~as~~ cemented sand and halite contaminated soil

Sandy clay, f. sand, hard, dry, non plastic/crumbly, poorly graded, dark reddish brown w/ some light brown

Increase in moisture, decrease in hardness, all light brown to tan

Sandy silt, f. to med sand, damp, mod soft/loose non plastic, poorly graded v. light brown to light tan

End boring

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

EXPLORATORY BORING LOG

project no: C0002255.0001 date: 11 - 16 - 16 boring number: GP-15-3
 client: Kinder Morgan
 location: Cortez, CO
 logged by: B. Draeger
 filler/helper: Kyvek

page 1 of 1

field location of boring:

N: 763734.38'

E: -8640516.98'

ground elevation: 6940.72'

datum: NAD 1983

drilling method: Hollow Stem Auger

hole diameter:

casing diameter:

well completion data:

1000 - 1020

boring/well construction	headspace: gastech P/D	Conductivity FID ppm	sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level	time	date
	11.9	0.14	1	3	1	①				
	5.4	0.11	5	4	2					
	6.2	0.35	3	4	3					
	7.7	0.15	4	3	4					
	6.1	0.48	3	5	5					
	13.8	0.96	11	10	6	②				
	9.0	0.41	6	12	7					
	6.8	1.06	17	18	8					
	7.0	1.35	4	3	9					
	5.3	0.63	18	16	10					
	7.8	0.98	5	10	11					
	13.0	1.56	20	21	12	③				
					13					
					14					
					15					
					16					
					17					
					18					
					19					
					20					

Top Soil

Clayey silt, damp, med hard, v. poorly graded, non plastic, reddish brown

Multiple pockets of black cemented sand and halite contaminated soil

Moisture content increases, hardness decreases,

Becomes hard, dry, crumbly

Sandy silt, f. sand, damp, slightly sticky but non plastic, med hard, poorly graded, brown to light brown

End boring due to refusal

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

EXPLORATORY BORING LOG

project no: C0002255.0001 date: 11 - 16 - 16 boring number: GP-15-4
 client: Kinder Morgan
 location: Cortez, CO
 logged by: B. Draeger
 filler/helper: Kyrek

page 1 of 1

field location of boring:
 N: 763774.29'
 E: -8640492.02'

drilling method: Hollow Stem Auger

hole diameter:

casing diameter:

well completion data:

1030 - 1100

ground elevation: 6938.63'

datum: NAD 1983

boring/well construction	heads: gas tech. FID ppm	conductivity sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level	time	date
	8.5	0.08	1	①					
			3	1					
	8.2	0.07	4						
			3	2					
	6.9	0.92	2						
			5	3					
	4.1	1.49	9						
			12	4					
	6.7	0.05	6						
			11	5					
	14.1	0.56	16	②					
			20	6					
	6.8	0.81	3						
			9	7					
	6.1	0.50	15						
			18	8					
	9.5	0.43	2						
			12	9					
	9.6	0.20	22						
			20	10					
	8.6	0.10	4						
			12	11					
	4.6	0.05	20	③					
			22	12					
				13					
				14					
				15					
				16					
				17					
				18					
				19					
				20					

Top Soil

Stiff Clayey Silt, damp, mod soft, v. poorly graded, non-plastic, dark reddish brown SAA but w/ f. to med sand and increased moisture content

Becomes hard, dry, crumbly, and light w/ dark brown

Same at 0.6" but very compacted/hard/cohesive

Sandy Silt, f. sand, dry, mod hard but non cohesive, poorly graded, non plastic, light brown

End boring

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

EXPLORATORY BORING LOG

project no: CO 002255.0001 date: 11 - 16 - 16 boring number: GP-15-S
 client: Kinder Morgan
 location: Cortez, CO
 logged by: B. Draeger
 filler/helper: _____

page 1 of 1

field location of boring: _____

drilling method: Coordinates
 hole diameter: N: 763655.70'
 casing diameter: E: -8640618.99'
 well completion data: Elev: 6944.91'
#1115-1145

ground elevation: _____

datum: _____

boring/well construction	headspace: gastech PID FID ppm	Conductivity sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level	time	date
	11.5	0.12	2						
			3	1					
	3.0	0.18	4						
			4	2					
	11.5	0.47	3		①				
			6	3					
	8.2	0.64	9						
			12	4					
	11.8	0.73	2		②				
			5	5					
	4.5	0.34	6						
			5	6					
	6.6	0.31	3						
			10	7					
	7.2	0.75	15						
			16	8					
	5.9	0.79	4						
			10	9					
	6.0	1.55	16						
			18	10					
	6.4	0.87	3						
			13	11					
	4.3	0.53	30						
			24	12					
	10.6	0.62	23		③				
			50; 4"	13					
				14					
				15					
				16					
				17					
				18					
				19					
				20					

Top Soil

Silty clay, damp, mod soft, non plastic but fairly cohesive, v. poorly graded, dark reddish brown

Becomes sticky and v cohesive
Some c. sand

Black Sandy contaminated soil mixed in for 4" layer

Sandy clay, f. sand, v. hard and crumbly, damp, non-plastic, v. poorly graded, dark reddish brown w/ light brown veins of staining

Increase in f. sand, more crumbly

Silty sand w/ sandstone pieces, dry to damp, mod loose, well graded, non plastic, orangeish brown

Silty sand, med sand, damp, non-plastic, poorly graded, loose, tan

Same as 10.5' but w/ increased sandstone pieces

End boring due to refusal

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

EXPLORATORY BORING LOG

project no: CO 002255.0001 date: 11-16-16 boring number: GP-15-6
 client: Kinder Morgan
 location: Cortez, CO
 logged by: B. Draeger
 Miller/helper: _____

page 1 of 1

field location of boring: _____

drilling method: Coordinates
 hole diameter: N: 763718.86'
 casing diameter: E: -8640600.14'
 well completion data: Elev: 6944.35'

ground elevation: _____

datum: 1230-1250

boring/well construction	headspace: (ft) gas tech FID ppm	Conductivity sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level	time	date
	9.0	0.09	3						
			4	1					
	9.0	0.13	10						
			10	2					
	3.0	0.03	3						
			5	3					
	4.2	0.28	4						
			5	4					
	6.2	0.22	3						
			4	5					
	4.6	0.30	1						
			1	6					
	3.4	0.23	2						
			2	7					
	4.3	0.25	2						
			2	8					
	3.6	0.38	3						
			3	9					
	5.20	0.16	6						
			9	10					
	8.0	0.22	245						
			10/40; 3"	11					
			40-3"						
				12					
				13					
				14					
				15					
				16					
				17					
				18					
				19					
				20					

Top Soil
 Silty clay, dry to damp, hard, non plastic, poorly graded, reddish brown to brown

Some c. sand

Becomes moist, soft, and dark brown

Silty sand, damp, loose/soft, med sand, poorly graded, non plastic, tan

End boring due to refusal

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

EXPLORATORY BORING LOG

project no: CO002255.0001 date: 11-16-16 boring number: GP-15-7
 client: Kinder Morgan
 location: Cortez, CO
 logged by: B. Draeger
 Miller/helper: _____

page 1 of 1

field location of boring: _____

drilling method: Coordinates
 hole diameter: N: 763775.42'
 casing diameter: E: - 8640586.06'
 well completion data: Elev: 6943.49'
1300-1330

ground elevation: _____

datum: _____

boring/well construction	headspace: gastech PIP	Conductivity	FID ppm	sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level	time	date
	13.5	0.11		2							
				8		1					
	12.4	0.20		10							
				10		2					
	15.9	1.25		4							
				8		3					
	12.3	0.53		6							
				7		4					
	12.3	0.88		2							
				3		5					
	235.7	0.18		5							
				4		6					
	137.2	0.26		4							
				10		7					
	91.8	0.44		20							
				21		8					
	39.0	0.30		4							
				8		9					
	29.7	0.49		18							
				20		10					
25.4	20.2	0.23		3							
				12		11					
	20.2	0.15		26							
				30		12					
						13					
						14					
						15					
						16					
						17					
						18					
						19					
						20					

Top Soil
 Sandy silt, f. sand, hard, dry to damp, non plastic, poorly graded, reddish brown

 Becomes moist, soft, and dark brown

 Iner seen at 6'
 light reddish contaminated sandy silt mixed w/ dark gray halite mixture, dry, hard, non plastic, poorly graded, odor

 Silty clay, v. cohesive and hard, dry to slightly damp, v. poorly graded, non plastic, crumbly, reddish brown w/ whitish veins of staining

 Silty sand, med sand, damp, loose/crumbly/non cohesive, non plastic, poorly graded v. light brown to tan

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

EXPLORATORY BORING LOG

project no: CO 002255 .0001
 client: Kinder Morgan
 location: Cortez, CO
 logged by: B. Draeger
 filler/helper:

date: 11 - 16 - 16

boring number:

GP-15-8

page 1 of 1

field location of boring:

drilling method: Coordinates
 hole diameter: N: 763334.27'
 casing diameter: E: -8640574.06'
 well completion data: Elev: 6941.65'
1340 - 1415

ground elevation:

datum:

boring/well construction	headspace: <u>gastech</u> FID ppm	<u>Conductivity</u> sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	water level	time	date
	10.7	0.24	2						
			2						
	13.2	0.22	4	1	①				
			4	2					
	8.1	0.08	3						
			3	3					
	12.1	0.14	4						
			4	4					
	9.2	0.74	2						
			3	5					
	13.6	0.28	9						
			10	6					
	11.6	0.60	5						
			12	7					
	17.0	0.89	16						
			23	8					
	16.5	0.32	3						
			11	9					
	17.3	6.49	18						
			20	10					
	17.4	1.0	5	10	②				
			18	11					
	15.7	0.36	28						
			29	12					
	17.7	0.12	6	13	③				
			16	13					
				14					
				15					
				16					
				17					
				18					
				19					
				20					

Top Soil
 Sandy silt, f. sand, damp, mod soft, poorly graded, non plastic, reddish brown
 Damp to moist, dark brown
 Becomes v. moist and mod plastic
 Sand (c.) and halite mixed contaminated soil, loose, dark gray, dry, v. poorly graded
 Silty clay, v. hard, damp, non-plastic, v. poorly graded, reddish brown w/ whitish stained veins
 Becomes more crumbly w/ depth
 Med to c. Sand w/ sandstone pieces, dry to damp, loose, poorly graded, v. light brown to tan
 End boring

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:
11/16/16

Description:
Looking north

Location:
GP-15



Photo: 2

Date:
11/16/16

Description:
Looking east

Location:
GP-15

Project Photographs

McElmo Dome
Cortez, Colorado



Photo: 3

Date:
11/16/16

Description:
Looking south

Location:
GP-15



Photo: 4

Date:
11/16/16

Description:
Looking west

Location:
GP-15

ATTACHMENT D

Field Notes



DAILY LOG

Project No.: CO 00 22 55.0001

Page 1 of 1

Site Location: Cortez, CO

Prepared By: B. Draeger

[illegible]

ATTACHMENT E

Laboratory Analytical Reports





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

December 10, 2016

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

Work Order: **HS16111109**

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

Dear Aaron,

ALS Environmental received 27 sample(s) on Nov 23, 2016 for the analysis presented in the following report.

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

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

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

Sincerely,

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

Generated By: Jumoke.Lawal
Sonia West
Project Manager

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16111109

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS16111109-01	GP-15-1-1-2-111616	Soil		16-Nov-2016 08:50	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-02	GP-15-1-9-10-111616	Soil		16-Nov-2016 09:00	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-03	GP-15-1-13-14-111616	Soil		16-Nov-2016 09:15	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-04	GP-15-2-1-2-111616	Soil		16-Nov-2016 09:20	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-05	GP-15-2-7-8-111616	Soil		16-Nov-2016 09:30	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-06	GP-15-2-10-11-111616	Soil		16-Nov-2016 09:45	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-07	GP-15-3-0-1-111616	Soil		16-Nov-2016 10:00	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-08	GP-15-3-5-6-111616	Soil		16-Nov-2016 10:10	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-09	TRIP BLANK 082916-86	Water		16-Nov-2016 00:00	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-10	GP-15-3-11-12-111616	Soil		16-Nov-2016 10:20	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-11	GP-15-4-0-1-111616	Soil		16-Nov-2016 10:30	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-12	GP-15-4-5-6-111616	Soil		16-Nov-2016 10:40	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-13	GP-15-4-11-12-111616	Soil		16-Nov-2016 11:00	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-14	GP-15-5-2-3-111616	Soil		16-Nov-2016 11:15	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-15	GP-15-5-4-5-111616	Soil		16-Nov-2016 11:20	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-16	GP-15-5-12-13-111616	Soil		16-Nov-2016 11:45	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-17	GP-15-6-1-2-111616	Soil		16-Nov-2016 12:30	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-18	TRIP BLANK 082916-79	Water		16-Nov-2016 00:00	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-19	GP-15-6-4-5-111616	Soil		16-Nov-2016 12:40	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-20	GP-15-6-10-11-111616	Soil		16-Nov-2016 12:50	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-21	GP-15-7-2-3-111616	Soil		16-Nov-2016 13:00	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-22	GP-15-7-5-6-111616	Soil		16-Nov-2016 13:15	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-23	GP-15-7-11-12-111616	Soil		16-Nov-2016 13:30	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-24	GP-15-8-1-2-111616	Soil		16-Nov-2016 13:40	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-25	GP-15-8-10-11-111616	Soil		16-Nov-2016 14:10	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-26	GP-15-8-12-13-111616	Soil		16-Nov-2016 14:15	23-Nov-2016 08:51	<input type="checkbox"/>
HS16111109-27	TRIP BLANK 082916-97	Water		16-Nov-2016 00:00	23-Nov-2016 08:51	<input type="checkbox"/>

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16111109

CASE NARRATIVE

Work Order Comments

- Sample ID discrepancy, sample GP-15-5-4-5-111616 listed on chain of custody labeled as GP-15-5-5-4-111616. This information is reported from the chain of custody.
- 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: 110176,110188,110253

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

GC Volatiles by Method SW8015

Batch ID: R285581,R285584

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

GCMS Volatiles by Method SW8260

Batch ID: R285449

Sample ID: **GP-15-1-1-2-111616 (HS16111109-01MS)**
• MS failed QC limits for some compounds.

Batch ID: R285469

Sample ID: **GP-15-7-2-3-111616 (HS16111109-21MS)**
• MS failed QC limits for some compounds.

Batch ID: R285471

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

Metals by Method La29B-6020

Batch ID: 110550,110551

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

Metals by Method Calculation

Batch ID: R286264

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

Metals by Method SW7471A

Batch ID: 110478,110479

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

Metals by Method SW6020

Batch ID: 110361

Sample ID: **GP-15-1-9-10-111616 (HS16111109-02MS)**
• Silver and Zinc failed on the MS\MSD but passed on the PDS. Arsenic, Copper and Selenium failed on the MS but passed on the MSD and PDS.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16111109

CASE NARRATIVE

Metals by Method SW6020**Batch ID: 110361**Sample ID: **GP-15-1-9-10-111616 (HS16111109-02MS)**

- 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

Batch ID: 110383Sample ID: **HS16111271-01MS**

- MS and MSD are for an unrelated sample

WetChemistry by Method LaDNR-29B EC**Batch ID: R286300,R286301**

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

WetChemistry by Method LaDNR-29B SP**Batch ID: R286151,R286157**

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

WetChemistry by Method SW9045B**Batch ID: R285960,R286057**

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

WetChemistry by Method SW3550**Batch ID: R285840,R285924,R285925**

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

WetChemistry by Method SW7196**Batch ID: 110296,110398,110541**

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-1-1-2-111616
 Collection Date: 16-Nov-2016 08:50

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-01
 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	26-Nov-2016 00:03
Ethylbenzene	ND		4.8	ug/Kg	1	26-Nov-2016 00:03
m,p-Xylene	ND		9.6	ug/Kg	1	26-Nov-2016 00:03
o-Xylene	ND		4.8	ug/Kg	1	26-Nov-2016 00:03
Toluene	ND		4.8	ug/Kg	1	26-Nov-2016 00:03
Xylenes, Total	ND		4.8	ug/Kg	1	26-Nov-2016 00:03
Surr: 1,2-Dichloroethane-d4	95.5		70-128	%REC	1	26-Nov-2016 00:03
Surr: 4-Bromofluorobenzene	101		73-126	%REC	1	26-Nov-2016 00:03
Surr: Dibromofluoromethane	101		71-128	%REC	1	26-Nov-2016 00:03
Surr: Toluene-d8	110		73-127	%REC	1	26-Nov-2016 00:03
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 17:16
Surr: 4-Bromofluorobenzene	82.8		70-130	%REC	1	28-Nov-2016 17:16
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 26-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	29-Nov-2016 12:21
Surr: 2-Fluorobiphenyl	69.0		60-135	%REC	1	29-Nov-2016 12:21
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	6.82		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	1.38		0.00999	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	39.1		4.99	mg/L	10	08-Dec-2016 18:19
Magnesium	7.05		4.99	mg/L	10	08-Dec-2016 18:19
Sodium	35.6		4.99	mg/L	10	08-Dec-2016 18:19
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JDE		
Arsenic	2.34		0.477	mg/Kg	1	02-Dec-2016 22:26
Barium	153		0.477	mg/Kg	1	02-Dec-2016 22:26
Boron	2.63		2.38	mg/Kg	1	02-Dec-2016 22:26
Cadmium	ND		0.477	mg/Kg	1	02-Dec-2016 22:26
Chromium	6.82		0.477	mg/Kg	1	02-Dec-2016 22:26
Copper	4.76		0.191	mg/Kg	1	02-Dec-2016 22:26
Lead	5.47		0.477	mg/Kg	1	02-Dec-2016 22:26
Nickel	7.42		0.477	mg/Kg	1	02-Dec-2016 22:26
Selenium	ND		0.477	mg/Kg	1	02-Dec-2016 22:26
Silver	ND		0.477	mg/Kg	1	02-Dec-2016 22:26
Zinc	24.1		0.477	mg/Kg	1	02-Dec-2016 22:26
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	14.8		3.54	ug/Kg	1	08-Dec-2016 10:52

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-1-1-2-111616
 Collection Date: 16-Nov-2016 08:50

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-01
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	0.813		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	0.404		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.497		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.497		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	14.4		0.0100	wt%	1	01-Dec-2016 08:27
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 30-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		1.97	mg/kg	1	01-Dec-2016 19:25
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.76	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	20.0	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-1-9-10-111616
 Collection Date: 16-Nov-2016 09:00

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-02
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	26-Nov-2016 00:26
Ethylbenzene	ND		4.8	ug/Kg	1	26-Nov-2016 00:26
m,p-Xylene	ND		9.6	ug/Kg	1	26-Nov-2016 00:26
o-Xylene	ND		4.8	ug/Kg	1	26-Nov-2016 00:26
Toluene	ND		4.8	ug/Kg	1	26-Nov-2016 00:26
Xylenes, Total	ND		4.8	ug/Kg	1	26-Nov-2016 00:26
Surr: 1,2-Dichloroethane-d4	97.2		70-128	%REC	1	26-Nov-2016 00:26
Surr: 4-Bromofluorobenzene	101		73-126	%REC	1	26-Nov-2016 00:26
Surr: Dibromofluoromethane	101		71-128	%REC	1	26-Nov-2016 00:26
Surr: Toluene-d8	112		73-127	%REC	1	26-Nov-2016 00:26
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 17:32
Surr: 4-Bromofluorobenzene	81.9		70-130	%REC	1	28-Nov-2016 17:32
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 26-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	29-Nov-2016 12:45
Surr: 2-Fluorobiphenyl	69.0		60-135	%REC	1	29-Nov-2016 12:45
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	6.95		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	4.94		0.00999	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	31.2		5.00	mg/L	10	08-Dec-2016 18:23
Magnesium	6.44		5.00	mg/L	10	08-Dec-2016 18:23
Sodium	116		5.00	mg/L	10	08-Dec-2016 18:23
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JDE		
Arsenic	2.30		0.457	mg/Kg	1	02-Dec-2016 22:31
Barium	169		2.29	mg/Kg	5	05-Dec-2016 14:51
Boron	2.53		2.29	mg/Kg	1	02-Dec-2016 22:31
Cadmium	ND		0.457	mg/Kg	1	02-Dec-2016 22:31
Chromium	6.95		0.457	mg/Kg	1	02-Dec-2016 22:31
Copper	4.25		0.183	mg/Kg	1	02-Dec-2016 22:31
Lead	4.89		0.457	mg/Kg	1	02-Dec-2016 22:31
Nickel	7.13		0.457	mg/Kg	1	02-Dec-2016 22:31
Selenium	ND		0.457	mg/Kg	1	02-Dec-2016 22:31
Silver	ND		0.457	mg/Kg	1	02-Dec-2016 22:31
Zinc	29.6		0.457	mg/Kg	1	02-Dec-2016 22:31
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	11.7		3.56	ug/Kg	1	08-Dec-2016 10:54

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-1-9-10-111616
 Collection Date: 16-Nov-2016 09:00

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-02
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	1.34		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	0.754		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.560		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.560		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	16.7		0.0100	wt%	1	01-Dec-2016 08:27
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 30-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	01-Dec-2016 19:25
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.89	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	20.9	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-1-13-14-111616
 Collection Date: 16-Nov-2016 09:15

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-03
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.9	ug/Kg	1	26-Nov-2016 00:49
Ethylbenzene	ND		4.9	ug/Kg	1	26-Nov-2016 00:49
m,p-Xylene	ND		9.8	ug/Kg	1	26-Nov-2016 00:49
o-Xylene	ND		4.9	ug/Kg	1	26-Nov-2016 00:49
Toluene	ND		4.9	ug/Kg	1	26-Nov-2016 00:49
Xylenes, Total	ND		4.9	ug/Kg	1	26-Nov-2016 00:49
Surr: 1,2-Dichloroethane-d4	98.5		70-128	%REC	1	26-Nov-2016 00:49
Surr: 4-Bromofluorobenzene	105		73-126	%REC	1	26-Nov-2016 00:49
Surr: Dibromofluoromethane	102		71-128	%REC	1	26-Nov-2016 00:49
Surr: Toluene-d8	113		73-127	%REC	1	26-Nov-2016 00:49
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 17:48
Surr: 4-Bromofluorobenzene	84.9		70-130	%REC	1	28-Nov-2016 17:48
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 26-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	29-Nov-2016 14:48
Surr: 2-Fluorobiphenyl	72.8		60-135	%REC	1	29-Nov-2016 14:48
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	1.70		0.0100	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	277		5.00	mg/L	10	08-Dec-2016 18:28
Magnesium	28.3		5.00	mg/L	10	08-Dec-2016 18:28
Sodium	111		5.00	mg/L	10	08-Dec-2016 18:28
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JDE		
Arsenic	5.92		0.477	mg/Kg	1	02-Dec-2016 22:55
Barium	296		2.39	mg/Kg	5	05-Dec-2016 15:04
Boron	4.85		2.39	mg/Kg	1	02-Dec-2016 22:55
Cadmium	ND		0.477	mg/Kg	1	02-Dec-2016 22:55
Chromium	3.13		0.477	mg/Kg	1	02-Dec-2016 22:55
Copper	6.33		0.191	mg/Kg	1	02-Dec-2016 22:55
Lead	4.52		0.477	mg/Kg	1	02-Dec-2016 22:55
Nickel	6.49		0.477	mg/Kg	1	02-Dec-2016 22:55
Selenium	ND		0.477	mg/Kg	1	02-Dec-2016 22:55
Silver	ND		0.477	mg/Kg	1	02-Dec-2016 22:55
Zinc	30.9		0.477	mg/Kg	1	02-Dec-2016 22:55
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	37.0		3.55	ug/Kg	1	08-Dec-2016 10:56

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-1-13-14-111616
 Collection Date: 16-Nov-2016 09:15

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-03
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	4.24		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	2.70		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.636		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.636		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	23.7		0.0100	wt%	1	01-Dec-2016 08:27
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 30-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		1.97	mg/kg	1	01-Dec-2016 19:25
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.25	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	20.5	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-2-1-2-111616
 Collection Date: 16-Nov-2016 09:20

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-04
 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	26-Nov-2016 02:45
Ethylbenzene	ND		4.8	ug/Kg	1	26-Nov-2016 02:45
m,p-Xylene	ND		9.7	ug/Kg	1	26-Nov-2016 02:45
o-Xylene	ND		4.8	ug/Kg	1	26-Nov-2016 02:45
Toluene	ND		4.8	ug/Kg	1	26-Nov-2016 02:45
Xylenes, Total	ND		4.8	ug/Kg	1	26-Nov-2016 02:45
Surr: 1,2-Dichloroethane-d4	110		70-128	%REC	1	26-Nov-2016 02:45
Surr: 4-Bromofluorobenzene	105		73-126	%REC	1	26-Nov-2016 02:45
Surr: Dibromofluoromethane	112		71-128	%REC	1	26-Nov-2016 02:45
Surr: Toluene-d8	111		73-127	%REC	1	26-Nov-2016 02:45
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 18:04
Surr: 4-Bromofluorobenzene	90.1		70-130	%REC	1	28-Nov-2016 18:04
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Dec-2016 03:43
Surr: 2-Fluorobiphenyl	75.4		60-135	%REC	1	03-Dec-2016 03:43
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	6.02		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	2.25		0.0100	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	142		5.00	mg/L	10	08-Dec-2016 18:32
Magnesium	12.1		5.00	mg/L	10	08-Dec-2016 18:32
Sodium	104		5.00	mg/L	10	08-Dec-2016 18:32
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JCJ		
Arsenic	2.15		0.465	mg/Kg	1	05-Dec-2016 15:37
Barium	158		0.465	mg/Kg	1	05-Dec-2016 15:37
Boron	2.94		2.32	mg/Kg	1	05-Dec-2016 15:37
Cadmium	ND		0.465	mg/Kg	1	05-Dec-2016 15:37
Chromium	6.02		0.465	mg/Kg	1	05-Dec-2016 15:37
Copper	4.12		0.186	mg/Kg	1	05-Dec-2016 15:37
Lead	5.64		0.465	mg/Kg	1	05-Dec-2016 15:37
Nickel	7.60		0.465	mg/Kg	1	05-Dec-2016 15:37
Selenium	ND		0.465	mg/Kg	1	05-Dec-2016 15:37
Silver	ND		0.465	mg/Kg	1	05-Dec-2016 15:37
Zinc	18.5		0.465	mg/Kg	1	05-Dec-2016 15:37
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	14.9		3.58	ug/Kg	1	08-Dec-2016 10:57

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-2-1-2-111616
 Collection Date: 16-Nov-2016 09:20

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-04
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	1.21		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	0.540		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.445		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.445		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	16.6		0.0100	wt%	1	01-Dec-2016 08:27
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 30-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		1.98	mg/kg	1	01-Dec-2016 19:25
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	9.44	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	20.1	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-2-7-8-111616
 Collection Date: 16-Nov-2016 09:30

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-05
 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	26-Nov-2016 03:08
Ethylbenzene	ND		5.0	ug/Kg	1	26-Nov-2016 03:08
m,p-Xylene	ND		9.9	ug/Kg	1	26-Nov-2016 03:08
o-Xylene	ND		5.0	ug/Kg	1	26-Nov-2016 03:08
Toluene	ND		5.0	ug/Kg	1	26-Nov-2016 03:08
Xylenes, Total	ND		5.0	ug/Kg	1	26-Nov-2016 03:08
Surr: 1,2-Dichloroethane-d4	93.9		70-128	%REC	1	26-Nov-2016 03:08
Surr: 4-Bromofluorobenzene	100		73-126	%REC	1	26-Nov-2016 03:08
Surr: Dibromofluoromethane	98.2		71-128	%REC	1	26-Nov-2016 03:08
Surr: Toluene-d8	110		73-127	%REC	1	26-Nov-2016 03:08
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 18:20
Surr: 4-Bromofluorobenzene	83.1		70-130	%REC	1	28-Nov-2016 18:20
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Dec-2016 04:56
Surr: 2-Fluorobiphenyl	93.9		60-135	%REC	1	03-Dec-2016 04:56
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	5.53		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	7.74		0.00999	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	59.0		5.00	mg/L	10	08-Dec-2016 18:37
Magnesium	ND		5.00	mg/L	10	08-Dec-2016 18:37
Sodium	216		5.00	mg/L	10	08-Dec-2016 18:37
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JCJ		
Arsenic	2.07		0.459	mg/Kg	1	05-Dec-2016 15:42
Barium	251		2.30	mg/Kg	5	05-Dec-2016 15:20
Boron	2.57		2.30	mg/Kg	1	05-Dec-2016 15:42
Cadmium	ND		0.459	mg/Kg	1	05-Dec-2016 15:42
Chromium	5.53		0.459	mg/Kg	1	05-Dec-2016 15:42
Copper	3.41		0.184	mg/Kg	1	05-Dec-2016 15:42
Lead	4.90		0.459	mg/Kg	1	05-Dec-2016 15:42
Nickel	6.56		0.459	mg/Kg	1	05-Dec-2016 15:42
Selenium	ND		0.459	mg/Kg	1	05-Dec-2016 15:42
Silver	ND		0.459	mg/Kg	1	05-Dec-2016 15:42
Zinc	15.2		0.459	mg/Kg	1	05-Dec-2016 15:42
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	141		3.50	ug/Kg	1	08-Dec-2016 10:59

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-2-7-8-111616
 Collection Date: 16-Nov-2016 09:30

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-05
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	2.35		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	1.16		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.494		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.494		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	15.9		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 30-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	01-Dec-2016 19:25
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	9.65	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	20.0	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-2-10-11-111616
 Collection Date: 16-Nov-2016 09:45

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-06
 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	26-Nov-2016 03:31
Ethylbenzene	ND		5.0	ug/Kg	1	26-Nov-2016 03:31
m,p-Xylene	ND		10	ug/Kg	1	26-Nov-2016 03:31
o-Xylene	ND		5.0	ug/Kg	1	26-Nov-2016 03:31
Toluene	ND		5.0	ug/Kg	1	26-Nov-2016 03:31
Xylenes, Total	ND		5.0	ug/Kg	1	26-Nov-2016 03:31
Surr: 1,2-Dichloroethane-d4	99.4		70-128	%REC	1	26-Nov-2016 03:31
Surr: 4-Bromofluorobenzene	102		73-126	%REC	1	26-Nov-2016 03:31
Surr: Dibromofluoromethane	99.7		71-128	%REC	1	26-Nov-2016 03:31
Surr: Toluene-d8	112		73-127	%REC	1	26-Nov-2016 03:31
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 18:36
Surr: 4-Bromofluorobenzene	83.9		70-130	%REC	1	28-Nov-2016 18:36
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	12		1.7	mg/Kg	1	03-Dec-2016 05:21
Surr: 2-Fluorobiphenyl	66.6		60-135	%REC	1	03-Dec-2016 05:21
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	11.5		0.0100	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	28.0		5.00	mg/L	10	08-Dec-2016 18:41
Magnesium	ND		5.00	mg/L	10	08-Dec-2016 18:41
Sodium	221		5.00	mg/L	10	08-Dec-2016 18:41
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JCJ		
Arsenic	1.56		0.468	mg/Kg	1	05-Dec-2016 16:05
Barium	201		2.34	mg/Kg	5	05-Dec-2016 15:24
Boron	2.50		2.34	mg/Kg	1	05-Dec-2016 16:05
Cadmium	ND		0.468	mg/Kg	1	05-Dec-2016 16:05
Chromium	1.33		0.468	mg/Kg	1	05-Dec-2016 16:05
Copper	1.54		0.187	mg/Kg	1	05-Dec-2016 16:05
Lead	1.03		0.468	mg/Kg	1	05-Dec-2016 16:05
Nickel	1.85		0.468	mg/Kg	1	05-Dec-2016 16:05
Selenium	ND		0.468	mg/Kg	1	05-Dec-2016 16:05
Silver	ND		0.468	mg/Kg	1	05-Dec-2016 16:05
Zinc	4.48		0.468	mg/Kg	1	05-Dec-2016 16:05
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	15.2		3.48	ug/Kg	1	08-Dec-2016 11:01

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-2-10-11-111616
 Collection Date: 16-Nov-2016 09:45

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-06
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	3.55		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	1.26		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.356		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.356		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	26.1		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 30-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		1.99	mg/kg	1	01-Dec-2016 19:25
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	9.37	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	20.4	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-3-0-1-111616
 Collection Date: 16-Nov-2016 10:00

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-07
 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	26-Nov-2016 03:54
Ethylbenzene	ND		4.9	ug/Kg	1	26-Nov-2016 03:54
m,p-Xylene	ND		9.8	ug/Kg	1	26-Nov-2016 03:54
o-Xylene	ND		4.9	ug/Kg	1	26-Nov-2016 03:54
Toluene	ND		4.9	ug/Kg	1	26-Nov-2016 03:54
Xylenes, Total	ND		4.9	ug/Kg	1	26-Nov-2016 03:54
Surr: 1,2-Dichloroethane-d4	104		70-128	%REC	1	26-Nov-2016 03:54
Surr: 4-Bromofluorobenzene	105		73-126	%REC	1	26-Nov-2016 03:54
Surr: Dibromofluoromethane	104		71-128	%REC	1	26-Nov-2016 03:54
Surr: Toluene-d8	113		73-127	%REC	1	26-Nov-2016 03:54
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 18:53
Surr: 4-Bromofluorobenzene	83.4		70-130	%REC	1	28-Nov-2016 18:53
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Dec-2016 05:45
Surr: 2-Fluorobiphenyl	71.5		60-135	%REC	1	03-Dec-2016 05:45
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	6.24		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	1.70		0.0100	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	48.9		5.00	mg/L	10	08-Dec-2016 18:46
Magnesium	5.21		5.00	mg/L	10	08-Dec-2016 18:46
Sodium	46.9		5.00	mg/L	10	08-Dec-2016 18:46
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JCJ		
Arsenic	2.24		0.459	mg/Kg	1	05-Dec-2016 16:09
Barium	154		0.459	mg/Kg	1	05-Dec-2016 16:09
Boron	2.53		2.30	mg/Kg	1	05-Dec-2016 16:09
Cadmium	ND		0.459	mg/Kg	1	05-Dec-2016 16:09
Chromium	6.24		0.459	mg/Kg	1	05-Dec-2016 16:09
Copper	4.89		0.184	mg/Kg	1	05-Dec-2016 16:09
Lead	5.69		0.459	mg/Kg	1	05-Dec-2016 16:09
Nickel	6.81		0.459	mg/Kg	1	05-Dec-2016 16:09
Selenium	ND		0.459	mg/Kg	1	05-Dec-2016 16:09
Silver	ND		0.459	mg/Kg	1	05-Dec-2016 16:09
Zinc	24.7		0.459	mg/Kg	1	05-Dec-2016 16:09
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	12.8		3.51	ug/Kg	1	08-Dec-2016 11:02

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-3-0-1-111616
 Collection Date: 16-Nov-2016 10:00

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-07
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	0.754		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	0.389		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.516		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.516		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	14.4		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 30-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		1.99	mg/kg	1	01-Dec-2016 19:25
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	9.06	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	19.8	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-3-5-6-111616
 Collection Date: 16-Nov-2016 10:10

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-08
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	26-Nov-2016 04:17
Ethylbenzene	ND		4.8	ug/Kg	1	26-Nov-2016 04:17
m,p-Xylene	ND		9.6	ug/Kg	1	26-Nov-2016 04:17
o-Xylene	ND		4.8	ug/Kg	1	26-Nov-2016 04:17
Toluene	ND		4.8	ug/Kg	1	26-Nov-2016 04:17
Xylenes, Total	ND		4.8	ug/Kg	1	26-Nov-2016 04:17
Surr: 1,2-Dichloroethane-d4	97.1		70-128	%REC	1	26-Nov-2016 04:17
Surr: 4-Bromofluorobenzene	98.5		73-126	%REC	1	26-Nov-2016 04:17
Surr: Dibromofluoromethane	99.3		71-128	%REC	1	26-Nov-2016 04:17
Surr: Toluene-d8	107		73-127	%REC	1	26-Nov-2016 04:17
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 19:24
Surr: 4-Bromofluorobenzene	81.0		70-130	%REC	1	28-Nov-2016 19:24
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Dec-2016 06:09
Surr: 2-Fluorobiphenyl	78.6		60-135	%REC	1	03-Dec-2016 06:09
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	6.27		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	20.4		0.0100	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	18.0		5.00	mg/L	10	08-Dec-2016 18:50
Magnesium	ND		5.00	mg/L	10	08-Dec-2016 18:50
Sodium	315		5.00	mg/L	10	08-Dec-2016 18:50
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JCJ		
Arsenic	2.19		0.466	mg/Kg	1	05-Dec-2016 16:14
Barium	119		0.466	mg/Kg	1	05-Dec-2016 16:14
Boron	2.50		2.33	mg/Kg	1	05-Dec-2016 16:14
Cadmium	ND		0.466	mg/Kg	1	05-Dec-2016 16:14
Chromium	6.27		0.466	mg/Kg	1	05-Dec-2016 16:14
Copper	4.06		0.186	mg/Kg	1	05-Dec-2016 16:14
Lead	6.06		0.466	mg/Kg	1	05-Dec-2016 16:14
Nickel	9.24		0.466	mg/Kg	1	05-Dec-2016 16:14
Selenium	ND		0.466	mg/Kg	1	05-Dec-2016 16:14
Silver	ND		0.466	mg/Kg	1	05-Dec-2016 16:14
Zinc	19.5		0.466	mg/Kg	1	05-Dec-2016 16:14
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	44.6		3.52	ug/Kg	1	08-Dec-2016 11:04

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-3-5-6-111616
 Collection Date: 16-Nov-2016 10:10

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-08
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	3.77		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	1.76		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.466		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.466		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	15.0		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 30-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		1.98	mg/kg	1	01-Dec-2016 19:25
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	9.08	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	19.9	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: TRIP BLANK 082916-86
Collection Date: 16-Nov-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16111109
Lab ID:HS16111109-09
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	26-Nov-2016 11:33
Ethylbenzene	ND		1.0	ug/L	1	26-Nov-2016 11:33
m,p-Xylene	ND		2.0	ug/L	1	26-Nov-2016 11:33
o-Xylene	ND		1.0	ug/L	1	26-Nov-2016 11:33
Toluene	ND		1.0	ug/L	1	26-Nov-2016 11:33
Xylenes, Total	ND		1.0	ug/L	1	26-Nov-2016 11:33
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>101</i>		<i>71-125</i>	<i>%REC</i>	<i>1</i>	<i>26-Nov-2016 11:33</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>93.0</i>		<i>70-125</i>	<i>%REC</i>	<i>1</i>	<i>26-Nov-2016 11:33</i>
<i>Surr: Dibromofluoromethane</i>	<i>99.6</i>		<i>74-125</i>	<i>%REC</i>	<i>1</i>	<i>26-Nov-2016 11:33</i>
<i>Surr: Toluene-d8</i>	<i>103</i>		<i>75-125</i>	<i>%REC</i>	<i>1</i>	<i>26-Nov-2016 11:33</i>

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-3-11-12-111616
 Collection Date: 16-Nov-2016 10:20

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-10
 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	26-Nov-2016 04:40
Ethylbenzene	ND		5.0	ug/Kg	1	26-Nov-2016 04:40
m,p-Xylene	ND		9.9	ug/Kg	1	26-Nov-2016 04:40
o-Xylene	ND		5.0	ug/Kg	1	26-Nov-2016 04:40
Toluene	ND		5.0	ug/Kg	1	26-Nov-2016 04:40
Xylenes, Total	ND		5.0	ug/Kg	1	26-Nov-2016 04:40
Surr: 1,2-Dichloroethane-d4	99.0		70-128	%REC	1	26-Nov-2016 04:40
Surr: 4-Bromofluorobenzene	103		73-126	%REC	1	26-Nov-2016 04:40
Surr: Dibromofluoromethane	99.3		71-128	%REC	1	26-Nov-2016 04:40
Surr: Toluene-d8	110		73-127	%REC	1	26-Nov-2016 04:40
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 19:40
Surr: 4-Bromofluorobenzene	85.5		70-130	%REC	1	28-Nov-2016 19:40
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Dec-2016 06:34
Surr: 2-Fluorobiphenyl	89.8		60-135	%REC	1	03-Dec-2016 06:34
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	2.99		0.00999	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	1,000		4.99	mg/L	10	08-Dec-2016 19:04
Magnesium	133		4.99	mg/L	10	08-Dec-2016 19:04
Sodium	379		4.99	mg/L	10	08-Dec-2016 19:04
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JCJ		
Arsenic	1.80		0.479	mg/Kg	1	05-Dec-2016 16:18
Barium	126		0.479	mg/Kg	1	05-Dec-2016 16:18
Boron	2.99		2.39	mg/Kg	1	05-Dec-2016 16:18
Cadmium	ND		0.479	mg/Kg	1	05-Dec-2016 16:18
Chromium	4.41		0.479	mg/Kg	1	05-Dec-2016 16:18
Copper	3.71		0.191	mg/Kg	1	05-Dec-2016 16:18
Lead	4.04		0.479	mg/Kg	1	05-Dec-2016 16:18
Nickel	5.65		0.479	mg/Kg	1	05-Dec-2016 16:18
Selenium	ND		0.479	mg/Kg	1	05-Dec-2016 16:18
Silver	ND		0.479	mg/Kg	1	05-Dec-2016 16:18
Zinc	13.2		0.479	mg/Kg	1	05-Dec-2016 16:18
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	7.49		3.49	ug/Kg	1	08-Dec-2016 11:14

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-3-11-12-111616
 Collection Date: 16-Nov-2016 10:20

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-10
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	16.5		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	9.39		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.569		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.569		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	17.2		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 30-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	01-Dec-2016 19:25
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	7.86	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	19.6	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-4-0-1-111616
 Collection Date: 16-Nov-2016 10:30

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-11
 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	26-Nov-2016 05:03
Ethylbenzene	ND		5.0	ug/Kg	1	26-Nov-2016 05:03
m,p-Xylene	ND		9.9	ug/Kg	1	26-Nov-2016 05:03
o-Xylene	ND		5.0	ug/Kg	1	26-Nov-2016 05:03
Toluene	ND		5.0	ug/Kg	1	26-Nov-2016 05:03
Xylenes, Total	ND		5.0	ug/Kg	1	26-Nov-2016 05:03
Surr: 1,2-Dichloroethane-d4	95.3		70-128	%REC	1	26-Nov-2016 05:03
Surr: 4-Bromofluorobenzene	103		73-126	%REC	1	26-Nov-2016 05:03
Surr: Dibromofluoromethane	97.8		71-128	%REC	1	26-Nov-2016 05:03
Surr: Toluene-d8	111		73-127	%REC	1	26-Nov-2016 05:03
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 19:56
Surr: 4-Bromofluorobenzene	86.4		70-130	%REC	1	28-Nov-2016 19:56
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Dec-2016 07:47
Surr: 2-Fluorobiphenyl	90.5		60-135	%REC	1	03-Dec-2016 07:47
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	6.67		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	2.68		0.0100	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	63.0		5.00	mg/L	10	08-Dec-2016 19:08
Magnesium	5.61		5.00	mg/L	10	08-Dec-2016 19:08
Sodium	82.7		5.00	mg/L	10	08-Dec-2016 19:08
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JCJ		
Arsenic	2.34		0.482	mg/Kg	1	05-Dec-2016 16:23
Barium	155		2.41	mg/Kg	5	05-Dec-2016 15:29
Boron	2.58		2.41	mg/Kg	1	05-Dec-2016 16:23
Cadmium	ND		0.482	mg/Kg	1	05-Dec-2016 16:23
Chromium	6.67		0.482	mg/Kg	1	05-Dec-2016 16:23
Copper	4.87		0.193	mg/Kg	1	05-Dec-2016 16:23
Lead	6.57		0.482	mg/Kg	1	05-Dec-2016 16:23
Nickel	7.77		0.482	mg/Kg	1	05-Dec-2016 16:23
Selenium	ND		0.482	mg/Kg	1	05-Dec-2016 16:23
Silver	ND		0.482	mg/Kg	1	05-Dec-2016 16:23
Zinc	23.5		0.482	mg/Kg	1	05-Dec-2016 16:23
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	13.5		3.53	ug/Kg	1	08-Dec-2016 11:16

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-4-0-1-111616
 Collection Date: 16-Nov-2016 10:30

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-11
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	0.915		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	0.463		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.506		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.506		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	15.2		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 30-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		1.98	mg/kg	1	01-Dec-2016 19:25
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	9.28	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	20.0	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-4-5-6-111616
 Collection Date: 16-Nov-2016 10:40

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-12
 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	26-Nov-2016 05:26
Ethylbenzene	ND		5.0	ug/Kg	1	26-Nov-2016 05:26
m,p-Xylene	ND		10	ug/Kg	1	26-Nov-2016 05:26
o-Xylene	ND		5.0	ug/Kg	1	26-Nov-2016 05:26
Toluene	ND		5.0	ug/Kg	1	26-Nov-2016 05:26
Xylenes, Total	ND		5.0	ug/Kg	1	26-Nov-2016 05:26
Surr: 1,2-Dichloroethane-d4	96.0		70-128	%REC	1	26-Nov-2016 05:26
Surr: 4-Bromofluorobenzene	101		73-126	%REC	1	26-Nov-2016 05:26
Surr: Dibromofluoromethane	103		71-128	%REC	1	26-Nov-2016 05:26
Surr: Toluene-d8	111		73-127	%REC	1	26-Nov-2016 05:26
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 20:13
Surr: 4-Bromofluorobenzene	89.4		70-130	%REC	1	28-Nov-2016 20:13
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Dec-2016 08:11
Surr: 2-Fluorobiphenyl	76.2		60-135	%REC	1	03-Dec-2016 08:11
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	6.47		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	1.38		0.0100	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	215		5.00	mg/L	10	08-Dec-2016 19:12
Magnesium	66.0		5.00	mg/L	10	08-Dec-2016 19:12
Sodium	90.4		5.00	mg/L	10	08-Dec-2016 19:12
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JCJ		
Arsenic	2.17		0.462	mg/Kg	1	05-Dec-2016 16:27
Barium	178		2.31	mg/Kg	5	05-Dec-2016 15:33
Boron	ND		2.31	mg/Kg	1	05-Dec-2016 16:27
Cadmium	ND		0.462	mg/Kg	1	05-Dec-2016 16:27
Chromium	6.47		0.462	mg/Kg	1	05-Dec-2016 16:27
Copper	4.37		0.185	mg/Kg	1	05-Dec-2016 16:27
Lead	5.93		0.462	mg/Kg	1	05-Dec-2016 16:27
Nickel	8.71		0.462	mg/Kg	1	05-Dec-2016 16:27
Selenium	ND		0.462	mg/Kg	1	05-Dec-2016 16:27
Silver	ND		0.462	mg/Kg	1	05-Dec-2016 16:27
Zinc	18.7		0.462	mg/Kg	1	05-Dec-2016 16:27
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	14.6		3.52	ug/Kg	1	08-Dec-2016 11:18

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-4-5-6-111616
 Collection Date: 16-Nov-2016 10:40

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-12
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	4.86		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	2.49		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.512		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.512		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	14.0		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 30-Nov-2016 Analyst: KVL		
Chromium, Hexavalent	ND		1.98	mg/kg	1	01-Dec-2016 19:25
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	7.93	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	20.0	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-4-11-12-111616
 Collection Date: 16-Nov-2016 11:00

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-13
 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	26-Nov-2016 05:50
Ethylbenzene	ND		5.0	ug/Kg	1	26-Nov-2016 05:50
m,p-Xylene	ND		9.9	ug/Kg	1	26-Nov-2016 05:50
o-Xylene	ND		5.0	ug/Kg	1	26-Nov-2016 05:50
Toluene	ND		5.0	ug/Kg	1	26-Nov-2016 05:50
Xylenes, Total	ND		5.0	ug/Kg	1	26-Nov-2016 05:50
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>121</i>		<i>70-128</i>	<i>%REC</i>	<i>1</i>	<i>26-Nov-2016 05:50</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>105</i>		<i>73-126</i>	<i>%REC</i>	<i>1</i>	<i>26-Nov-2016 05:50</i>
<i>Surr: Dibromofluoromethane</i>	<i>113</i>		<i>71-128</i>	<i>%REC</i>	<i>1</i>	<i>26-Nov-2016 05:50</i>
<i>Surr: Toluene-d8</i>	<i>108</i>		<i>73-127</i>	<i>%REC</i>	<i>1</i>	<i>26-Nov-2016 05:50</i>
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 20:29
<i>Surr: 4-Bromofluorobenzene</i>	<i>85.3</i>		<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>28-Nov-2016 20:29</i>
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Dec-2016 08:36
<i>Surr: 2-Fluorobiphenyl</i>	<i>97.3</i>		<i>60-135</i>	<i>%REC</i>	<i>1</i>	<i>03-Dec-2016 08:36</i>
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	4.21		0.00999	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	21.0		5.00	mg/L	10	08-Dec-2016 19:17
Magnesium	ND		5.00	mg/L	10	08-Dec-2016 19:17
Sodium	70.1		5.00	mg/L	10	08-Dec-2016 19:17
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JCJ		
Arsenic	3.05		2.37	mg/Kg	5	05-Dec-2016 16:32
Barium	326		2.37	mg/Kg	5	05-Dec-2016 16:32
Boron	ND		11.8	mg/Kg	5	05-Dec-2016 16:32
Cadmium	ND		2.37	mg/Kg	5	05-Dec-2016 16:32
Chromium	ND		2.37	mg/Kg	5	05-Dec-2016 16:32
Copper	2.77		0.947	mg/Kg	5	05-Dec-2016 16:32
Lead	ND		2.37	mg/Kg	5	05-Dec-2016 16:32
Nickel	3.42		2.37	mg/Kg	5	05-Dec-2016 16:32
Selenium	ND		2.37	mg/Kg	5	05-Dec-2016 16:32
Silver	ND		2.37	mg/Kg	5	05-Dec-2016 16:32
Zinc	7.98		2.37	mg/Kg	5	05-Dec-2016 16:32
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	20.0		3.46	ug/Kg	1	08-Dec-2016 11:19

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-4-11-12-111616
 Collection Date: 16-Nov-2016 11:00

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-13
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	1.23		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	0.529		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.431		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.431		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	14.2		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 05-Dec-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	05-Dec-2016 16:30
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	9.40	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	19.9	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-5-2-3-111616
 Collection Date: 16-Nov-2016 11:15

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-14
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	26-Nov-2016 06:13
Ethylbenzene	ND		4.8	ug/Kg	1	26-Nov-2016 06:13
m,p-Xylene	ND		9.7	ug/Kg	1	26-Nov-2016 06:13
o-Xylene	ND		4.8	ug/Kg	1	26-Nov-2016 06:13
Toluene	ND		4.8	ug/Kg	1	26-Nov-2016 06:13
Xylenes, Total	ND		4.8	ug/Kg	1	26-Nov-2016 06:13
Surr: 1,2-Dichloroethane-d4	110		70-128	%REC	1	26-Nov-2016 06:13
Surr: 4-Bromofluorobenzene	102		73-126	%REC	1	26-Nov-2016 06:13
Surr: Dibromofluoromethane	108		71-128	%REC	1	26-Nov-2016 06:13
Surr: Toluene-d8	109		73-127	%REC	1	26-Nov-2016 06:13
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 22:05
Surr: 4-Bromofluorobenzene	87.5		70-130	%REC	1	28-Nov-2016 22:05
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Dec-2016 09:00
Surr: 2-Fluorobiphenyl	103		60-135	%REC	1	03-Dec-2016 09:00
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	7.00		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	1.91		0.00999	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	136		5.00	mg/L	10	08-Dec-2016 19:22
Magnesium	26.6		5.00	mg/L	10	08-Dec-2016 19:22
Sodium	93.3		5.00	mg/L	10	08-Dec-2016 19:22
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JDE		
Arsenic	2.39		0.456	mg/Kg	1	03-Dec-2016 01:26
Barium	128		0.456	mg/Kg	1	03-Dec-2016 01:26
Boron	2.78		2.28	mg/Kg	1	03-Dec-2016 01:26
Cadmium	ND		0.456	mg/Kg	1	03-Dec-2016 01:26
Chromium	7.00		0.456	mg/Kg	1	03-Dec-2016 01:26
Copper	5.49		0.183	mg/Kg	1	03-Dec-2016 01:26
Lead	6.16		0.456	mg/Kg	1	03-Dec-2016 01:26
Nickel	7.86		0.456	mg/Kg	1	03-Dec-2016 01:26
Selenium	ND		0.456	mg/Kg	1	03-Dec-2016 01:26
Silver	ND		0.456	mg/Kg	1	03-Dec-2016 01:26
Zinc	21.1		0.456	mg/Kg	1	03-Dec-2016 01:26
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	13.7		3.40	ug/Kg	1	08-Dec-2016 11:25

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-5-2-3-111616
 Collection Date: 16-Nov-2016 11:15

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-14
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	2.99		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	1.51		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.504		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.504		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	14.7		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 05-Dec-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	05-Dec-2016 16:30
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	7.49	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	19.4	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-5-4-5-111616
 Collection Date: 16-Nov-2016 11:20

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-15
 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	26-Nov-2016 06:36
Ethylbenzene	ND		4.8	ug/Kg	1	26-Nov-2016 06:36
m,p-Xylene	ND		9.7	ug/Kg	1	26-Nov-2016 06:36
o-Xylene	ND		4.8	ug/Kg	1	26-Nov-2016 06:36
Toluene	ND		4.8	ug/Kg	1	26-Nov-2016 06:36
Xylenes, Total	ND		4.8	ug/Kg	1	26-Nov-2016 06:36
Surr: 1,2-Dichloroethane-d4	95.1		70-128	%REC	1	26-Nov-2016 06:36
Surr: 4-Bromofluorobenzene	103		73-126	%REC	1	26-Nov-2016 06:36
Surr: Dibromofluoromethane	103		71-128	%REC	1	26-Nov-2016 06:36
Surr: Toluene-d8	114		73-127	%REC	1	26-Nov-2016 06:36
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 22:53
Surr: 4-Bromofluorobenzene	82.6		70-130	%REC	1	28-Nov-2016 22:53
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Dec-2016 09:24
Surr: 2-Fluorobiphenyl	81.7		60-135	%REC	1	03-Dec-2016 09:24
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	6.68		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	1.97		0.0100	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	167		5.00	mg/L	10	08-Dec-2016 19:26
Magnesium	26.4		5.00	mg/L	10	08-Dec-2016 19:26
Sodium	104		5.00	mg/L	10	08-Dec-2016 19:26
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JDE		
Arsenic	2.84		0.457	mg/Kg	1	03-Dec-2016 01:32
Barium	176		2.29	mg/Kg	5	05-Dec-2016 15:46
Boron	ND		2.29	mg/Kg	1	03-Dec-2016 01:32
Cadmium	ND		0.457	mg/Kg	1	03-Dec-2016 01:32
Chromium	6.68		0.457	mg/Kg	1	03-Dec-2016 01:32
Copper	5.54		0.183	mg/Kg	1	03-Dec-2016 01:32
Lead	5.92		0.457	mg/Kg	1	03-Dec-2016 01:32
Nickel	7.35		0.457	mg/Kg	1	03-Dec-2016 01:32
Selenium	ND		0.457	mg/Kg	1	03-Dec-2016 01:32
Silver	ND		0.457	mg/Kg	1	03-Dec-2016 01:32
Zinc	22.7		0.457	mg/Kg	1	03-Dec-2016 01:32
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	11.1		3.57	ug/Kg	1	08-Dec-2016 11:26

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-5-4-5-111616
 Collection Date: 16-Nov-2016 11:20

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-15
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	4.06		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	1.79		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.441		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.441		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	14.6		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 05-Dec-2016 Analyst: KVL		
Chromium, Hexavalent	ND		1.99	mg/kg	1	05-Dec-2016 16:30
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.18	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	19.6	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-5-12-13-111616
 Collection Date: 16-Nov-2016 11:45

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-16
 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	26-Nov-2016 06:59
Ethylbenzene	ND		5.0	ug/Kg	1	26-Nov-2016 06:59
m,p-Xylene	ND		10	ug/Kg	1	26-Nov-2016 06:59
o-Xylene	ND		5.0	ug/Kg	1	26-Nov-2016 06:59
Toluene	ND		5.0	ug/Kg	1	26-Nov-2016 06:59
Xylenes, Total	ND		5.0	ug/Kg	1	26-Nov-2016 06:59
Surr: 1,2-Dichloroethane-d4	102		70-128	%REC	1	26-Nov-2016 06:59
Surr: 4-Bromofluorobenzene	102		73-126	%REC	1	26-Nov-2016 06:59
Surr: Dibromofluoromethane	101		71-128	%REC	1	26-Nov-2016 06:59
Surr: Toluene-d8	109		73-127	%REC	1	26-Nov-2016 06:59
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 23:10
Surr: 4-Bromofluorobenzene	75.7		70-130	%REC	1	28-Nov-2016 23:10
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Dec-2016 09:49
Surr: 2-Fluorobiphenyl	65.4		60-135	%REC	1	03-Dec-2016 09:49
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	2.04		0.0100	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	90.4		5.00	mg/L	10	08-Dec-2016 19:31
Magnesium	19.1		5.00	mg/L	10	08-Dec-2016 19:31
Sodium	81.7		5.00	mg/L	10	08-Dec-2016 19:31
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JDE		
Arsenic	3.74		0.477	mg/Kg	1	03-Dec-2016 01:37
Barium	425		4.77	mg/Kg	10	05-Dec-2016 15:51
Boron	3.18		2.39	mg/Kg	1	03-Dec-2016 01:37
Cadmium	ND		0.477	mg/Kg	1	03-Dec-2016 01:37
Chromium	3.13		0.477	mg/Kg	1	03-Dec-2016 01:37
Copper	3.85		0.191	mg/Kg	1	03-Dec-2016 01:37
Lead	2.95		0.477	mg/Kg	1	03-Dec-2016 01:37
Nickel	4.62		0.477	mg/Kg	1	03-Dec-2016 01:37
Selenium	ND		0.477	mg/Kg	1	03-Dec-2016 01:37
Silver	ND		0.477	mg/Kg	1	03-Dec-2016 01:37
Zinc	10.5		0.477	mg/Kg	1	03-Dec-2016 01:37
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	18.4		3.54	ug/Kg	1	08-Dec-2016 11:28

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-5-12-13-111616
 Collection Date: 16-Nov-2016 11:45

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-16
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	2.59		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	1.23		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.475		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.475		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	16.9		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 05-Dec-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	05-Dec-2016 16:30
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.52	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	19.6	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-6-1-2-111616
 Collection Date: 16-Nov-2016 12:30

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-17
 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	26-Nov-2016 07:22
Ethylbenzene	ND		4.8	ug/Kg	1	26-Nov-2016 07:22
m,p-Xylene	ND		9.6	ug/Kg	1	26-Nov-2016 07:22
o-Xylene	ND		4.8	ug/Kg	1	26-Nov-2016 07:22
Toluene	ND		4.8	ug/Kg	1	26-Nov-2016 07:22
Xylenes, Total	ND		4.8	ug/Kg	1	26-Nov-2016 07:22
Surr: 1,2-Dichloroethane-d4	107		70-128	%REC	1	26-Nov-2016 07:22
Surr: 4-Bromofluorobenzene	99.9		73-126	%REC	1	26-Nov-2016 07:22
Surr: Dibromofluoromethane	109		71-128	%REC	1	26-Nov-2016 07:22
Surr: Toluene-d8	106		73-127	%REC	1	26-Nov-2016 07:22
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 23:26
Surr: 4-Bromofluorobenzene	74.3		70-130	%REC	1	28-Nov-2016 23:26
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	5.7		1.7	mg/Kg	1	03-Dec-2016 10:13
Surr: 2-Fluorobiphenyl	85.8		60-135	%REC	1	03-Dec-2016 10:13
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	5.31		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	4.73		0.0100	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	145		5.00	mg/L	10	08-Dec-2016 19:35
Magnesium	6.31		5.00	mg/L	10	08-Dec-2016 19:35
Sodium	214		5.00	mg/L	10	08-Dec-2016 19:35
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JDE		
Arsenic	1.90		0.473	mg/Kg	1	03-Dec-2016 01:42
Barium	139		0.473	mg/Kg	1	03-Dec-2016 01:42
Boron	ND		2.36	mg/Kg	1	03-Dec-2016 01:42
Cadmium	ND		0.473	mg/Kg	1	03-Dec-2016 01:42
Chromium	5.31		0.473	mg/Kg	1	03-Dec-2016 01:42
Copper	4.05		0.189	mg/Kg	1	03-Dec-2016 01:42
Lead	4.27		0.473	mg/Kg	1	03-Dec-2016 01:42
Nickel	6.63		0.473	mg/Kg	1	03-Dec-2016 01:42
Selenium	ND		0.473	mg/Kg	1	03-Dec-2016 01:42
Silver	ND		0.473	mg/Kg	1	03-Dec-2016 01:42
Zinc	18.6		0.473	mg/Kg	1	03-Dec-2016 01:42
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	14.2		3.49	ug/Kg	1	08-Dec-2016 11:30

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-6-1-2-111616
 Collection Date: 16-Nov-2016 12:30

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-17
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	3.73		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	2.00		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.535		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.535		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	20.7		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 05-Dec-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	05-Dec-2016 16:30
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	9.17	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	19.6	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: TRIP BLANK 082916-79
Collection Date: 16-Nov-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16111109
Lab ID:HS16111109-18
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	26-Nov-2016 12:25
Ethylbenzene	ND		1.0	ug/L	1	26-Nov-2016 12:25
m,p-Xylene	ND		2.0	ug/L	1	26-Nov-2016 12:25
o-Xylene	ND		1.0	ug/L	1	26-Nov-2016 12:25
Toluene	ND		1.0	ug/L	1	26-Nov-2016 12:25
Xylenes, Total	ND		1.0	ug/L	1	26-Nov-2016 12:25
Surr: 1,2-Dichloroethane-d4	98.6		71-125	%REC	1	26-Nov-2016 12:25
Surr: 4-Bromofluorobenzene	98.0		70-125	%REC	1	26-Nov-2016 12:25
Surr: Dibromofluoromethane	102		74-125	%REC	1	26-Nov-2016 12:25
Surr: Toluene-d8	101		75-125	%REC	1	26-Nov-2016 12:25

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-6-4-5-111616
 Collection Date: 16-Nov-2016 12:40

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-19
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	27-Nov-2016 00:27
Ethylbenzene	ND		4.8	ug/Kg	1	27-Nov-2016 00:27
m,p-Xylene	ND		9.6	ug/Kg	1	27-Nov-2016 00:27
o-Xylene	ND		4.8	ug/Kg	1	27-Nov-2016 00:27
Toluene	ND		4.8	ug/Kg	1	27-Nov-2016 00:27
Xylenes, Total	ND		4.8	ug/Kg	1	27-Nov-2016 00:27
Surr: 1,2-Dichloroethane-d4	98.5		70-128	%REC	1	27-Nov-2016 00:27
Surr: 4-Bromofluorobenzene	98.9		73-126	%REC	1	27-Nov-2016 00:27
Surr: Dibromofluoromethane	100.0		71-128	%REC	1	27-Nov-2016 00:27
Surr: Toluene-d8	109		73-127	%REC	1	27-Nov-2016 00:27
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	28-Nov-2016 23:42
Surr: 4-Bromofluorobenzene	86.0		70-130	%REC	1	28-Nov-2016 23:42
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	2.3		1.7	mg/Kg	1	03-Dec-2016 10:37
Surr: 2-Fluorobiphenyl	73.7		60-135	%REC	1	03-Dec-2016 10:37
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	6.95		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	1.65		0.00999	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	138		5.00	mg/L	10	08-Dec-2016 19:58
Magnesium	21.3		5.00	mg/L	10	08-Dec-2016 19:58
Sodium	78.8		5.00	mg/L	10	08-Dec-2016 19:58
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JDE		
Arsenic	2.40		0.467	mg/Kg	1	03-Dec-2016 01:47
Barium	145		0.467	mg/Kg	1	03-Dec-2016 01:47
Boron	ND		2.33	mg/Kg	1	03-Dec-2016 01:47
Cadmium	ND		0.467	mg/Kg	1	03-Dec-2016 01:47
Chromium	6.95		0.467	mg/Kg	1	03-Dec-2016 01:47
Copper	5.93		0.187	mg/Kg	1	03-Dec-2016 01:47
Lead	5.98		0.467	mg/Kg	1	03-Dec-2016 01:47
Nickel	7.52		0.467	mg/Kg	1	03-Dec-2016 01:47
Selenium	ND		0.467	mg/Kg	1	03-Dec-2016 01:47
Silver	ND		0.467	mg/Kg	1	03-Dec-2016 01:47
Zinc	21.2		0.467	mg/Kg	1	03-Dec-2016 01:47
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	11.9		3.56	ug/Kg	1	08-Dec-2016 12:57

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-6-4-5-111616
 Collection Date: 16-Nov-2016 12:40

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-19
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	3.03		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	1.45		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.478		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.478		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	12.9		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 05-Dec-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	05-Dec-2016 16:30
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.57	H	0.100	pH Units	1	05-Dec-2016 13:50
Temp Deg C @pH	19.6	H	0	°C	1	05-Dec-2016 13:50

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-6-10-11-111616
 Collection Date: 16-Nov-2016 12:50

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-20
 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	27-Nov-2016 00:50
Ethylbenzene	ND		4.8	ug/Kg	1	27-Nov-2016 00:50
m,p-Xylene	ND		9.5	ug/Kg	1	27-Nov-2016 00:50
o-Xylene	ND		4.8	ug/Kg	1	27-Nov-2016 00:50
Toluene	ND		4.8	ug/Kg	1	27-Nov-2016 00:50
Xylenes, Total	ND		4.8	ug/Kg	1	27-Nov-2016 00:50
Surr: 1,2-Dichloroethane-d4	96.9		70-128	%REC	1	27-Nov-2016 00:50
Surr: 4-Bromofluorobenzene	103		73-126	%REC	1	27-Nov-2016 00:50
Surr: Dibromofluoromethane	99.5		71-128	%REC	1	27-Nov-2016 00:50
Surr: Toluene-d8	111		73-127	%REC	1	27-Nov-2016 00:50
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	29-Nov-2016 00:14
Surr: 4-Bromofluorobenzene	83.7		70-130	%REC	1	29-Nov-2016 00:14
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Dec-2016 11:01
Surr: 2-Fluorobiphenyl	100		60-135	%REC	1	03-Dec-2016 11:01
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	1.41		0.00999	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	125		5.00	mg/L	10	08-Dec-2016 20:07
Magnesium	22.4		5.00	mg/L	10	08-Dec-2016 20:07
Sodium	65.1		5.00	mg/L	10	08-Dec-2016 20:07
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 01-Dec-2016 Analyst: JDE		
Arsenic	1.96		0.477	mg/Kg	1	03-Dec-2016 01:53
Barium	352		2.39	mg/Kg	5	05-Dec-2016 16:36
Boron	2.62		2.39	mg/Kg	1	03-Dec-2016 01:53
Cadmium	ND		0.477	mg/Kg	1	03-Dec-2016 01:53
Chromium	2.03		0.477	mg/Kg	1	03-Dec-2016 01:53
Copper	2.07		0.191	mg/Kg	1	03-Dec-2016 01:53
Lead	1.23		0.477	mg/Kg	1	03-Dec-2016 01:53
Nickel	2.54		0.477	mg/Kg	1	03-Dec-2016 01:53
Selenium	ND		0.477	mg/Kg	1	03-Dec-2016 01:53
Silver	ND		0.477	mg/Kg	1	03-Dec-2016 01:53
Zinc	5.83		0.477	mg/Kg	1	03-Dec-2016 01:53
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	22.4		3.50	ug/Kg	1	08-Dec-2016 13:02

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-6-10-11-111616
 Collection Date: 16-Nov-2016 12:50

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-20
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	3.05		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	1.37		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.449		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.449		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	15.6		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 05-Dec-2016 Analyst: KVL		
Chromium, Hexavalent	ND		1.99	mg/kg	1	05-Dec-2016 16:30
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.54	H	0.100	pH Units	1	05-Dec-2016 17:30
Temp Deg C @pH	19.6	H	0	°C	1	05-Dec-2016 17:30

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-7-2-3-111616
 Collection Date: 16-Nov-2016 13:00

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-21
 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	27-Nov-2016 01:13
Ethylbenzene	ND		4.9	ug/Kg	1	27-Nov-2016 01:13
m,p-Xylene	ND		9.8	ug/Kg	1	27-Nov-2016 01:13
o-Xylene	ND		4.9	ug/Kg	1	27-Nov-2016 01:13
Toluene	ND		4.9	ug/Kg	1	27-Nov-2016 01:13
Xylenes, Total	ND		4.9	ug/Kg	1	27-Nov-2016 01:13
Surr: 1,2-Dichloroethane-d4	96.7		70-128	%REC	1	27-Nov-2016 01:13
Surr: 4-Bromofluorobenzene	101		73-126	%REC	1	27-Nov-2016 01:13
Surr: Dibromofluoromethane	101		71-128	%REC	1	27-Nov-2016 01:13
Surr: Toluene-d8	111		73-127	%REC	1	27-Nov-2016 01:13
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	29-Nov-2016 00:30
Surr: 4-Bromofluorobenzene	87.1		70-130	%REC	1	29-Nov-2016 00:30
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		2.0	mg/Kg	1	03-Dec-2016 11:26
Surr: 2-Fluorobiphenyl	107		60-135	%REC	1	03-Dec-2016 11:26
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	6.97		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	1.74		0.00999	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	180		5.00	mg/L	10	08-Dec-2016 20:11
Magnesium	27.0		5.00	mg/L	10	08-Dec-2016 20:11
Sodium	94.5		5.00	mg/L	10	08-Dec-2016 20:11
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 02-Dec-2016 Analyst: JDE		
Arsenic	2.41		0.480	mg/Kg	1	03-Dec-2016 02:40
Barium	151		0.480	mg/Kg	1	03-Dec-2016 02:40
Boron	3.04		2.40	mg/Kg	1	03-Dec-2016 02:40
Cadmium	ND		0.480	mg/Kg	1	03-Dec-2016 02:40
Chromium	6.97		0.480	mg/Kg	1	03-Dec-2016 02:40
Copper	5.27		0.192	mg/Kg	1	03-Dec-2016 02:40
Lead	5.76		0.480	mg/Kg	1	03-Dec-2016 02:40
Nickel	7.52		0.480	mg/Kg	1	03-Dec-2016 02:40
Selenium	ND		0.480	mg/Kg	1	03-Dec-2016 02:40
Silver	ND		0.480	mg/Kg	1	03-Dec-2016 02:40
Zinc	20.5		0.480	mg/Kg	1	03-Dec-2016 02:40
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	11.4		3.38	ug/Kg	1	08-Dec-2016 13:11

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-7-2-3-111616
 Collection Date: 16-Nov-2016 13:00

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-21
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	3.60		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	1.86		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.517		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.517		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	20.0		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 08-Dec-2016 Analyst: KVL		
Chromium, Hexavalent	ND		1.99	mg/kg	1	08-Dec-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.51	H	0.100	pH Units	1	05-Dec-2016 17:30
Temp Deg C @pH	19.7	H	0	°C	1	05-Dec-2016 17:30

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-7-5-6-111616
 Collection Date: 16-Nov-2016 13:15

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-22
 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	27-Nov-2016 01:36
Ethylbenzene	ND		5.0	ug/Kg	1	27-Nov-2016 01:36
m,p-Xylene	ND		10	ug/Kg	1	27-Nov-2016 01:36
o-Xylene	ND		5.0	ug/Kg	1	27-Nov-2016 01:36
Toluene	ND		5.0	ug/Kg	1	27-Nov-2016 01:36
Xylenes, Total	ND		5.0	ug/Kg	1	27-Nov-2016 01:36
Surr: 1,2-Dichloroethane-d4	94.2		70-128	%REC	1	27-Nov-2016 01:36
Surr: 4-Bromofluorobenzene	102		73-126	%REC	1	27-Nov-2016 01:36
Surr: Dibromofluoromethane	98.1		71-128	%REC	1	27-Nov-2016 01:36
Surr: Toluene-d8	110		73-127	%REC	1	27-Nov-2016 01:36
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	29-Nov-2016 00:46
Surr: 4-Bromofluorobenzene	86.2		70-130	%REC	1	29-Nov-2016 00:46
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Dec-2016 11:50
Surr: 2-Fluorobiphenyl	64.6		60-135	%REC	1	03-Dec-2016 11:50
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	7.00		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	2.60		0.0100	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	216		5.00	mg/L	10	08-Dec-2016 20:16
Magnesium	36.1		5.00	mg/L	10	08-Dec-2016 20:16
Sodium	157		5.00	mg/L	10	08-Dec-2016 20:16
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 02-Dec-2016 Analyst: JDE		
Arsenic	2.43		0.478	mg/Kg	1	03-Dec-2016 02:45
Barium	153		0.478	mg/Kg	1	03-Dec-2016 02:45
Boron	2.58		2.39	mg/Kg	1	03-Dec-2016 02:45
Cadmium	ND		0.478	mg/Kg	1	03-Dec-2016 02:45
Chromium	7.00		0.478	mg/Kg	1	03-Dec-2016 02:45
Copper	5.27		0.191	mg/Kg	1	03-Dec-2016 02:45
Lead	6.02		0.478	mg/Kg	1	03-Dec-2016 02:45
Nickel	7.76		0.478	mg/Kg	1	03-Dec-2016 02:45
Selenium	ND		0.478	mg/Kg	1	03-Dec-2016 02:45
Silver	ND		0.478	mg/Kg	1	03-Dec-2016 02:45
Zinc	21.6		0.478	mg/Kg	1	03-Dec-2016 02:45
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	12.4		3.59	ug/Kg	1	08-Dec-2016 13:13

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-7-5-6-111616
 Collection Date: 16-Nov-2016 13:15

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-22
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	4.84		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Electrical Conductivity, 1:1 aqueous	2.60		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:28
Saturation % as decimal	0.537		0	mmhos/cm @25°C	1	09-Dec-2016 16:28
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.537		0.100	SP as fraction	1	07-Dec-2016 11:50
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	16.7		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 08-Dec-2016 Analyst: KVL		
Chromium, Hexavalent	ND		1.99	mg/kg	1	08-Dec-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.43	H	0.100	pH Units	1	05-Dec-2016 17:30
Temp Deg C @pH	19.5	H	0	°C	1	05-Dec-2016 17:30

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-7-11-12-111616
 Collection Date: 16-Nov-2016 13:30

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-23
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	27-Nov-2016 01:59
Ethylbenzene	ND		5.0	ug/Kg	1	27-Nov-2016 01:59
m,p-Xylene	ND		9.9	ug/Kg	1	27-Nov-2016 01:59
o-Xylene	ND		5.0	ug/Kg	1	27-Nov-2016 01:59
Toluene	ND		5.0	ug/Kg	1	27-Nov-2016 01:59
Xylenes, Total	ND		5.0	ug/Kg	1	27-Nov-2016 01:59
Surr: 1,2-Dichloroethane-d4	99.1		70-128	%REC	1	27-Nov-2016 01:59
Surr: 4-Bromofluorobenzene	102		73-126	%REC	1	27-Nov-2016 01:59
Surr: Dibromofluoromethane	103		71-128	%REC	1	27-Nov-2016 01:59
Surr: Toluene-d8	110		73-127	%REC	1	27-Nov-2016 01:59
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	29-Nov-2016 01:03
Surr: 4-Bromofluorobenzene	86.7		70-130	%REC	1	29-Nov-2016 01:03
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Dec-2016 12:15
Surr: 2-Fluorobiphenyl	72.4		60-135	%REC	1	03-Dec-2016 12:15
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	1.49		0.00999	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	171		5.00	mg/L	10	08-Dec-2016 21:43
Magnesium	51.1		5.00	mg/L	10	08-Dec-2016 21:43
Sodium	86.3		5.00	mg/L	10	08-Dec-2016 21:43
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 02-Dec-2016 Analyst: JDE		
Arsenic	1.28		0.475	mg/Kg	1	03-Dec-2016 02:51
Barium	229		2.37	mg/Kg	5	05-Dec-2016 16:41
Boron	ND		2.37	mg/Kg	1	03-Dec-2016 02:51
Cadmium	ND		0.475	mg/Kg	1	03-Dec-2016 02:51
Chromium	1.44		0.475	mg/Kg	1	03-Dec-2016 02:51
Copper	1.78		0.190	mg/Kg	1	03-Dec-2016 02:51
Lead	0.795		0.475	mg/Kg	1	03-Dec-2016 02:51
Nickel	1.83		0.475	mg/Kg	1	03-Dec-2016 02:51
Selenium	ND		0.475	mg/Kg	1	03-Dec-2016 02:51
Silver	ND		0.475	mg/Kg	1	03-Dec-2016 02:51
Zinc	3.92		0.475	mg/Kg	1	03-Dec-2016 02:51
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	25.8		3.53	ug/Kg	1	08-Dec-2016 13:14

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-7-11-12-111616
 Collection Date: 16-Nov-2016 13:30

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-23
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	4.92		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:30
Electrical Conductivity, 1:1 aqueous	2.02		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:30
Saturation % as decimal	0.410		0	mmhos/cm @25°C	1	09-Dec-2016 16:30
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.410		0.100	SP as fraction	1	07-Dec-2016 11:55
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	21.1		0.0100	wt%	1	02-Dec-2016 11:21
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 08-Dec-2016 Analyst: KVL		
Chromium, Hexavalent	ND		1.99	mg/kg	1	08-Dec-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.56	H	0.100	pH Units	1	05-Dec-2016 17:30
Temp Deg C @pH	19.5	H	0	°C	1	05-Dec-2016 17:30

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-8-1-2-111616
 Collection Date: 16-Nov-2016 13:40

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-24
 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	27-Nov-2016 02:23
Ethylbenzene	ND		4.9	ug/Kg	1	27-Nov-2016 02:23
m,p-Xylene	ND		9.8	ug/Kg	1	27-Nov-2016 02:23
o-Xylene	ND		4.9	ug/Kg	1	27-Nov-2016 02:23
Toluene	ND		4.9	ug/Kg	1	27-Nov-2016 02:23
Xylenes, Total	ND		4.9	ug/Kg	1	27-Nov-2016 02:23
Surr: 1,2-Dichloroethane-d4	104		70-128	%REC	1	27-Nov-2016 02:23
Surr: 4-Bromofluorobenzene	102		73-126	%REC	1	27-Nov-2016 02:23
Surr: Dibromofluoromethane	101		71-128	%REC	1	27-Nov-2016 02:23
Surr: Toluene-d8	111		73-127	%REC	1	27-Nov-2016 02:23
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	29-Nov-2016 01:19
Surr: 4-Bromofluorobenzene	90.8		70-130	%REC	1	29-Nov-2016 01:19
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Dec-2016 12:39
Surr: 2-Fluorobiphenyl	102		60-135	%REC	1	03-Dec-2016 12:39
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	7.31		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	1.05		0.00999	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	39.5		4.99	mg/L	10	08-Dec-2016 21:48
Magnesium	6.60		4.99	mg/L	10	08-Dec-2016 21:48
Sodium	27.0		4.99	mg/L	10	08-Dec-2016 21:48
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 02-Dec-2016 Analyst: JDE		
Arsenic	2.52		0.470	mg/Kg	1	03-Dec-2016 02:56
Barium	164		0.470	mg/Kg	1	03-Dec-2016 02:56
Boron	ND		2.35	mg/Kg	1	03-Dec-2016 02:56
Cadmium	ND		0.470	mg/Kg	1	03-Dec-2016 02:56
Chromium	7.31		0.470	mg/Kg	1	03-Dec-2016 02:56
Copper	5.11		0.188	mg/Kg	1	03-Dec-2016 02:56
Lead	6.39		0.470	mg/Kg	1	03-Dec-2016 02:56
Nickel	7.81		0.470	mg/Kg	1	03-Dec-2016 02:56
Selenium	ND		0.470	mg/Kg	1	03-Dec-2016 02:56
Silver	ND		0.470	mg/Kg	1	03-Dec-2016 02:56
Zinc	20.8		0.470	mg/Kg	1	03-Dec-2016 02:56
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	12.0		3.56	ug/Kg	1	08-Dec-2016 13:16

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-8-1-2-111616
 Collection Date: 16-Nov-2016 13:40

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-24
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	0.691		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:30
Electrical Conductivity, 1:1 aqueous	0.356		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:30
Saturation % as decimal	0.515		0	mmhos/cm @25°C	1	09-Dec-2016 16:30
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.515		0.100	SP as fraction	1	07-Dec-2016 11:55
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	16.2		0.0100	wt%	1	02-Dec-2016 11:27
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 08-Dec-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	08-Dec-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	9.20	H	0.100	pH Units	1	05-Dec-2016 17:30
Temp Deg C @pH	19.3	H	0	°C	1	05-Dec-2016 17:30

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-8-10-11-111616
 Collection Date: 16-Nov-2016 14:10

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-25
 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	27-Nov-2016 02:46
Ethylbenzene	ND		4.9	ug/Kg	1	27-Nov-2016 02:46
m,p-Xylene	ND		9.8	ug/Kg	1	27-Nov-2016 02:46
o-Xylene	ND		4.9	ug/Kg	1	27-Nov-2016 02:46
Toluene	ND		4.9	ug/Kg	1	27-Nov-2016 02:46
Xylenes, Total	ND		4.9	ug/Kg	1	27-Nov-2016 02:46
Surr: 1,2-Dichloroethane-d4	96.7		70-128	%REC	1	27-Nov-2016 02:46
Surr: 4-Bromofluorobenzene	98.8		73-126	%REC	1	27-Nov-2016 02:46
Surr: Dibromofluoromethane	102		71-128	%REC	1	27-Nov-2016 02:46
Surr: Toluene-d8	109		73-127	%REC	1	27-Nov-2016 02:46
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	29-Nov-2016 01:35
Surr: 4-Bromofluorobenzene	86.8		70-130	%REC	1	29-Nov-2016 01:35
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 28-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		2.0	mg/Kg	1	03-Dec-2016 13:03
Surr: 2-Fluorobiphenyl	86.0		60-135	%REC	1	03-Dec-2016 13:03
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	5.61		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	4.51		0.0100	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	763		5.00	mg/L	10	08-Dec-2016 21:53
Magnesium	147		5.00	mg/L	10	08-Dec-2016 21:53
Sodium	519		5.00	mg/L	10	08-Dec-2016 21:53
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 02-Dec-2016 Analyst: JDE		
Arsenic	2.06		0.478	mg/Kg	1	03-Dec-2016 03:01
Barium	265		2.39	mg/Kg	5	05-Dec-2016 17:07
Boron	3.16		2.39	mg/Kg	1	03-Dec-2016 03:01
Cadmium	ND		0.478	mg/Kg	1	03-Dec-2016 03:01
Chromium	5.61		0.478	mg/Kg	1	03-Dec-2016 03:01
Copper	4.09		0.191	mg/Kg	1	03-Dec-2016 03:01
Lead	4.38		0.478	mg/Kg	1	03-Dec-2016 03:01
Nickel	6.23		0.478	mg/Kg	1	03-Dec-2016 03:01
Selenium	ND		0.478	mg/Kg	1	03-Dec-2016 03:01
Silver	ND		0.478	mg/Kg	1	03-Dec-2016 03:01
Zinc	16.2		0.478	mg/Kg	1	03-Dec-2016 03:01
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	14.5		3.55	ug/Kg	1	08-Dec-2016 13:18

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-8-10-11-111616
 Collection Date: 16-Nov-2016 14:10

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-25
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	16.0		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:30
Electrical Conductivity, 1:1 aqueous	8.58		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:30
Saturation % as decimal	0.538		0	mmhos/cm @25°C	1	09-Dec-2016 16:30
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.538		0.100	SP as fraction	1	07-Dec-2016 11:55
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	13.4		0.0100	wt%	1	02-Dec-2016 11:27
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 08-Dec-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	08-Dec-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.10	H	0.100	pH Units	1	05-Dec-2016 17:30
Temp Deg C @pH	19.2	H	0	°C	1	05-Dec-2016 17:30

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-8-12-13-111616
 Collection Date: 16-Nov-2016 14:15

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-26
 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	27-Nov-2016 03:09
Ethylbenzene	ND		4.9	ug/Kg	1	27-Nov-2016 03:09
m,p-Xylene	ND		9.8	ug/Kg	1	27-Nov-2016 03:09
o-Xylene	ND		4.9	ug/Kg	1	27-Nov-2016 03:09
Toluene	ND		4.9	ug/Kg	1	27-Nov-2016 03:09
Xylenes, Total	ND		4.9	ug/Kg	1	27-Nov-2016 03:09
Surr: 1,2-Dichloroethane-d4	98.1		70-128	%REC	1	27-Nov-2016 03:09
Surr: 4-Bromofluorobenzene	102		73-126	%REC	1	27-Nov-2016 03:09
Surr: Dibromofluoromethane	104		71-128	%REC	1	27-Nov-2016 03:09
Surr: Toluene-d8	114		73-127	%REC	1	27-Nov-2016 03:09
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	29-Nov-2016 01:51
Surr: 4-Bromofluorobenzene	86.6		70-130	%REC	1	29-Nov-2016 01:51
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 29-Nov-2016 Analyst: AAP		
TPH (Diesel Range)	ND		1.7	mg/Kg	1	02-Dec-2016 03:51
Surr: 2-Fluorobiphenyl	91.3		60-135	%REC	1	02-Dec-2016 03:51
TRIVALENT CHROMIUM		Method:Calculation		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	09-Dec-2016 12:43
LA29B SODIUM ADSORPTION RATIO		Method:La29B SAR		Prep:La29B-6020 / 06-Dec-2016 Analyst: DQ		
Sodium Adsorption Ratio	35.7		0.0100	meq/meq	1	09-Dec-2016 16:09
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		Method:La29B-6020		Prep:La29B-6020 / 06-Dec-2016 Analyst: JCJ		
Calcium	95.4		5.00	mg/L	10	08-Dec-2016 22:02
Magnesium	19.2		5.00	mg/L	10	08-Dec-2016 22:02
Sodium	1,460		5.00	mg/L	10	08-Dec-2016 22:02
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 02-Dec-2016 Analyst: JDE		
Arsenic	9.37		0.464	mg/Kg	1	03-Dec-2016 03:07
Barium	272		2.32	mg/Kg	5	05-Dec-2016 17:11
Boron	2.46		2.32	mg/Kg	1	03-Dec-2016 03:07
Cadmium	ND		0.464	mg/Kg	1	03-Dec-2016 03:07
Chromium	1.70		0.464	mg/Kg	1	03-Dec-2016 03:07
Copper	2.63		0.185	mg/Kg	1	03-Dec-2016 03:07
Lead	7.81		0.464	mg/Kg	1	03-Dec-2016 03:07
Nickel	4.39		0.464	mg/Kg	1	03-Dec-2016 03:07
Selenium	ND		0.464	mg/Kg	1	03-Dec-2016 03:07
Silver	ND		0.464	mg/Kg	1	03-Dec-2016 03:07
Zinc	10.8		0.464	mg/Kg	1	03-Dec-2016 03:07
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 06-Dec-2016 Analyst: JCJ		
Mercury	74.0		3.39	ug/Kg	1	08-Dec-2016 13:19

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 Sample ID: GP-15-8-12-13-111616
 Collection Date: 16-Nov-2016 14:15

ANALYTICAL REPORT

WorkOrder:HS16111109
 Lab ID:HS16111109-26
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B ELECTRICAL CONDUCTIVITY		Method:LaDNR-29B EC		Analyst: KMU		
Electrical Conductivity @ saturation	23.4		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:30
Electrical Conductivity, 1:1 aqueous	8.26		0.0100	mmhos/cm @25°C	1	09-Dec-2016 16:30
Saturation % as decimal	0.353		0	mmhos/cm @25°C	1	09-Dec-2016 16:30
LA29B SATURATION POINT (AS FRACTION)		Method:LaDNR-29B SP		Analyst: KAH		
Saturation Point	0.353		0.100	SP as fraction	1	07-Dec-2016 11:55
MOISTURE		Method:SW3550		Analyst: DFF		
Percent Moisture	14.3		0.0100	wt%	1	02-Dec-2016 11:27
HEXAVALENT CHROMIUM BY SW7196A		Method:SW7196		Prep:SW3060A / 08-Dec-2016 Analyst: KVL		
Chromium, Hexavalent	ND		2.00	mg/kg	1	08-Dec-2016 15:00
PH SOIL BY SW9045D		Method:SW9045B		Analyst: SAP		
pH	8.80	H	0.100	pH Units	1	05-Dec-2016 17:30
Temp Deg C @pH	19.5	H	0	°C	1	05-Dec-2016 17:30

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Sample ID: TRIP BLANK 082916-97
Collection Date: 16-Nov-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16111109
Lab ID:HS16111109-27
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	26-Nov-2016 12:49
Ethylbenzene	ND		1.0	ug/L	1	26-Nov-2016 12:49
m,p-Xylene	ND		2.0	ug/L	1	26-Nov-2016 12:49
o-Xylene	ND		1.0	ug/L	1	26-Nov-2016 12:49
Toluene	ND		1.0	ug/L	1	26-Nov-2016 12:49
Xylenes, Total	ND		1.0	ug/L	1	26-Nov-2016 12:49
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>99.0</i>		<i>71-125</i>	<i>%REC</i>	<i>1</i>	<i>26-Nov-2016 12:49</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>99.1</i>		<i>70-125</i>	<i>%REC</i>	<i>1</i>	<i>26-Nov-2016 12:49</i>
<i>Surr: Dibromofluoromethane</i>	<i>99.9</i>		<i>74-125</i>	<i>%REC</i>	<i>1</i>	<i>26-Nov-2016 12:49</i>
<i>Surr: Toluene-d8</i>	<i>101</i>		<i>75-125</i>	<i>%REC</i>	<i>1</i>	<i>26-Nov-2016 12:49</i>

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

WEIGHT LOG

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

Batch ID: 1400 **Method:** VOLATILES BY SW8260C

SamplID	Container	Sample Wt/Vol	Final Volume	Weight Factor	Container Type
HS16111109-01	1	5.21 (g)	5 (mL)	0.96	TerraCore (5035A)
HS16111109-02	1	5.21 (g)	5 (mL)	0.96	TerraCore (5035A)
HS16111109-03	1	5.077 (g)	5 (mL)	0.98	TerraCore (5035A)
HS16111109-04	1	5.135 (g)	5 (mL)	0.97	TerraCore (5035A)
HS16111109-05	1	5.06 (g)	5 (mL)	0.99	TerraCore (5035A)
HS16111109-06	1	4.933 (g)	5 (mL)	1.01	TerraCore (5035A)
HS16111109-07	1	5.077 (g)	5 (mL)	0.98	TerraCore (5035A)
HS16111109-08	1	5.192 (g)	5 (mL)	0.96	TerraCore (5035A)
HS16111109-10	1	5.033 (g)	5 (mL)	0.99	TerraCore (5035A)
HS16111109-11	1	5.074 (g)	5 (mL)	0.99	TerraCore (5035A)
HS16111109-12	1	5.015 (g)	5 (mL)	1	TerraCore (5035A)
HS16111109-13	1	5.026 (g)	5 (mL)	0.99	TerraCore (5035A)
HS16111109-14	1	5.155 (g)	5 (mL)	0.97	TerraCore (5035A)
HS16111109-15	1	5.136 (g)	5 (mL)	0.97	TerraCore (5035A)
HS16111109-16	1	5.007 (g)	5 (mL)	1	TerraCore (5035A)
HS16111109-17	1	5.194 (g)	5 (mL)	0.96	TerraCore (5035A)
HS16111109-19	1	5.221 (g)	5 (mL)	0.96	TerraCore (5035A)
HS16111109-20	1	5.254 (g)	5 (mL)	0.95	TerraCore (5035A)
HS16111109-21	1	5.087 (g)	5 (mL)	0.98	TerraCore (5035A)
HS16111109-22	1	5.02 (g)	5 (mL)	1	TerraCore (5035A)
HS16111109-23	1	5.048 (g)	5 (mL)	0.99	TerraCore (5035A)
HS16111109-24	1	5.096 (g)	5 (mL)	0.98	TerraCore (5035A)
HS16111109-25	1	5.113 (g)	5 (mL)	0.98	TerraCore (5035A)
HS16111109-26	1	5.089 (g)	5 (mL)	0.98	TerraCore (5035A)

Batch ID: 1405 **Method:** GASOLINE RANGE ORGANICS BY SW8015C **Prep:**

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS16111109-01	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS16111109-02	1	5 (g)	5 (mL)	1	Bulk (5030B)
HS16111109-03	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16111109-04	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16111109-05	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16111109-06	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16111109-07	1	5.02 (g)	5 (mL)	1	Bulk (5030B)
HS16111109-08	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16111109-10	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS16111109-11	1	5.02 (g)	5 (mL)	1	Bulk (5030B)
HS16111109-12	1	5.05 (g)	5 (mL)	0.99	Bulk (5030B)
HS16111109-13	1	5.05 (g)	5 (mL)	0.99	Bulk (5030B)

WEIGHT LOG

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

Batch ID: 1406 **Method:** GASOLINE RANGE ORGANICS BY SW8015C **Prep:**

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS16111109-14	1	5.04 (g)	5 (mL)	0.99	Bulk (5030B)
HS16111109-15	1	5.04 (g)	5 (mL)	0.99	Bulk (5030B)
HS16111109-16	1	5 (g)	5 (mL)	1	Bulk (5030B)
HS16111109-17	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16111109-19	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16111109-20	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16111109-21	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS16111109-22	1	5.02 (g)	5 (mL)	1	Bulk (5030B)
HS16111109-23	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16111109-24	1	5.02 (g)	5 (mL)	1	Bulk (5030B)
HS16111109-25	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS16111109-26	1	5.04 (g)	5 (mL)	0.99	Bulk (5030B)

Batch ID: 110176 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS16111109-01	1	30.01	1 (mL)	0.03332	
HS16111109-02	1	30.05	1 (mL)	0.03328	
HS16111109-03	1	30.08	1 (mL)	0.03324	

Batch ID: 110188 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS16111109-04	1	30.07	1 (mL)	0.03326	
HS16111109-05	1	30.09	1 (mL)	0.03323	
HS16111109-06	1	30.01	1 (mL)	0.03332	
HS16111109-07	1	30.05	1 (mL)	0.03328	
HS16111109-08	1	30.02	1 (mL)	0.03331	
HS16111109-10	1	30.06	1 (mL)	0.03327	
HS16111109-11	1	30.09	1 (mL)	0.03323	
HS16111109-12	1	30.01	1 (mL)	0.03332	
HS16111109-13	1	30.08	1 (mL)	0.03324	
HS16111109-14	1	30.03	1 (mL)	0.0333	
HS16111109-15	1	30.06	1 (mL)	0.03327	
HS16111109-16	1	30.02	1 (mL)	0.03331	
HS16111109-17	1	30.07	1 (mL)	0.03326	
HS16111109-19	1	30.1	1 (mL)	0.03322	
HS16111109-20	1	30.06	1 (mL)	0.03327	
HS16111109-21	1	25.01	1 (mL)	0.03998	
HS16111109-22	1	30.03	1 (mL)	0.0333	
HS16111109-23	1	30.09	1 (mL)	0.03323	
HS16111109-24	1	30.07	1 (mL)	0.03326	
HS16111109-25	1	25.03	1 (mL)	0.03995	

Batch ID: 110253 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS16111109-26	1	30.05	1 (mL)	0.03328	

WEIGHT LOG

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

Batch ID: 110296 **Method:** HEXAVALENT CHROMIUM BY SW7196A **Prep:** CR6_S_PR3060A

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16111109-01	1	2.5334	100 (mL)	39.47
HS16111109-02	1	2.5056	100 (mL)	39.91
HS16111109-03	1	2.5386	100 (mL)	39.39
HS16111109-04	1	2.5237	100 (mL)	39.62
HS16111109-05	1	2.5032	100 (mL)	39.95
HS16111109-06	1	2.5074	100 (mL)	39.88
HS16111109-07	1	2.5185	100 (mL)	39.71
HS16111109-08	1	2.5215	100 (mL)	39.66
HS16111109-10	1	2.5057	100 (mL)	39.91
HS16111109-11	1	2.5246	100 (mL)	39.61
HS16111109-12	1	2.5283	100 (mL)	39.55

Batch ID: 110361 **Method:** METALS BY SW6020A **Prep:** 3050_I_LOW

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16111109-01	1	0.5242	50 (mL)	95.38
HS16111109-02	1	0.5466	50 (mL)	91.47
HS16111109-03	1	0.5241	50 (mL)	95.4
HS16111109-04	1	0.5382	50 (mL)	92.9
HS16111109-05	1	0.5442	50 (mL)	91.88
HS16111109-06	1	0.5341	50 (mL)	93.62
HS16111109-07	1	0.5441	50 (mL)	91.89
HS16111109-08	1	0.5367	50 (mL)	93.16
HS16111109-10	1	0.5224	50 (mL)	95.71
HS16111109-11	1	0.5192	50 (mL)	96.3
HS16111109-12	1	0.5417	50 (mL)	92.3
HS16111109-13	1	0.5279	50 (mL)	94.71
HS16111109-14	1	0.5478	50 (mL)	91.27
HS16111109-15	1	0.5469	50 (mL)	91.42
HS16111109-16	1	0.5239	50 (mL)	95.44
HS16111109-17	1	0.5289	50 (mL)	94.54
HS16111109-19	1	0.5359	50 (mL)	93.3
HS16111109-20	1	0.5238	50 (mL)	95.46

Batch ID: 110383 **Method:** METALS BY SW6020A **Prep:** 3050_I_LOW

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16111109-21	1	0.5209	50 (mL)	95.99
HS16111109-22	1	0.5226	50 (mL)	95.68
HS16111109-23	1	0.5266	50 (mL)	94.95
HS16111109-24	1	0.5319	50 (mL)	94
HS16111109-25	1	0.5229	50 (mL)	95.62
HS16111109-26	1	0.5391	50 (mL)	92.75

WEIGHT LOG

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

Batch ID: 110398 **Method:** HEXAVALENT CHROMIUM BY SW7196A **Prep:** CR6_S_PR3060A

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16111109-13	1	2.5023	100 (mL)	39.96
HS16111109-14	1	2.5002	100 (mL)	40
HS16111109-15	1	2.5154	100 (mL)	39.76
HS16111109-16	1	2.5027	100 (mL)	39.96
HS16111109-17	1	2.5014	100 (mL)	39.98
HS16111109-19	1	2.5033	100 (mL)	39.95
HS16111109-20	1	2.5081	100 (mL)	39.87

Batch ID: 110478 **Method:** MERCURY BY SW7471B **Prep:** HG_S_LOWPR

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16111109-01	1	0.5629	40 (mL)	71.06
HS16111109-02	1	0.5603	40 (mL)	71.39
HS16111109-03	1	0.5627	40 (mL)	71.09
HS16111109-04	1	0.5573	40 (mL)	71.77
HS16111109-05	1	0.5694	40 (mL)	70.25
HS16111109-06	1	0.5735	40 (mL)	69.75
HS16111109-07	1	0.5678	40 (mL)	70.45
HS16111109-08	1	0.5671	40 (mL)	70.53
HS16111109-10	1	0.5716	40 (mL)	69.98
HS16111109-11	1	0.5658	40 (mL)	70.7
HS16111109-12	1	0.5673	40 (mL)	70.51
HS16111109-13	1	0.5771	40 (mL)	69.31
HS16111109-14	1	0.5868	40 (mL)	68.17
HS16111109-15	1	0.5594	40 (mL)	71.51
HS16111109-16	1	0.5638	40 (mL)	70.95
HS16111109-17	1	0.5711	40 (mL)	70.04

Batch ID: 110479 **Method:** MERCURY BY SW7471B **Prep:** HG_S_LOWPR

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16111109-19	1	0.5602	40 (mL)	71.4
HS16111109-20	1	0.5696	40 (mL)	70.22
HS16111109-21	1	0.5899	40 (mL)	67.81
HS16111109-22	1	0.5557	40 (mL)	71.98
HS16111109-23	1	0.5653	40 (mL)	70.76
HS16111109-24	1	0.5599	40 (mL)	71.44
HS16111109-25	1	0.5617	40 (mL)	71.21
HS16111109-26	1	0.5889	40 (mL)	67.92

Batch ID: 110541 **Method:** HEXAVALENT CHROMIUM BY SW7196A **Prep:** CR6_S_PR3060A

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16111109-21	1	2.5064	100 (mL)	39.9
HS16111109-22	1	2.5096	100 (mL)	39.85
HS16111109-23	1	2.5073	100 (mL)	39.88
HS16111109-24	1	2.4993	100 (mL)	40.01
HS16111109-25	1	2.5016	100 (mL)	39.97
HS16111109-26	1	2.496	100 (mL)	40.06

WEIGHT LOG

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

Batch ID: 110550 **Method:** LA29B SODIUM ADSORPTION RATIO **Prep:** LA29B SAR CATPR

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16111109-01	1	75.0968	75 (mL)	0.9987
HS16111109-02	1	75.0598	75 (mL)	0.9992
HS16111109-03	1	75.0108	75 (mL)	0.9999
HS16111109-04	1	75.0007	75 (mL)	1
HS16111109-05	1	75.04	75 (mL)	0.9995
HS16111109-06	1	75.027	75 (mL)	0.9996
HS16111109-07	1	75.0195	75 (mL)	0.9997
HS16111109-08	1	75.008	75 (mL)	0.9999
HS16111109-10	1	75.0778	75 (mL)	0.999
HS16111109-11	1	75.0083	75 (mL)	0.9999
HS16111109-12	1	75.0139	75 (mL)	0.9998
HS16111109-13	1	75.0668	75 (mL)	0.9991
HS16111109-14	1	75.0717	75 (mL)	0.999
HS16111109-15	1	75.0211	75 (mL)	0.9997
HS16111109-16	1	75.0081	75 (mL)	0.9999
HS16111109-17	1	75.0077	75 (mL)	0.9999
HS16111109-19	1	75.039	75 (mL)	0.9995
HS16111109-20	1	75.0733	75 (mL)	0.999
HS16111109-21	1	75.0665	75 (mL)	0.9991
HS16111109-22	1	75.0234	75 (mL)	0.9997
HS16111109-01	1	75.0968	75 (mL)	0.9987
HS16111109-02	1	75.0598	75 (mL)	0.9992
HS16111109-03	1	75.0108	75 (mL)	0.9999
HS16111109-04	1	75.0007	75 (mL)	1
HS16111109-05	1	75.04	75 (mL)	0.9995
HS16111109-06	1	75.027	75 (mL)	0.9996
HS16111109-07	1	75.0195	75 (mL)	0.9997
HS16111109-08	1	75.008	75 (mL)	0.9999
HS16111109-10	1	75.0778	75 (mL)	0.999
HS16111109-11	1	75.0083	75 (mL)	0.9999
HS16111109-12	1	75.0139	75 (mL)	0.9998
HS16111109-13	1	75.0668	75 (mL)	0.9991
HS16111109-14	1	75.0717	75 (mL)	0.999
HS16111109-15	1	75.0211	75 (mL)	0.9997
HS16111109-16	1	75.0081	75 (mL)	0.9999
HS16111109-17	1	75.0077	75 (mL)	0.9999
HS16111109-19	1	75.039	75 (mL)	0.9995
HS16111109-20	1	75.0733	75 (mL)	0.999
HS16111109-21	1	75.0665	75 (mL)	0.9991
HS16111109-22	1	75.0234	75 (mL)	0.9997

Batch ID: 110551 **Method:** LA29B SODIUM ADSORPTION RATIO **Prep:** LA29B SAR CATPR

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16111109-23	1	75.0411	75 (mL)	0.9995
HS16111109-24	1	75.0772	75 (mL)	0.999
HS16111109-25	1	75.0029	75 (mL)	1
HS16111109-26	1	75.0363	75 (mL)	0.9995
HS16111109-23	1	75.0411	75 (mL)	0.9995
HS16111109-24	1	75.0772	75 (mL)	0.999
HS16111109-25	1	75.0029	75 (mL)	1
HS16111109-26	1	75.0363	75 (mL)	0.9995

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 110176 Test Name : TPH DRO/ORO BY SW8015C Matrix: Soil						
HS16111109-01	GP-15-1-1-2-111616	16 Nov 2016 08:50		26 Nov 2016 11:30	29 Nov 2016 12:21	1
HS16111109-02	GP-15-1-9-10-111616	16 Nov 2016 09:00		26 Nov 2016 11:30	29 Nov 2016 12:45	1
HS16111109-03	GP-15-1-13-14-111616	16 Nov 2016 09:15		26 Nov 2016 11:30	29 Nov 2016 14:48	1
Batch ID 110188 Test Name : TPH DRO/ORO BY SW8015C Matrix: Soil						
HS16111109-04	GP-15-2-1-2-111616	16 Nov 2016 09:20		28 Nov 2016 09:13	03 Dec 2016 03:43	1
HS16111109-05	GP-15-2-7-8-111616	16 Nov 2016 09:30		28 Nov 2016 09:13	03 Dec 2016 04:56	1
HS16111109-06	GP-15-2-10-11-111616	16 Nov 2016 09:45		28 Nov 2016 09:13	03 Dec 2016 05:21	1
HS16111109-07	GP-15-3-0-1-111616	16 Nov 2016 10:00		28 Nov 2016 09:13	03 Dec 2016 05:45	1
HS16111109-08	GP-15-3-5-6-111616	16 Nov 2016 10:10		28 Nov 2016 09:13	03 Dec 2016 06:09	1
HS16111109-10	GP-15-3-11-12-111616	16 Nov 2016 10:20		28 Nov 2016 09:13	03 Dec 2016 06:34	1
HS16111109-11	GP-15-4-0-1-111616	16 Nov 2016 10:30		28 Nov 2016 09:13	03 Dec 2016 07:47	1
HS16111109-12	GP-15-4-5-6-111616	16 Nov 2016 10:40		28 Nov 2016 09:13	03 Dec 2016 08:11	1
HS16111109-13	GP-15-4-11-12-111616	16 Nov 2016 11:00		28 Nov 2016 09:13	03 Dec 2016 08:36	1
HS16111109-14	GP-15-5-2-3-111616	16 Nov 2016 11:15		28 Nov 2016 09:13	03 Dec 2016 09:00	1
HS16111109-15	GP-15-5-4-5-111616	16 Nov 2016 11:20		28 Nov 2016 09:13	03 Dec 2016 09:24	1
HS16111109-16	GP-15-5-12-13-111616	16 Nov 2016 11:45		28 Nov 2016 09:13	03 Dec 2016 09:49	1
HS16111109-17	GP-15-6-1-2-111616	16 Nov 2016 12:30		28 Nov 2016 09:13	03 Dec 2016 10:13	1
HS16111109-19	GP-15-6-4-5-111616	16 Nov 2016 12:40		28 Nov 2016 09:13	03 Dec 2016 10:37	1
HS16111109-20	GP-15-6-10-11-111616	16 Nov 2016 12:50		28 Nov 2016 09:13	03 Dec 2016 11:01	1
HS16111109-21	GP-15-7-2-3-111616	16 Nov 2016 13:00		28 Nov 2016 09:13	03 Dec 2016 11:26	1
HS16111109-22	GP-15-7-5-6-111616	16 Nov 2016 13:15		28 Nov 2016 09:13	03 Dec 2016 11:50	1
HS16111109-23	GP-15-7-11-12-111616	16 Nov 2016 13:30		28 Nov 2016 09:13	03 Dec 2016 12:15	1
HS16111109-24	GP-15-8-1-2-111616	16 Nov 2016 13:40		28 Nov 2016 09:13	03 Dec 2016 12:39	1
HS16111109-25	GP-15-8-10-11-111616	16 Nov 2016 14:10		28 Nov 2016 09:13	03 Dec 2016 13:03	1
Batch ID 110253 Test Name : TPH DRO/ORO BY SW8015C Matrix: Soil						
HS16111109-26	GP-15-8-12-13-111616	16 Nov 2016 14:15		29 Nov 2016 13:57	02 Dec 2016 03:51	1
Batch ID 110296 Test Name : HEXAVALENT CHROMIUM BY SW7196A Matrix: Soil						
HS16111109-01	GP-15-1-1-2-111616	16 Nov 2016 08:50		30 Nov 2016 11:28	01 Dec 2016 19:25	1
HS16111109-02	GP-15-1-9-10-111616	16 Nov 2016 09:00		30 Nov 2016 11:28	01 Dec 2016 19:25	1
HS16111109-03	GP-15-1-13-14-111616	16 Nov 2016 09:15		30 Nov 2016 11:28	01 Dec 2016 19:25	1
HS16111109-04	GP-15-2-1-2-111616	16 Nov 2016 09:20		30 Nov 2016 11:28	01 Dec 2016 19:25	1
HS16111109-05	GP-15-2-7-8-111616	16 Nov 2016 09:30		30 Nov 2016 11:28	01 Dec 2016 19:25	1
HS16111109-06	GP-15-2-10-11-111616	16 Nov 2016 09:45		30 Nov 2016 11:28	01 Dec 2016 19:25	1
HS16111109-07	GP-15-3-0-1-111616	16 Nov 2016 10:00		30 Nov 2016 11:28	01 Dec 2016 19:25	1
HS16111109-08	GP-15-3-5-6-111616	16 Nov 2016 10:10		30 Nov 2016 11:28	01 Dec 2016 19:25	1
HS16111109-10	GP-15-3-11-12-111616	16 Nov 2016 10:20		30 Nov 2016 11:28	01 Dec 2016 19:25	1
HS16111109-11	GP-15-4-0-1-111616	16 Nov 2016 10:30		30 Nov 2016 11:28	01 Dec 2016 19:25	1
HS16111109-12	GP-15-4-5-6-111616	16 Nov 2016 10:40		30 Nov 2016 11:28	01 Dec 2016 19:25	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 110361	Test Name : METALS BY SW6020A			Matrix: Soil		
HS16111109-01	GP-15-1-1-2-111616	16 Nov 2016 08:50		01 Dec 2016 18:17	02 Dec 2016 22:26	1
HS16111109-02	GP-15-1-9-10-111616	16 Nov 2016 09:00		01 Dec 2016 18:17	05 Dec 2016 14:51	5
HS16111109-02	GP-15-1-9-10-111616	16 Nov 2016 09:00		01 Dec 2016 18:17	02 Dec 2016 22:31	1
HS16111109-03	GP-15-1-13-14-111616	16 Nov 2016 09:15		01 Dec 2016 18:17	05 Dec 2016 15:04	5
HS16111109-03	GP-15-1-13-14-111616	16 Nov 2016 09:15		01 Dec 2016 18:17	02 Dec 2016 22:55	1
HS16111109-04	GP-15-2-1-2-111616	16 Nov 2016 09:20		01 Dec 2016 18:17	05 Dec 2016 15:37	1
HS16111109-05	GP-15-2-7-8-111616	16 Nov 2016 09:30		01 Dec 2016 18:17	05 Dec 2016 15:42	1
HS16111109-05	GP-15-2-7-8-111616	16 Nov 2016 09:30		01 Dec 2016 18:17	05 Dec 2016 15:20	5
HS16111109-06	GP-15-2-10-11-111616	16 Nov 2016 09:45		01 Dec 2016 18:17	05 Dec 2016 16:05	1
HS16111109-06	GP-15-2-10-11-111616	16 Nov 2016 09:45		01 Dec 2016 18:17	05 Dec 2016 15:24	5
HS16111109-07	GP-15-3-0-1-111616	16 Nov 2016 10:00		01 Dec 2016 18:17	05 Dec 2016 16:09	1
HS16111109-08	GP-15-3-5-6-111616	16 Nov 2016 10:10		01 Dec 2016 18:17	05 Dec 2016 16:14	1
HS16111109-10	GP-15-3-11-12-111616	16 Nov 2016 10:20		01 Dec 2016 18:17	05 Dec 2016 16:18	1
HS16111109-11	GP-15-4-0-1-111616	16 Nov 2016 10:30		01 Dec 2016 18:17	05 Dec 2016 16:23	1
HS16111109-11	GP-15-4-0-1-111616	16 Nov 2016 10:30		01 Dec 2016 18:17	05 Dec 2016 15:29	5
HS16111109-12	GP-15-4-5-6-111616	16 Nov 2016 10:40		01 Dec 2016 18:17	05 Dec 2016 16:27	1
HS16111109-12	GP-15-4-5-6-111616	16 Nov 2016 10:40		01 Dec 2016 18:17	05 Dec 2016 15:33	5
HS16111109-13	GP-15-4-11-12-111616	16 Nov 2016 11:00		01 Dec 2016 18:17	05 Dec 2016 16:32	5
HS16111109-14	GP-15-5-2-3-111616	16 Nov 2016 11:15		01 Dec 2016 18:17	03 Dec 2016 01:26	1
HS16111109-15	GP-15-5-4-5-111616	16 Nov 2016 11:20		01 Dec 2016 18:17	05 Dec 2016 15:46	5
HS16111109-15	GP-15-5-4-5-111616	16 Nov 2016 11:20		01 Dec 2016 18:17	03 Dec 2016 01:32	1
HS16111109-16	GP-15-5-12-13-111616	16 Nov 2016 11:45		01 Dec 2016 18:17	05 Dec 2016 15:51	10
HS16111109-16	GP-15-5-12-13-111616	16 Nov 2016 11:45		01 Dec 2016 18:17	03 Dec 2016 01:37	1
HS16111109-17	GP-15-6-1-2-111616	16 Nov 2016 12:30		01 Dec 2016 18:17	03 Dec 2016 01:42	1
HS16111109-19	GP-15-6-4-5-111616	16 Nov 2016 12:40		01 Dec 2016 18:17	03 Dec 2016 01:47	1
HS16111109-20	GP-15-6-10-11-111616	16 Nov 2016 12:50		01 Dec 2016 18:17	05 Dec 2016 16:36	5
HS16111109-20	GP-15-6-10-11-111616	16 Nov 2016 12:50		01 Dec 2016 18:17	03 Dec 2016 01:53	1
Batch ID 110383	Test Name : METALS BY SW6020A			Matrix: Soil		
HS16111109-21	GP-15-7-2-3-111616	16 Nov 2016 13:00		02 Dec 2016 12:06	03 Dec 2016 02:40	1
HS16111109-22	GP-15-7-5-6-111616	16 Nov 2016 13:15		02 Dec 2016 12:06	03 Dec 2016 02:45	1
HS16111109-23	GP-15-7-11-12-111616	16 Nov 2016 13:30		02 Dec 2016 12:06	05 Dec 2016 16:41	5
HS16111109-23	GP-15-7-11-12-111616	16 Nov 2016 13:30		02 Dec 2016 12:06	03 Dec 2016 02:51	1
HS16111109-24	GP-15-8-1-2-111616	16 Nov 2016 13:40		02 Dec 2016 12:06	03 Dec 2016 02:56	1
HS16111109-25	GP-15-8-10-11-111616	16 Nov 2016 14:10		02 Dec 2016 12:06	05 Dec 2016 17:07	5
HS16111109-25	GP-15-8-10-11-111616	16 Nov 2016 14:10		02 Dec 2016 12:06	03 Dec 2016 03:01	1
HS16111109-26	GP-15-8-12-13-111616	16 Nov 2016 14:15		02 Dec 2016 12:06	05 Dec 2016 17:11	5
HS16111109-26	GP-15-8-12-13-111616	16 Nov 2016 14:15		02 Dec 2016 12:06	03 Dec 2016 03:07	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 110398 Test Name : HEXAVALENT CHROMIUM BY SW7196A Matrix: Soil						
HS16111109-13	GP-15-4-11-12-111616	16 Nov 2016 11:00		05 Dec 2016 09:40	05 Dec 2016 16:30	1
HS16111109-14	GP-15-5-2-3-111616	16 Nov 2016 11:15		05 Dec 2016 09:40	05 Dec 2016 16:30	1
HS16111109-15	GP-15-5-4-5-111616	16 Nov 2016 11:20		05 Dec 2016 09:40	05 Dec 2016 16:30	1
HS16111109-16	GP-15-5-12-13-111616	16 Nov 2016 11:45		05 Dec 2016 09:40	05 Dec 2016 16:30	1
HS16111109-17	GP-15-6-1-2-111616	16 Nov 2016 12:30		05 Dec 2016 09:40	05 Dec 2016 16:30	1
HS16111109-19	GP-15-6-4-5-111616	16 Nov 2016 12:40		05 Dec 2016 09:40	05 Dec 2016 16:30	1
HS16111109-20	GP-15-6-10-11-111616	16 Nov 2016 12:50		05 Dec 2016 09:40	05 Dec 2016 16:30	1
Batch ID 110478 Test Name : MERCURY BY SW7471B Matrix: Soil						
HS16111109-01	GP-15-1-1-2-111616	16 Nov 2016 08:50		06 Dec 2016 14:48	08 Dec 2016 10:52	1
HS16111109-02	GP-15-1-9-10-111616	16 Nov 2016 09:00		06 Dec 2016 14:48	08 Dec 2016 10:54	1
HS16111109-03	GP-15-1-13-14-111616	16 Nov 2016 09:15		06 Dec 2016 14:48	08 Dec 2016 10:56	1
HS16111109-04	GP-15-2-1-2-111616	16 Nov 2016 09:20		06 Dec 2016 14:48	08 Dec 2016 10:57	1
HS16111109-05	GP-15-2-7-8-111616	16 Nov 2016 09:30		06 Dec 2016 14:48	08 Dec 2016 10:59	1
HS16111109-06	GP-15-2-10-11-111616	16 Nov 2016 09:45		06 Dec 2016 14:48	08 Dec 2016 11:01	1
HS16111109-07	GP-15-3-0-1-111616	16 Nov 2016 10:00		06 Dec 2016 14:48	08 Dec 2016 11:02	1
HS16111109-08	GP-15-3-5-6-111616	16 Nov 2016 10:10		06 Dec 2016 14:48	08 Dec 2016 11:04	1
HS16111109-10	GP-15-3-11-12-111616	16 Nov 2016 10:20		06 Dec 2016 14:48	08 Dec 2016 11:14	1
HS16111109-11	GP-15-4-0-1-111616	16 Nov 2016 10:30		06 Dec 2016 14:48	08 Dec 2016 11:16	1
HS16111109-12	GP-15-4-5-6-111616	16 Nov 2016 10:40		06 Dec 2016 14:48	08 Dec 2016 11:18	1
HS16111109-13	GP-15-4-11-12-111616	16 Nov 2016 11:00		06 Dec 2016 14:48	08 Dec 2016 11:19	1
HS16111109-14	GP-15-5-2-3-111616	16 Nov 2016 11:15		06 Dec 2016 14:48	08 Dec 2016 11:25	1
HS16111109-15	GP-15-5-4-5-111616	16 Nov 2016 11:20		06 Dec 2016 14:48	08 Dec 2016 11:26	1
HS16111109-16	GP-15-5-12-13-111616	16 Nov 2016 11:45		06 Dec 2016 14:48	08 Dec 2016 11:28	1
HS16111109-17	GP-15-6-1-2-111616	16 Nov 2016 12:30		06 Dec 2016 14:48	08 Dec 2016 11:30	1
Batch ID 110479 Test Name : MERCURY BY SW7471B Matrix: Soil						
HS16111109-19	GP-15-6-4-5-111616	16 Nov 2016 12:40		06 Dec 2016 14:51	08 Dec 2016 12:57	1
HS16111109-20	GP-15-6-10-11-111616	16 Nov 2016 12:50		06 Dec 2016 14:51	08 Dec 2016 13:02	1
HS16111109-21	GP-15-7-2-3-111616	16 Nov 2016 13:00		06 Dec 2016 14:51	08 Dec 2016 13:11	1
HS16111109-22	GP-15-7-5-6-111616	16 Nov 2016 13:15		06 Dec 2016 14:51	08 Dec 2016 13:13	1
HS16111109-23	GP-15-7-11-12-111616	16 Nov 2016 13:30		06 Dec 2016 14:51	08 Dec 2016 13:14	1
HS16111109-24	GP-15-8-1-2-111616	16 Nov 2016 13:40		06 Dec 2016 14:51	08 Dec 2016 13:16	1
HS16111109-25	GP-15-8-10-11-111616	16 Nov 2016 14:10		06 Dec 2016 14:51	08 Dec 2016 13:18	1
HS16111109-26	GP-15-8-12-13-111616	16 Nov 2016 14:15		06 Dec 2016 14:51	08 Dec 2016 13:19	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 110541	Test Name : HEXAVALENT CHROMIUM BY SW7196A			Matrix: Soil		
HS16111109-21	GP-15-7-2-3-111616	16 Nov 2016 13:00		08 Dec 2016 09:43	08 Dec 2016 15:00	1
HS16111109-22	GP-15-7-5-6-111616	16 Nov 2016 13:15		08 Dec 2016 09:43	08 Dec 2016 15:00	1
HS16111109-23	GP-15-7-11-12-111616	16 Nov 2016 13:30		08 Dec 2016 09:43	08 Dec 2016 15:00	1
HS16111109-24	GP-15-8-1-2-111616	16 Nov 2016 13:40		08 Dec 2016 09:43	08 Dec 2016 15:00	1
HS16111109-25	GP-15-8-10-11-111616	16 Nov 2016 14:10		08 Dec 2016 09:43	08 Dec 2016 15:00	1
HS16111109-26	GP-15-8-12-13-111616	16 Nov 2016 14:15		08 Dec 2016 09:43	08 Dec 2016 15:00	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 110550	Test Name : LA29B SODIUM ADSORPTION RATIO			Matrix: Soil		
HS16111109-01	GP-15-1-1-2-111616	16 Nov 2016 08:50		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-01	GP-15-1-1-2-111616	16 Nov 2016 08:50		06 Dec 2016 20:30	08 Dec 2016 18:19	10
HS16111109-02	GP-15-1-9-10-111616	16 Nov 2016 09:00		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-02	GP-15-1-9-10-111616	16 Nov 2016 09:00		06 Dec 2016 20:30	08 Dec 2016 18:23	10
HS16111109-03	GP-15-1-13-14-111616	16 Nov 2016 09:15		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-03	GP-15-1-13-14-111616	16 Nov 2016 09:15		06 Dec 2016 20:30	08 Dec 2016 18:28	10
HS16111109-04	GP-15-2-1-2-111616	16 Nov 2016 09:20		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-04	GP-15-2-1-2-111616	16 Nov 2016 09:20		06 Dec 2016 20:30	08 Dec 2016 18:32	10
HS16111109-05	GP-15-2-7-8-111616	16 Nov 2016 09:30		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-05	GP-15-2-7-8-111616	16 Nov 2016 09:30		06 Dec 2016 20:30	08 Dec 2016 18:37	10
HS16111109-06	GP-15-2-10-11-111616	16 Nov 2016 09:45		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-06	GP-15-2-10-11-111616	16 Nov 2016 09:45		06 Dec 2016 20:30	08 Dec 2016 18:41	10
HS16111109-07	GP-15-3-0-1-111616	16 Nov 2016 10:00		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-07	GP-15-3-0-1-111616	16 Nov 2016 10:00		06 Dec 2016 20:30	08 Dec 2016 18:46	10
HS16111109-08	GP-15-3-5-6-111616	16 Nov 2016 10:10		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-08	GP-15-3-5-6-111616	16 Nov 2016 10:10		06 Dec 2016 20:30	08 Dec 2016 18:50	10
HS16111109-10	GP-15-3-11-12-111616	16 Nov 2016 10:20		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-10	GP-15-3-11-12-111616	16 Nov 2016 10:20		06 Dec 2016 20:30	08 Dec 2016 19:04	10
HS16111109-11	GP-15-4-0-1-111616	16 Nov 2016 10:30		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-11	GP-15-4-0-1-111616	16 Nov 2016 10:30		06 Dec 2016 20:30	08 Dec 2016 19:08	10
HS16111109-12	GP-15-4-5-6-111616	16 Nov 2016 10:40		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-12	GP-15-4-5-6-111616	16 Nov 2016 10:40		06 Dec 2016 20:30	08 Dec 2016 19:12	10
HS16111109-13	GP-15-4-11-12-111616	16 Nov 2016 11:00		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-13	GP-15-4-11-12-111616	16 Nov 2016 11:00		06 Dec 2016 20:30	08 Dec 2016 19:17	10
HS16111109-14	GP-15-5-2-3-111616	16 Nov 2016 11:15		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-14	GP-15-5-2-3-111616	16 Nov 2016 11:15		06 Dec 2016 20:30	08 Dec 2016 19:22	10
HS16111109-15	GP-15-5-4-5-111616	16 Nov 2016 11:20		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-15	GP-15-5-4-5-111616	16 Nov 2016 11:20		06 Dec 2016 20:30	08 Dec 2016 19:26	10
HS16111109-16	GP-15-5-12-13-111616	16 Nov 2016 11:45		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-16	GP-15-5-12-13-111616	16 Nov 2016 11:45		06 Dec 2016 20:30	08 Dec 2016 19:31	10
HS16111109-17	GP-15-6-1-2-111616	16 Nov 2016 12:30		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-17	GP-15-6-1-2-111616	16 Nov 2016 12:30		06 Dec 2016 20:30	08 Dec 2016 19:35	10
HS16111109-19	GP-15-6-4-5-111616	16 Nov 2016 12:40		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-19	GP-15-6-4-5-111616	16 Nov 2016 12:40		06 Dec 2016 20:30	08 Dec 2016 19:58	10
HS16111109-20	GP-15-6-10-11-111616	16 Nov 2016 12:50		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-20	GP-15-6-10-11-111616	16 Nov 2016 12:50		06 Dec 2016 20:30	08 Dec 2016 20:07	10
HS16111109-21	GP-15-7-2-3-111616	16 Nov 2016 13:00		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-21	GP-15-7-2-3-111616	16 Nov 2016 13:00		06 Dec 2016 20:30	08 Dec 2016 20:11	10
HS16111109-22	GP-15-7-5-6-111616	16 Nov 2016 13:15		06 Dec 2016 20:30	09 Dec 2016 16:09	1
HS16111109-22	GP-15-7-5-6-111616	16 Nov 2016 13:15		06 Dec 2016 20:30	08 Dec 2016 20:16	10

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 110551 Test Name : LA29B SODIUM ADSORPTION RATIO Matrix: Soil						
HS16111109-23	GP-15-7-11-12-111616	16 Nov 2016 13:30		06 Dec 2016 20:40	09 Dec 2016 16:09	1
HS16111109-23	GP-15-7-11-12-111616	16 Nov 2016 13:30		06 Dec 2016 20:40	08 Dec 2016 21:43	10
HS16111109-24	GP-15-8-1-2-111616	16 Nov 2016 13:40		06 Dec 2016 20:40	09 Dec 2016 16:09	1
HS16111109-24	GP-15-8-1-2-111616	16 Nov 2016 13:40		06 Dec 2016 20:40	08 Dec 2016 21:48	10
HS16111109-25	GP-15-8-10-11-111616	16 Nov 2016 14:10		06 Dec 2016 20:40	09 Dec 2016 16:09	1
HS16111109-25	GP-15-8-10-11-111616	16 Nov 2016 14:10		06 Dec 2016 20:40	08 Dec 2016 21:53	10
HS16111109-26	GP-15-8-12-13-111616	16 Nov 2016 14:15		06 Dec 2016 20:40	09 Dec 2016 16:09	1
HS16111109-26	GP-15-8-12-13-111616	16 Nov 2016 14:15		06 Dec 2016 20:40	08 Dec 2016 22:02	10
Batch ID R285449 Test Name : VOLATILES BY SW8260C Matrix: Soil						
HS16111109-01	GP-15-1-1-2-111616	16 Nov 2016 08:50			26 Nov 2016 00:03	1
HS16111109-02	GP-15-1-9-10-111616	16 Nov 2016 09:00			26 Nov 2016 00:26	1
HS16111109-03	GP-15-1-13-14-111616	16 Nov 2016 09:15			26 Nov 2016 00:49	1
HS16111109-04	GP-15-2-1-2-111616	16 Nov 2016 09:20			26 Nov 2016 02:45	1
HS16111109-05	GP-15-2-7-8-111616	16 Nov 2016 09:30			26 Nov 2016 03:08	1
HS16111109-06	GP-15-2-10-11-111616	16 Nov 2016 09:45			26 Nov 2016 03:31	1
HS16111109-07	GP-15-3-0-1-111616	16 Nov 2016 10:00			26 Nov 2016 03:54	1
HS16111109-08	GP-15-3-5-6-111616	16 Nov 2016 10:10			26 Nov 2016 04:17	1
HS16111109-10	GP-15-3-11-12-111616	16 Nov 2016 10:20			26 Nov 2016 04:40	1
HS16111109-11	GP-15-4-0-1-111616	16 Nov 2016 10:30			26 Nov 2016 05:03	1
HS16111109-12	GP-15-4-5-6-111616	16 Nov 2016 10:40			26 Nov 2016 05:26	1
HS16111109-13	GP-15-4-11-12-111616	16 Nov 2016 11:00			26 Nov 2016 05:50	1
HS16111109-14	GP-15-5-2-3-111616	16 Nov 2016 11:15			26 Nov 2016 06:13	1
HS16111109-15	GP-15-5-4-5-111616	16 Nov 2016 11:20			26 Nov 2016 06:36	1
HS16111109-16	GP-15-5-12-13-111616	16 Nov 2016 11:45			26 Nov 2016 06:59	1
HS16111109-17	GP-15-6-1-2-111616	16 Nov 2016 12:30			26 Nov 2016 07:22	1
Batch ID R285469 Test Name : VOLATILES BY SW8260C Matrix: Soil						
HS16111109-19	GP-15-6-4-5-111616	16 Nov 2016 12:40			27 Nov 2016 00:27	1
HS16111109-20	GP-15-6-10-11-111616	16 Nov 2016 12:50			27 Nov 2016 00:50	1
HS16111109-21	GP-15-7-2-3-111616	16 Nov 2016 13:00			27 Nov 2016 01:13	1
HS16111109-22	GP-15-7-5-6-111616	16 Nov 2016 13:15			27 Nov 2016 01:36	1
HS16111109-23	GP-15-7-11-12-111616	16 Nov 2016 13:30			27 Nov 2016 01:59	1
HS16111109-24	GP-15-8-1-2-111616	16 Nov 2016 13:40			27 Nov 2016 02:23	1
HS16111109-25	GP-15-8-10-11-111616	16 Nov 2016 14:10			27 Nov 2016 02:46	1
HS16111109-26	GP-15-8-12-13-111616	16 Nov 2016 14:15			27 Nov 2016 03:09	1
Batch ID R285471 Test Name : LOW LEVEL VOLATILES BY SW8260C Matrix: Water						
HS16111109-09	TRIP BLANK 082916-86	16 Nov 2016 00:00			26 Nov 2016 11:33	1
HS16111109-18	TRIP BLANK 082916-79	16 Nov 2016 00:00			26 Nov 2016 12:25	1
HS16111109-27	TRIP BLANK 082916-97	16 Nov 2016 00:00			26 Nov 2016 12:49	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R285581 Test Name : GASOLINE RANGE ORGANICS BY SW8015C Matrix: Soil						
HS16111109-01	GP-15-1-1-2-111616	16 Nov 2016 08:50			28 Nov 2016 17:16	1
HS16111109-02	GP-15-1-9-10-111616	16 Nov 2016 09:00			28 Nov 2016 17:32	1
HS16111109-03	GP-15-1-13-14-111616	16 Nov 2016 09:15			28 Nov 2016 17:48	1
HS16111109-04	GP-15-2-1-2-111616	16 Nov 2016 09:20			28 Nov 2016 18:04	1
HS16111109-05	GP-15-2-7-8-111616	16 Nov 2016 09:30			28 Nov 2016 18:20	1
HS16111109-06	GP-15-2-10-11-111616	16 Nov 2016 09:45			28 Nov 2016 18:36	1
HS16111109-07	GP-15-3-0-1-111616	16 Nov 2016 10:00			28 Nov 2016 18:53	1
HS16111109-08	GP-15-3-5-6-111616	16 Nov 2016 10:10			28 Nov 2016 19:24	1
HS16111109-10	GP-15-3-11-12-111616	16 Nov 2016 10:20			28 Nov 2016 19:40	1
HS16111109-11	GP-15-4-0-1-111616	16 Nov 2016 10:30			28 Nov 2016 19:56	1
HS16111109-12	GP-15-4-5-6-111616	16 Nov 2016 10:40			28 Nov 2016 20:13	1
HS16111109-13	GP-15-4-11-12-111616	16 Nov 2016 11:00			28 Nov 2016 20:29	1
Batch ID R285584 Test Name : GASOLINE RANGE ORGANICS BY SW8015C Matrix: Soil						
HS16111109-14	GP-15-5-2-3-111616	16 Nov 2016 11:15			28 Nov 2016 22:05	1
HS16111109-15	GP-15-5-4-5-111616	16 Nov 2016 11:20			28 Nov 2016 22:53	1
HS16111109-16	GP-15-5-12-13-111616	16 Nov 2016 11:45			28 Nov 2016 23:10	1
HS16111109-17	GP-15-6-1-2-111616	16 Nov 2016 12:30			28 Nov 2016 23:26	1
HS16111109-19	GP-15-6-4-5-111616	16 Nov 2016 12:40			28 Nov 2016 23:42	1
HS16111109-20	GP-15-6-10-11-111616	16 Nov 2016 12:50			29 Nov 2016 00:14	1
HS16111109-21	GP-15-7-2-3-111616	16 Nov 2016 13:00			29 Nov 2016 00:30	1
HS16111109-22	GP-15-7-5-6-111616	16 Nov 2016 13:15			29 Nov 2016 00:46	1
HS16111109-23	GP-15-7-11-12-111616	16 Nov 2016 13:30			29 Nov 2016 01:03	1
HS16111109-24	GP-15-8-1-2-111616	16 Nov 2016 13:40			29 Nov 2016 01:19	1
HS16111109-25	GP-15-8-10-11-111616	16 Nov 2016 14:10			29 Nov 2016 01:35	1
HS16111109-26	GP-15-8-12-13-111616	16 Nov 2016 14:15			29 Nov 2016 01:51	1
Batch ID R285840 Test Name : MOISTURE Matrix: Soil						
HS16111109-01	GP-15-1-1-2-111616	16 Nov 2016 08:50			01 Dec 2016 08:27	1
HS16111109-02	GP-15-1-9-10-111616	16 Nov 2016 09:00			01 Dec 2016 08:27	1
HS16111109-03	GP-15-1-13-14-111616	16 Nov 2016 09:15			01 Dec 2016 08:27	1
HS16111109-04	GP-15-2-1-2-111616	16 Nov 2016 09:20			01 Dec 2016 08:27	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R285924 Test Name : MOISTURE Matrix: Soil						
HS16111109-05	GP-15-2-7-8-111616	16 Nov 2016 09:30			02 Dec 2016 11:21	1
HS16111109-06	GP-15-2-10-11-111616	16 Nov 2016 09:45			02 Dec 2016 11:21	1
HS16111109-07	GP-15-3-0-1-111616	16 Nov 2016 10:00			02 Dec 2016 11:21	1
HS16111109-08	GP-15-3-5-6-111616	16 Nov 2016 10:10			02 Dec 2016 11:21	1
HS16111109-10	GP-15-3-11-12-111616	16 Nov 2016 10:20			02 Dec 2016 11:21	1
HS16111109-11	GP-15-4-0-1-111616	16 Nov 2016 10:30			02 Dec 2016 11:21	1
HS16111109-12	GP-15-4-5-6-111616	16 Nov 2016 10:40			02 Dec 2016 11:21	1
HS16111109-13	GP-15-4-11-12-111616	16 Nov 2016 11:00			02 Dec 2016 11:21	1
HS16111109-14	GP-15-5-2-3-111616	16 Nov 2016 11:15			02 Dec 2016 11:21	1
HS16111109-15	GP-15-5-4-5-111616	16 Nov 2016 11:20			02 Dec 2016 11:21	1
HS16111109-16	GP-15-5-12-13-111616	16 Nov 2016 11:45			02 Dec 2016 11:21	1
HS16111109-17	GP-15-6-1-2-111616	16 Nov 2016 12:30			02 Dec 2016 11:21	1
HS16111109-19	GP-15-6-4-5-111616	16 Nov 2016 12:40			02 Dec 2016 11:21	1
HS16111109-20	GP-15-6-10-11-111616	16 Nov 2016 12:50			02 Dec 2016 11:21	1
HS16111109-21	GP-15-7-2-3-111616	16 Nov 2016 13:00			02 Dec 2016 11:21	1
HS16111109-22	GP-15-7-5-6-111616	16 Nov 2016 13:15			02 Dec 2016 11:21	1
HS16111109-23	GP-15-7-11-12-111616	16 Nov 2016 13:30			02 Dec 2016 11:21	1
Batch ID R285925 Test Name : MOISTURE Matrix: Soil						
HS16111109-24	GP-15-8-1-2-111616	16 Nov 2016 13:40			02 Dec 2016 11:27	1
HS16111109-25	GP-15-8-10-11-111616	16 Nov 2016 14:10			02 Dec 2016 11:27	1
HS16111109-26	GP-15-8-12-13-111616	16 Nov 2016 14:15			02 Dec 2016 11:27	1
Batch ID R285960 Test Name : PH SOIL BY SW9045D Matrix: Soil						
HS16111109-01	GP-15-1-1-2-111616	16 Nov 2016 08:50			05 Dec 2016 13:50	1
HS16111109-02	GP-15-1-9-10-111616	16 Nov 2016 09:00			05 Dec 2016 13:50	1
HS16111109-03	GP-15-1-13-14-111616	16 Nov 2016 09:15			05 Dec 2016 13:50	1
HS16111109-04	GP-15-2-1-2-111616	16 Nov 2016 09:20			05 Dec 2016 13:50	1
HS16111109-05	GP-15-2-7-8-111616	16 Nov 2016 09:30			05 Dec 2016 13:50	1
HS16111109-06	GP-15-2-10-11-111616	16 Nov 2016 09:45			05 Dec 2016 13:50	1
HS16111109-07	GP-15-3-0-1-111616	16 Nov 2016 10:00			05 Dec 2016 13:50	1
HS16111109-08	GP-15-3-5-6-111616	16 Nov 2016 10:10			05 Dec 2016 13:50	1
HS16111109-10	GP-15-3-11-12-111616	16 Nov 2016 10:20			05 Dec 2016 13:50	1
HS16111109-11	GP-15-4-0-1-111616	16 Nov 2016 10:30			05 Dec 2016 13:50	1
HS16111109-12	GP-15-4-5-6-111616	16 Nov 2016 10:40			05 Dec 2016 13:50	1
HS16111109-13	GP-15-4-11-12-111616	16 Nov 2016 11:00			05 Dec 2016 13:50	1
HS16111109-14	GP-15-5-2-3-111616	16 Nov 2016 11:15			05 Dec 2016 13:50	1
HS16111109-15	GP-15-5-4-5-111616	16 Nov 2016 11:20			05 Dec 2016 13:50	1
HS16111109-16	GP-15-5-12-13-111616	16 Nov 2016 11:45			05 Dec 2016 13:50	1
HS16111109-17	GP-15-6-1-2-111616	16 Nov 2016 12:30			05 Dec 2016 13:50	1
HS16111109-19	GP-15-6-4-5-111616	16 Nov 2016 12:40			05 Dec 2016 13:50	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R286057 Test Name : PH SOIL BY SW9045D Matrix: Soil						
HS16111109-20	GP-15-6-10-11-111616	16 Nov 2016 12:50			05 Dec 2016 17:30	1
HS16111109-21	GP-15-7-2-3-111616	16 Nov 2016 13:00			05 Dec 2016 17:30	1
HS16111109-22	GP-15-7-5-6-111616	16 Nov 2016 13:15			05 Dec 2016 17:30	1
HS16111109-23	GP-15-7-11-12-111616	16 Nov 2016 13:30			05 Dec 2016 17:30	1
HS16111109-24	GP-15-8-1-2-111616	16 Nov 2016 13:40			05 Dec 2016 17:30	1
HS16111109-25	GP-15-8-10-11-111616	16 Nov 2016 14:10			05 Dec 2016 17:30	1
HS16111109-26	GP-15-8-12-13-111616	16 Nov 2016 14:15			05 Dec 2016 17:30	1
Batch ID R286151 Test Name : LA29B SATURATION POINT (AS FRACTION) Matrix: Soil						
HS16111109-01	GP-15-1-1-2-111616	16 Nov 2016 08:50			07 Dec 2016 11:50	1
HS16111109-02	GP-15-1-9-10-111616	16 Nov 2016 09:00			07 Dec 2016 11:50	1
HS16111109-03	GP-15-1-13-14-111616	16 Nov 2016 09:15			07 Dec 2016 11:50	1
HS16111109-04	GP-15-2-1-2-111616	16 Nov 2016 09:20			07 Dec 2016 11:50	1
HS16111109-05	GP-15-2-7-8-111616	16 Nov 2016 09:30			07 Dec 2016 11:50	1
HS16111109-06	GP-15-2-10-11-111616	16 Nov 2016 09:45			07 Dec 2016 11:50	1
HS16111109-07	GP-15-3-0-1-111616	16 Nov 2016 10:00			07 Dec 2016 11:50	1
HS16111109-08	GP-15-3-5-6-111616	16 Nov 2016 10:10			07 Dec 2016 11:50	1
HS16111109-10	GP-15-3-11-12-111616	16 Nov 2016 10:20			07 Dec 2016 11:50	1
HS16111109-11	GP-15-4-0-1-111616	16 Nov 2016 10:30			07 Dec 2016 11:50	1
HS16111109-12	GP-15-4-5-6-111616	16 Nov 2016 10:40			07 Dec 2016 11:50	1
HS16111109-13	GP-15-4-11-12-111616	16 Nov 2016 11:00			07 Dec 2016 11:50	1
HS16111109-14	GP-15-5-2-3-111616	16 Nov 2016 11:15			07 Dec 2016 11:50	1
HS16111109-15	GP-15-5-4-5-111616	16 Nov 2016 11:20			07 Dec 2016 11:50	1
HS16111109-16	GP-15-5-12-13-111616	16 Nov 2016 11:45			07 Dec 2016 11:50	1
HS16111109-17	GP-15-6-1-2-111616	16 Nov 2016 12:30			07 Dec 2016 11:50	1
HS16111109-19	GP-15-6-4-5-111616	16 Nov 2016 12:40			07 Dec 2016 11:50	1
HS16111109-20	GP-15-6-10-11-111616	16 Nov 2016 12:50			07 Dec 2016 11:50	1
HS16111109-21	GP-15-7-2-3-111616	16 Nov 2016 13:00			07 Dec 2016 11:50	1
HS16111109-22	GP-15-7-5-6-111616	16 Nov 2016 13:15			07 Dec 2016 11:50	1
Batch ID R286157 Test Name : LA29B SATURATION POINT (AS FRACTION) Matrix: Soil						
HS16111109-23	GP-15-7-11-12-111616	16 Nov 2016 13:30			07 Dec 2016 11:55	1
HS16111109-24	GP-15-8-1-2-111616	16 Nov 2016 13:40			07 Dec 2016 11:55	1
HS16111109-25	GP-15-8-10-11-111616	16 Nov 2016 14:10			07 Dec 2016 11:55	1
HS16111109-26	GP-15-8-12-13-111616	16 Nov 2016 14:15			07 Dec 2016 11:55	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID	R286264	Test Name : TRIVALENT CHROMIUM			Matrix: Soil	
HS16111109-01	GP-15-1-1-2-111616	16 Nov 2016 08:50			09 Dec 2016 12:43	1
HS16111109-02	GP-15-1-9-10-111616	16 Nov 2016 09:00			09 Dec 2016 12:43	1
HS16111109-03	GP-15-1-13-14-111616	16 Nov 2016 09:15			09 Dec 2016 12:43	1
HS16111109-04	GP-15-2-1-2-111616	16 Nov 2016 09:20			09 Dec 2016 12:43	1
HS16111109-05	GP-15-2-7-8-111616	16 Nov 2016 09:30			09 Dec 2016 12:43	1
HS16111109-06	GP-15-2-10-11-111616	16 Nov 2016 09:45			09 Dec 2016 12:43	1
HS16111109-07	GP-15-3-0-1-111616	16 Nov 2016 10:00			09 Dec 2016 12:43	1
HS16111109-08	GP-15-3-5-6-111616	16 Nov 2016 10:10			09 Dec 2016 12:43	1
HS16111109-10	GP-15-3-11-12-111616	16 Nov 2016 10:20			09 Dec 2016 12:43	1
HS16111109-11	GP-15-4-0-1-111616	16 Nov 2016 10:30			09 Dec 2016 12:43	1
HS16111109-12	GP-15-4-5-6-111616	16 Nov 2016 10:40			09 Dec 2016 12:43	1
HS16111109-13	GP-15-4-11-12-111616	16 Nov 2016 11:00			09 Dec 2016 12:43	1
HS16111109-14	GP-15-5-2-3-111616	16 Nov 2016 11:15			09 Dec 2016 12:43	1
HS16111109-15	GP-15-5-4-5-111616	16 Nov 2016 11:20			09 Dec 2016 12:43	1
HS16111109-16	GP-15-5-12-13-111616	16 Nov 2016 11:45			09 Dec 2016 12:43	1
HS16111109-17	GP-15-6-1-2-111616	16 Nov 2016 12:30			09 Dec 2016 12:43	1
HS16111109-19	GP-15-6-4-5-111616	16 Nov 2016 12:40			09 Dec 2016 12:43	1
HS16111109-20	GP-15-6-10-11-111616	16 Nov 2016 12:50			09 Dec 2016 12:43	1
HS16111109-21	GP-15-7-2-3-111616	16 Nov 2016 13:00			09 Dec 2016 12:43	1
HS16111109-22	GP-15-7-5-6-111616	16 Nov 2016 13:15			09 Dec 2016 12:43	1
HS16111109-23	GP-15-7-11-12-111616	16 Nov 2016 13:30			09 Dec 2016 12:43	1
HS16111109-24	GP-15-8-1-2-111616	16 Nov 2016 13:40			09 Dec 2016 12:43	1
HS16111109-25	GP-15-8-10-11-111616	16 Nov 2016 14:10			09 Dec 2016 12:43	1
HS16111109-26	GP-15-8-12-13-111616	16 Nov 2016 14:15			09 Dec 2016 12:43	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R286300	Test Name : LA29B ELECTRICAL CONDUCTIVITY			Matrix: Soil		
HS16111109-01	GP-15-1-1-2-111616	16 Nov 2016 08:50			09 Dec 2016 16:28	1
HS16111109-02	GP-15-1-9-10-111616	16 Nov 2016 09:00			09 Dec 2016 16:28	1
HS16111109-03	GP-15-1-13-14-111616	16 Nov 2016 09:15			09 Dec 2016 16:28	1
HS16111109-04	GP-15-2-1-2-111616	16 Nov 2016 09:20			09 Dec 2016 16:28	1
HS16111109-05	GP-15-2-7-8-111616	16 Nov 2016 09:30			09 Dec 2016 16:28	1
HS16111109-06	GP-15-2-10-11-111616	16 Nov 2016 09:45			09 Dec 2016 16:28	1
HS16111109-07	GP-15-3-0-1-111616	16 Nov 2016 10:00			09 Dec 2016 16:28	1
HS16111109-08	GP-15-3-5-6-111616	16 Nov 2016 10:10			09 Dec 2016 16:28	1
HS16111109-10	GP-15-3-11-12-111616	16 Nov 2016 10:20			09 Dec 2016 16:28	1
HS16111109-11	GP-15-4-0-1-111616	16 Nov 2016 10:30			09 Dec 2016 16:28	1
HS16111109-12	GP-15-4-5-6-111616	16 Nov 2016 10:40			09 Dec 2016 16:28	1
HS16111109-13	GP-15-4-11-12-111616	16 Nov 2016 11:00			09 Dec 2016 16:28	1
HS16111109-14	GP-15-5-2-3-111616	16 Nov 2016 11:15			09 Dec 2016 16:28	1
HS16111109-15	GP-15-5-4-5-111616	16 Nov 2016 11:20			09 Dec 2016 16:28	1
HS16111109-16	GP-15-5-12-13-111616	16 Nov 2016 11:45			09 Dec 2016 16:28	1
HS16111109-17	GP-15-6-1-2-111616	16 Nov 2016 12:30			09 Dec 2016 16:28	1
HS16111109-19	GP-15-6-4-5-111616	16 Nov 2016 12:40			09 Dec 2016 16:28	1
HS16111109-20	GP-15-6-10-11-111616	16 Nov 2016 12:50			09 Dec 2016 16:28	1
HS16111109-21	GP-15-7-2-3-111616	16 Nov 2016 13:00			09 Dec 2016 16:28	1
HS16111109-22	GP-15-7-5-6-111616	16 Nov 2016 13:15			09 Dec 2016 16:28	1
Batch ID R286301	Test Name : LA29B ELECTRICAL CONDUCTIVITY			Matrix: Soil		
HS16111109-23	GP-15-7-11-12-111616	16 Nov 2016 13:30			09 Dec 2016 16:30	1
HS16111109-24	GP-15-8-1-2-111616	16 Nov 2016 13:40			09 Dec 2016 16:30	1
HS16111109-25	GP-15-8-10-11-111616	16 Nov 2016 14:10			09 Dec 2016 16:30	1
HS16111109-26	GP-15-8-12-13-111616	16 Nov 2016 14:15			09 Dec 2016 16:30	1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110176		Instrument: FID-8		Method: SW8015M					
MBLK	Sample ID: MBLK-110176	Units: mg/Kg		Analysis Date: 29-Nov-2016 07:51					
Client ID:	Run ID: FID-8_286026	SeqNo: 3918137		PrepDate: 26-Nov-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
TPH (Diesel Range)	ND	1.7							
Surr: 2-Fluorobiphenyl	2.076	0.10	3.33	0	62.3	60 - 135			
LCS	Sample ID: LCS-110176	Units: mg/Kg		Analysis Date: 29-Nov-2016 08:16					
Client ID:	Run ID: FID-8_286026	SeqNo: 3918138		PrepDate: 26-Nov-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
TPH (Diesel Range)	27.25	1.7	33.33	0	81.7	70 - 130			
Surr: 2-Fluorobiphenyl	2.12	0.10	3.33	0	63.7	60 - 135			
MS	Sample ID: HS16111109-02MS	Units: mg/Kg		Analysis Date: 29-Nov-2016 13:10					
Client ID: GP-15-1-9-10-111616	Run ID: FID-8_286026	SeqNo: 3918143		PrepDate: 26-Nov-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
TPH (Diesel Range)	34.47	1.7	33.25	0.2138	103	70 - 130			
Surr: 2-Fluorobiphenyl	2.216	0.10	3.322	0	66.7	60 - 135			
MSD	Sample ID: HS16111109-02MSD	Units: mg/Kg		Analysis Date: 29-Nov-2016 13:34					
Client ID: GP-15-1-9-10-111616	Run ID: FID-8_286026	SeqNo: 3918144		PrepDate: 26-Nov-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
TPH (Diesel Range)	33.93	1.7	33.3	0.2138	101	70 - 130	34.47	1.57	30
Surr: 2-Fluorobiphenyl	2.184	0.10	3.327	0	65.6	60 - 135	2.216	1.45	30
The following samples were analyzed in this batch:									
HS16111109-01		HS16111109-02		HS16111109-03					

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

Client: Kinder Morgan
 Project: McElmo Dome & Doe Canyon
 WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110188		Instrument: FID-7		Method: SW8015M					
MBLK	Sample ID: MBLK-110188	Units: mg/Kg		Analysis Date: 03-Dec-2016 02:55					
Client ID:	Run ID: FID-7_286020	SeqNo: 3917807		PrepDate: 28-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	2.938	0.10	3.33	0	88.2	60 - 135			

LCS	Sample ID: LCS-110188	Units: mg/Kg		Analysis Date: 03-Dec-2016 03:19					
Client ID:	Run ID: FID-7_286020	SeqNo: 3917808		PrepDate: 28-Nov-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

TPH (Diesel Range)	39.86	1.7	33.33	0	120	70 - 130			
Surr: 2-Fluorobiphenyl	3.19	0.10	3.33	0	95.8	60 - 135			

MS	Sample ID: HS16111109-04MS	Units: mg/Kg		Analysis Date: 03-Dec-2016 04:08					
Client ID: GP-15-2-1-2-111616	Run ID: FID-7_286020	SeqNo: 3917810		PrepDate: 28-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)	42.41	1.7	33.31	0	127	70 - 130			
Surr: 2-Fluorobiphenyl	3.587	0.10	3.328	0	108	60 - 135			

MSD	Sample ID: HS16111109-04MSD	Units: mg/Kg		Analysis Date: 03-Dec-2016 04:32					
Client ID: GP-15-2-1-2-111616	Run ID: FID-7_286020	SeqNo: 3917811		PrepDate: 28-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)	36.72	1.7	33.29	0	110	70 - 130	42.41	14.4	30
Surr: 2-Fluorobiphenyl	2.858	0.10	3.326	0	85.9	60 - 135	3.587	22.6	30

The following samples were analyzed in this batch:									
HS16111109-04	HS16111109-05	HS16111109-06	HS16111109-07						
HS16111109-08	HS16111109-10	HS16111109-11	HS16111109-12						
HS16111109-13	HS16111109-14	HS16111109-15	HS16111109-16						
HS16111109-17	HS16111109-19	HS16111109-20	HS16111109-21						
HS16111109-22	HS16111109-23	HS16111109-24	HS16111109-25						

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110253		Instrument: FID-8		Method: SW8015M					
MBLK	Sample ID: MBLK-110253	Units: mg/Kg		Analysis Date: 02-Dec-2016 03:02					
Client ID:	Run ID: FID-8_285964		SeqNo: 3916515		PrepDate: 29-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	2.777	0.10	3.33	0	83.4	60 - 135			

LCS	Sample ID: LCS-110253	Units: mg/Kg		Analysis Date: 02-Dec-2016 03:26					
Client ID:	Run ID: FID-8_285964		SeqNo: 3916516		PrepDate: 29-Nov-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

TPH (Diesel Range)	39.49	1.7	33.33	0	118	70 - 130			
Surr: 2-Fluorobiphenyl	3.097	0.10	3.33	0	93.0	60 - 135			

MS	Sample ID: HS16111139-16MS	Units: mg/Kg		Analysis Date: 02-Dec-2016 11:08					
Client ID:	Run ID: FID-8_285964		SeqNo: 3916534		PrepDate: 29-Nov-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

TPH (Diesel Range)	39.47	1.7	33.27	0.652	117	70 - 130			
Surr: 2-Fluorobiphenyl	2.993	0.10	3.324	0	90.0	60 - 135			

MSD	Sample ID: HS16111139-16MSD	Units: mg/Kg		Analysis Date: 02-Dec-2016 11:32					
Client ID:	Run ID: FID-8_285964		SeqNo: 3916535		PrepDate: 29-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)	36.7	1.7	33.25	0.652	108	70 - 130	39.47	7.25	30
Surr: 2-Fluorobiphenyl	2.648	0.10	3.322	0	79.7	60 - 135	2.993	12.2	30

The following samples were analyzed in this batch: HS16111109-26

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R285581		Instrument: FID-14		Method: SW8015						
MBLK	Sample ID: GBLK-161128	Units: mg/Kg		Analysis Date: 28-Nov-2016 13:52						
Client ID:	Run ID: FID-14_285581	SeqNo: 3908239		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	0.08297	0.0050	0.1	0	83.0	70 - 130				
LCS	Sample ID: GLCS-161128	Units: mg/Kg		Analysis Date: 28-Nov-2016 13:20						
Client ID:	Run ID: FID-14_285581	SeqNo: 3908238		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9981	0.050	1	0	99.8	70 - 130				
Surr: 4-Bromofluorobenzene	0.09367	0.0050	0.1	0	93.7	70 - 130				
MS	Sample ID: HS16111152-01MS	Units: mg/Kg		Analysis Date: 28-Nov-2016 14:36						
Client ID:	Run ID: FID-14_285581	SeqNo: 3908241		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9475	0.050	1	0	94.7	70 - 130				
Surr: 4-Bromofluorobenzene	0.08534	0.0050	0.1	0	85.3	70 - 130				
MSD	Sample ID: HS16111152-01MSD	Units: mg/Kg		Analysis Date: 28-Nov-2016 14:52						
Client ID:	Run ID: FID-14_285581	SeqNo: 3908242		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.006	0.050	1	0	101	70 - 130	0.9475	5.96	30	
Surr: 4-Bromofluorobenzene	0.09314	0.0050	0.1	0	93.1	70 - 130	0.08534	8.74	30	
The following samples were analyzed in this batch:										
HS16111109-01			HS16111109-02			HS16111109-03			HS16111109-04	
HS16111109-05			HS16111109-06			HS16111109-07			HS16111109-08	
HS16111109-10			HS16111109-11			HS16111109-12			HS16111109-13	

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R285584		Instrument: FID-14		Method: SW8015					
MBLK	Sample ID: GBLK-161128	Units: mg/Kg		Analysis Date: 28-Nov-2016 21:49					
Client ID:	Run ID: FID-14_285584	SeqNo: 3908311		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	0.08224	0.0050	0.1	0	82.2	70 - 130			
LCS	Sample ID: GLCS-161128	Units: mg/Kg		Analysis Date: 28-Nov-2016 21:17					
Client ID:	Run ID: FID-14_285584	SeqNo: 3908310		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Gasoline Range Organics	0.9288	0.050	1	0	92.9	70 - 130			
Surr: 4-Bromofluorobenzene	0.09053	0.0050	0.1	0	90.5	70 - 130			
MS	Sample ID: HS16111109-14MS	Units: mg/Kg		Analysis Date: 28-Nov-2016 22:21					
Client ID: GP-15-5-2-3-111616	Run ID: FID-14_285584	SeqNo: 3908314		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Gasoline Range Organics	0.725	0.050	1	0	72.5	70 - 130			
Surr: 4-Bromofluorobenzene	0.07496	0.0050	0.1	0	75.0	70 - 130			
MSD	Sample ID: HS16111109-14MSD	Units: mg/Kg		Analysis Date: 28-Nov-2016 22:37					
Client ID: GP-15-5-2-3-111616	Run ID: FID-14_285584	SeqNo: 3908315		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Gasoline Range Organics	0.747	0.050	1	0	74.7	70 - 130	0.725	2.98	30
Surr: 4-Bromofluorobenzene	0.07055	0.0050	0.1	0	70.6	70 - 130	0.07496	6.06	30
The following samples were analyzed in this batch:									
HS16111109-14		HS16111109-15		HS16111109-16		HS16111109-17			
HS16111109-19		HS16111109-20		HS16111109-21		HS16111109-22			
HS16111109-23		HS16111109-24		HS16111109-25		HS16111109-26			

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110361		Instrument: ICPMS04		Method: SW6020						
MBLK	Sample ID: MBLK-110361	Units: mg/Kg			Analysis Date: 02-Dec-2016 22:17					
Client ID:	Run ID: ICPMS04_285849	SeqNo: 3915577		PrepDate: 01-Dec-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-110361	Units: mg/Kg			Analysis Date: 02-Dec-2016 22:22					
Client ID:	Run ID: ICPMS04_285849	SeqNo: 3915578		PrepDate: 01-Dec-2016		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.282	0.500	10	0	92.8	80 - 120				
Barium	9.466	0.500	10	0	94.7	80 - 120				
Boron	43.54	2.50	50	0	87.1	80 - 120				
Cadmium	9.46	0.500	10	0	94.6	80 - 120				
Chromium	9.284	0.500	10	0	92.8	80 - 120				
Copper	8.929	0.200	10	0	89.3	80 - 120				
Lead	9.393	0.500	10	0	93.9	80 - 120				
Nickel	9.503	0.500	10	0	95.0	80 - 120				
Selenium	9.189	0.500	10	0	91.9	80 - 120				
Silver	9.626	0.500	10	0	96.3	80 - 120				
Zinc	9.72	0.500	10	0	97.2	80 - 120				

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110361		Instrument: ICPMS04		Method: SW6020					
MS		Sample ID: HS16111109-02MS		Units: mg/Kg		Analysis Date: 02-Dec-2016 22:41			
Client ID: GP-15-1-9-10-111616		Run ID: ICPMS04_285849		SeqNo: 3915582		PrepDate: 01-Dec-2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Arsenic	9.118	0.458	9.151	2.302	74.5	75 - 125			S
Barium	201.1	0.458	9.151	168.7	354	75 - 125			SEO
Boron	37.05	2.29	45.75	2.534	75.4	75 - 125			
Cadmium	7.398	0.458	9.151	0.03714	80.4	75 - 125			
Chromium	16.54	0.458	9.151	6.951	105	75 - 125			
Copper	10.77	0.183	9.151	4.248	71.2	75 - 125			S
Lead	13.14	0.458	9.151	4.89	90.2	75 - 125			
Nickel	14.61	0.458	9.151	7.13	81.7	75 - 125			
Selenium	6.687	0.458	9.151	0.3466	69.3	75 - 125			S
Silver	6.722	0.458	9.151	0.03256	73.1	75 - 125			S
Zinc	29.6	0.458	9.151	29.63	-0.387	75 - 125			S

MSD		Sample ID: HS16111109-02MSD		Units: mg/Kg		Analysis Date: 02-Dec-2016 22:46			
Client ID: GP-15-1-9-10-111616		Run ID: ICPMS04_285849		SeqNo: 3915583		PrepDate: 01-Dec-2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Arsenic	10.2	0.469	9.379	2.302	84.2	75 - 125	9.118	11.2	20
Barium	208.1	0.469	9.379	168.7	420	75 - 125	201.1	3.45	20 SEO
Boron	38.61	2.34	46.9	2.534	76.9	75 - 125	37.05	4.12	20
Cadmium	7.558	0.469	9.379	0.03714	80.2	75 - 125	7.398	2.14	20
Chromium	17.57	0.469	9.379	6.951	113	75 - 125	16.54	6.04	20
Copper	11.86	0.188	9.379	4.248	81.1	75 - 125	10.77	9.63	20
Lead	13.21	0.469	9.379	4.89	88.7	75 - 125	13.14	0.503	20
Nickel	16.25	0.469	9.379	7.13	97.2	75 - 125	14.61	10.6	20
Selenium	7.466	0.469	9.379	0.3466	75.9	75 - 125	6.687	11	20
Silver	6.878	0.469	9.379	0.03256	73.0	75 - 125	6.722	2.3	20 S
Zinc	33.46	0.469	9.379	29.63	40.9	75 - 125	29.6	12.3	20 S

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110361		Instrument: ICPMS04		Method: SW6020					
PDS		Sample ID: HS16111109-02PDS		Units: mg/Kg		Analysis Date: 02-Dec-2016 22:50			
Client ID: GP-15-1-9-10-111616		Run ID: ICPMS04_285849		SeqNo: 3915584		PrepDate: 01-Dec-2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Arsenic	11.18	0.457	9.147	2.302	97.0	75 - 125			
Boron	39.21	2.29	45.74	2.534	80.2	75 - 125			
Cadmium	8.69	0.457	9.147	0	95.0	75 - 125			
Chromium	16.23	0.457	9.147	6.951	101	75 - 125			
Copper	12.32	0.183	9.147	4.248	88.2	75 - 125			
Lead	13.82	0.457	9.147	4.89	97.6	75 - 125			
Nickel	15.83	0.457	9.147	7.13	95.1	75 - 125			
Selenium	9.321	0.457	9.147	0.3466	98.1	75 - 125			
Silver	6.991	0.457	9.147	0	76.4	75 - 125			
Zinc	37.76	0.457	9.147	29.63	88.9	75 - 125			

PDS		Sample ID: HS16111109-02PDS		Units: mg/Kg		Analysis Date: 05-Dec-2016 15:00			
Client ID: GP-15-1-9-10-111616		Run ID: ICPMS04_285952		SeqNo: 3916818		PrepDate: 01-Dec-2016		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Barium	213.3	2.29	45.74	168.9	97.1	75 - 125			

SD		Sample ID: HS16111109-02SD		Units: mg/Kg		Analysis Date: 02-Dec-2016 22:36			
Client ID: GP-15-1-9-10-111616		Run ID: ICPMS04_285849		SeqNo: 3915581		PrepDate: 01-Dec-2016		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit Qual
Arsenic	2.382	2.29					2.302	3.45	10
Boron	ND	11.4					2.534	0	10
Cadmium	ND	2.29					0.03714	0	10
Chromium	7.233	2.29					6.951	4.06	10
Copper	4.53	0.915					4.248	6.62	10
Lead	5.188	2.29					4.89	6.09	10
Nickel	7.567	2.29					7.13	6.13	10
Selenium	ND	2.29					0.3466	0	10
Silver	ND	2.29					0.03256	0	10
Zinc	30.97	2.29					29.63	4.53	10

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110361		Instrument: ICPMS04		Method: SW6020						
SD	Sample ID: HS16111109-02SD		Units: mg/Kg		Analysis Date: 05-Dec-2016 14:56					
Client ID: GP-15-1-9-10-111616	Run ID: ICPMS04_285952		SeqNo: 3916817		PrepDate: 01-Dec-2016		DF: 25			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Barium	169.3	11.4					168.9	0.217	10	

The following samples were analyzed in this batch:

HS16111109-01	HS16111109-02	HS16111109-03	HS16111109-04
HS16111109-05	HS16111109-06	HS16111109-07	HS16111109-08
HS16111109-10	HS16111109-11	HS16111109-12	HS16111109-13
HS16111109-14	HS16111109-15	HS16111109-16	HS16111109-17
HS16111109-19	HS16111109-20		

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110383		Instrument: ICPMS04		Method: SW6020						
MBLK	Sample ID: MBLK-110383	Units: mg/Kg		Analysis Date: 03-Dec-2016 02:30						
Client ID:	Run ID: ICPMS04_285849	SeqNo: 3915627		PrepDate: 02-Dec-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-110383	Units: mg/Kg		Analysis Date: 03-Dec-2016 02:35						
Client ID:	Run ID: ICPMS04_285849	SeqNo: 3915628		PrepDate: 02-Dec-2016		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.19	0.500	10	0	91.9	80 - 120				
Barium	9.181	0.500	10	0	91.8	80 - 120				
Boron	44.47	2.50	50	0	88.9	80 - 120				
Cadmium	9.327	0.500	10	0	93.3	80 - 120				
Chromium	9.04	0.500	10	0	90.4	80 - 120				
Copper	9.442	0.200	10	0	94.4	80 - 120				
Lead	9.388	0.500	10	0	93.9	80 - 120				
Nickel	9.372	0.500	10	0	93.7	80 - 120				
Selenium	9.105	0.500	10	0	91.0	80 - 120				
Silver	9.912	0.500	10	0	99.1	80 - 120				
Zinc	9.687	0.500	10	0	96.9	80 - 120				

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110383		Instrument: ICPMS04		Method: SW6020					
MS		Sample ID: HS16111271-01MS		Units: mg/Kg		Analysis Date: 03-Dec-2016 03:54			
Client ID:		Run ID: ICPMS04_285849		SeqNo: 3915643		PrepDate: 02-Dec-2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Arsenic	8.276	0.467	9.344	1.275	74.9	75 - 125			S
Barium	16.53	0.467	9.344	8.405	86.9	75 - 125			
Boron	35.08	2.34	46.72	0	75.1	75 - 125			
Cadmium	7.663	0.467	9.344	0	82.0	75 - 125			
Chromium	12.76	0.467	9.344	4.08	92.9	75 - 125			
Copper	10.02	0.187	9.344	2.665	78.7	75 - 125			
Lead	12.34	0.467	9.344	6.174	66.0	75 - 125			S
Nickel	12.77	0.467	9.344	4.929	83.9	75 - 125			
Selenium	7.968	0.467	9.344	0	85.3	75 - 125			
Silver	7.883	0.467	9.344	0	84.4	75 - 125			
Zinc	17.53	0.467	9.344	8.769	93.8	75 - 125			

MSD		Sample ID: HS16111271-01MSD		Units: mg/Kg		Analysis Date: 03-Dec-2016 03:59			
Client ID:		Run ID: ICPMS04_285849		SeqNo: 3915644		PrepDate: 02-Dec-2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Arsenic	8.735	0.466	9.318	1.275	80.1	75 - 125	8.276	5.4	20
Barium	27.34	0.466	9.318	8.405	203	75 - 125	16.53	49.3	20 SR
Boron	38.78	2.33	46.59	0	83.2	75 - 125	35.08	10	20
Cadmium	8.238	0.466	9.318	0	88.4	75 - 125	7.663	7.23	20
Chromium	13.76	0.466	9.318	4.08	104	75 - 125	12.76	7.51	20
Copper	10.73	0.186	9.318	2.665	86.6	75 - 125	10.02	6.84	20
Lead	14.57	0.466	9.318	6.174	90.1	75 - 125	12.34	16.5	20
Nickel	13.55	0.466	9.318	4.929	92.6	75 - 125	12.77	5.97	20
Selenium	7.803	0.466	9.318	0	83.7	75 - 125	7.968	2.09	20
Silver	8.495	0.466	9.318	0	91.2	75 - 125	7.883	7.47	20
Zinc	18.9	0.466	9.318	8.769	109	75 - 125	17.53	7.51	20

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110383		Instrument: ICPMS04		Method: SW6020						
PDS	Sample ID: HS16111271-01PDS	Units: mg/Kg			Analysis Date: 03-Dec-2016 04:05					
Client ID:	Run ID: ICPMS04_285849	SeqNo: 3915645		PrepDate: 02-Dec-2016		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	10.15	0.471	9.422	1.275	94.1	75 - 125				
Barium	16.17	0.471	9.422	8.405	82.4	75 - 125				
Boron	36.93	2.36	47.11	0	78.4	75 - 125				
Cadmium	8.368	0.471	9.422	0	88.8	75 - 125				
Chromium	12.6	0.471	9.422	4.08	90.4	75 - 125				
Copper	11.53	0.188	9.422	2.665	94.1	75 - 125				
Lead	14.52	0.471	9.422	6.174	88.5	75 - 125				
Nickel	13.73	0.471	9.422	4.929	93.4	75 - 125				
Selenium	9.202	0.471	9.422	0	97.7	75 - 125				
Silver	7.977	0.471	9.422	0	84.7	75 - 125				
Zinc	17.63	0.471	9.422	8.769	94.0	75 - 125				

SD	Sample ID: HS16111271-01SD		Units: mg/Kg		Analysis Date: 03-Dec-2016 03:49				
Client ID:	Run ID: ICPMS04_285849		SeqNo: 3915642		PrepDate: 02-Dec-2016		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit Qual

Arsenic	1.306	2.36					1.275	0	10	J
Barium	8.124	2.36					8.405	3.35	10	
Boron	ND	11.8					0	0	10	
Cadmium	ND	2.36					0	0	10	
Chromium	4.27	2.36					4.08	4.65	10	
Copper	2.827	0.942					2.665	6.11	10	
Lead	6.051	2.36					6.174	1.98	10	
Nickel	5.182	2.36					4.929	5.15	10	
Selenium	ND	2.36					0	0	10	
Silver	ND	2.36					0	0	10	
Zinc	9.351	2.36					8.769	6.63	10	

The following samples were analyzed in this batch: HS16111109-21 HS16111109-22 HS16111109-23 HS16111109-24
 HS16111109-25 HS16111109-26

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110478		Instrument: HG03		Method: SW7471A					
MBLK	Sample ID: MBLK-110478	Units: ug/Kg		Analysis Date: 08-Dec-2016 10:44					
Client ID:	Run ID: HG03_286199	SeqNo: 3921285		PrepDate: 06-Dec-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	ND	3.40							
LCS	Sample ID: LCS-110478	Units: ug/Kg		Analysis Date: 08-Dec-2016 10:46					
Client ID:	Run ID: HG03_286199	SeqNo: 3921286		PrepDate: 06-Dec-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	334.6	3.40	340.8	0	98.2	85 - 115			
MS	Sample ID: HS16111109-13MS	Units: ug/Kg		Analysis Date: 08-Dec-2016 11:21					
Client ID: GP-15-4-11-12-111616	Run ID: HG03_286199	SeqNo: 3921301		PrepDate: 06-Dec-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	369.6	3.54	354.7	19.96	98.6	85 - 115			
MSD	Sample ID: HS16111109-13MSD	Units: ug/Kg		Analysis Date: 08-Dec-2016 11:23					
Client ID: GP-15-4-11-12-111616	Run ID: HG03_286199	SeqNo: 3921302		PrepDate: 06-Dec-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	371.9	3.56	357	19.96	98.6	85 - 115	369.6	0.623	20
The following samples were analyzed in this batch:									
HS16111109-01		HS16111109-02		HS16111109-03		HS16111109-04			
HS16111109-05		HS16111109-06		HS16111109-07		HS16111109-08			
HS16111109-10		HS16111109-11		HS16111109-12		HS16111109-13			
HS16111109-14		HS16111109-15		HS16111109-16		HS16111109-17			

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110479		Instrument: HG03		Method: SW7471A					
MBLK	Sample ID: MBLK-110479	Units: ug/Kg		Analysis Date: 08-Dec-2016 12:50					
Client ID:	Run ID: HG03_286199	SeqNo: 3921324		PrepDate: 06-Dec-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	ND	3.39							
LCS	Sample ID: LCS-110479	Units: ug/Kg		Analysis Date: 08-Dec-2016 12:52					
Client ID:	Run ID: HG03_286199	SeqNo: 3921325		PrepDate: 06-Dec-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	332	3.37	338.1	0	98.2	85 - 115			
MS	Sample ID: HS16111109-20MS	Units: ug/Kg		Analysis Date: 08-Dec-2016 13:04					
Client ID: GP-15-6-10-11-111616	Run ID: HG03_286199	SeqNo: 3921330		PrepDate: 06-Dec-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	361.6	3.54	354.5	22.4	95.7	85 - 115			
MSD	Sample ID: HS16111109-20MSD	Units: ug/Kg		Analysis Date: 08-Dec-2016 13:06					
Client ID: GP-15-6-10-11-111616	Run ID: HG03_286199	SeqNo: 3921331		PrepDate: 06-Dec-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	362.8	3.52	352.9	22.4	96.5	85 - 115	361.6	0.339	20
The following samples were analyzed in this batch:									
HS16111109-19		HS16111109-20		HS16111109-21		HS16111109-22			
HS16111109-23		HS16111109-24		HS16111109-25		HS16111109-26			

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110550		Instrument: ICPMS04		Method: La29B-6020						
MBLK	Sample ID: MBLK-110550	Units: mg/L			Analysis Date: 08-Dec-2016 18:14					
Client ID:	Run ID: ICPMS04_286190	SeqNo: 3921897		PrepDate: 06-Dec-2016		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Calcium	ND	5.00								
Magnesium	ND	5.00								
Sodium	ND	5.00								

DUP	Sample ID: HS16111109-19DUP	Units: mg/L			Analysis Date: 08-Dec-2016 20:02					
Client ID: GP-15-6-4-5-111616	Run ID: ICPMS04_286190	SeqNo: 3921921		PrepDate: 06-Dec-2016		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	141	5.00					138.2	1.98	30	
Magnesium	22.61	5.00					21.27	6.08	30	
Sodium	79.82	5.00					78.82	1.26	30	

The following samples were analyzed in this batch:

HS16111109-01	HS16111109-02	HS16111109-03	HS16111109-04
HS16111109-05	HS16111109-06	HS16111109-07	HS16111109-08
HS16111109-10	HS16111109-11	HS16111109-12	HS16111109-13
HS16111109-14	HS16111109-15	HS16111109-16	HS16111109-17
HS16111109-19	HS16111109-20	HS16111109-21	HS16111109-22

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110551		Instrument: ICPMS04		Method: La29B-6020						
MBLK	Sample ID: MBLK-110551	Units: mg/L		Analysis Date: 08-Dec-2016 21:38						
Client ID:	Run ID: ICPMS04_286190	SeqNo: 3921942		PrepDate: 06-Dec-2016		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	ND	5.00								
Magnesium	ND	5.00								
Sodium	ND	5.00								

DUP	Sample ID: HS16111109-25DUP	Units: mg/L		Analysis Date: 08-Dec-2016 21:57						
Client ID: GP-15-8-10-11-111616	Run ID: ICPMS04_286190	SeqNo: 3921946		PrepDate: 06-Dec-2016		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	774.7	4.99					762.8	1.55	30	
Magnesium	146.9	4.99					147.2	0.253	30	
Sodium	524.5	4.99					519.4	0.978	30	

The following samples were analyzed in this batch:

HS16111109-23	HS16111109-24	HS16111109-25	HS16111109-26
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Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R285449		Instrument: VOA5		Method: SW8260					
MBLK	Sample ID: VBLKS2-112516	Units: ug/Kg		Analysis Date: 25-Nov-2016 23:40					
Client ID:	Run ID: VOA5_285449	SeqNo: 3905370		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	48.86	0	50	0	97.7	70 - 128			
Surr: 4-Bromofluorobenzene	51.44	0	50	0	103	73 - 126			
Surr: Dibromofluoromethane	51.11	0	50	0	102	71 - 128			
Surr: Toluene-d8	56.71	0	50	0	113	73 - 127			

LCS	Sample ID: VLCSS2-112516	Units: ug/Kg		Analysis Date: 25-Nov-2016 22:53					
Client ID:	Run ID: VOA5_285449	SeqNo: 3905369		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	52.05	5.0	50	0	104	79 - 122			
Ethylbenzene	50.35	5.0	50	0	101	80 - 122			
m,p-Xylene	100.2	10	100	0	100	79 - 122			
o-Xylene	50.64	5.0	50	0	101	80 - 123			
Toluene	50.64	5.0	50	0	101	79 - 120			
Xylenes, Total	150.9	5.0	150	0	101	79 - 123			
Surr: 1,2-Dichloroethane-d4	54.11	0	50	0	108	70 - 128			
Surr: 4-Bromofluorobenzene	52.8	0	50	0	106	73 - 126			
Surr: Dibromofluoromethane	54.22	0	50	0	108	71 - 128			
Surr: Toluene-d8	54.64	0	50	0	109	73 - 127			

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R285449		Instrument: VOA5		Method: SW8260					
MS		Sample ID: HS16111109-01MS		Units: ug/Kg		Analysis Date: 26-Nov-2016 01:35			
Client ID: GP-15-1-1-2-111616		Run ID: VOA5_285449		SeqNo: 3905375		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	45.15	5.0	50	0	90.3	79 - 122			
Ethylbenzene	39.92	5.0	50	0	79.8	80 - 122			S
m,p-Xylene	79.96	10	100	0	80.0	79 - 122			
o-Xylene	39.8	5.0	50	0	79.6	80 - 123			S
Toluene	41.19	5.0	50	0	82.4	79 - 120			
Xylenes, Total	119.8	5.0	150	0	79.8	79 - 123			
Surr: 1,2-Dichloroethane-d4	60.05	0	50	0	120	70 - 128			
Surr: 4-Bromofluorobenzene	52.43	0	50	0	105	73 - 126			
Surr: Dibromofluoromethane	57.94	0	50	0	116	71 - 128			
Surr: Toluene-d8	51.59	0	50	0	103	73 - 127			

MSD		Sample ID: HS16111109-01MSD		Units: ug/Kg		Analysis Date: 26-Nov-2016 01:58			
Client ID: GP-15-1-1-2-111616		Run ID: VOA5_285449		SeqNo: 3905376		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	45.65	4.8	48.5	0	94.1	79 - 122	45.15	1.11	30
Ethylbenzene	39.22	4.8	48.5	0	80.9	80 - 122	39.92	1.78	30
m,p-Xylene	79.27	9.7	97	0	81.7	79 - 122	79.96	0.872	30
o-Xylene	39.63	4.8	48.5	0	81.7	80 - 123	39.8	0.431	30
Toluene	41.59	4.8	48.5	0	85.8	79 - 120	41.19	0.974	30
Xylenes, Total	118.9	4.8	145.5	0	81.7	79 - 123	119.8	0.725	30
Surr: 1,2-Dichloroethane-d4	60.05	0	48.5	0	124	70 - 128	60.05	0.0108	30
Surr: 4-Bromofluorobenzene	52.04	0	48.5	0	107	73 - 126	52.43	0.743	30
Surr: Dibromofluoromethane	59.81	0	48.5	0	123	71 - 128	57.94	3.16	30
Surr: Toluene-d8	52	0	48.5	0	107	73 - 127	51.59	0.793	30

The following samples were analyzed in this batch:

HS16111109-01	HS16111109-02	HS16111109-03	HS16111109-04
HS16111109-05	HS16111109-06	HS16111109-07	HS16111109-08
HS16111109-10	HS16111109-11	HS16111109-12	HS16111109-13
HS16111109-14	HS16111109-15	HS16111109-16	HS16111109-17

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R285469		Instrument: VOA5		Method: SW8260					
MBLK	Sample ID: VBLKS2-112616	Units: ug/Kg		Analysis Date: 27-Nov-2016 00:04					
Client ID:	Run ID: VOA5_285469	SeqNo: 3905831		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	50.08	0	50	0	100	70 - 128			
Surr: 4-Bromofluorobenzene	50.13	0	50	0	100	73 - 126			
Surr: Dibromofluoromethane	50.42	0	50	0	101	71 - 128			
Surr: Toluene-d8	54.67	0	50	0	109	73 - 127			

LCS	Sample ID: VLCSS2-112616	Units: ug/Kg		Analysis Date: 26-Nov-2016 23:17					
Client ID:	Run ID: VOA5_285469	SeqNo: 3905830		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	52.58	5.0	50	0	105	79 - 122			
Ethylbenzene	51.18	5.0	50	0	102	80 - 122			
m,p-Xylene	101.8	10	100	0	102	79 - 122			
o-Xylene	51.7	5.0	50	0	103	80 - 123			
Toluene	52.31	5.0	50	0	105	79 - 120			
Xylenes, Total	153.5	5.0	150	0	102	79 - 123			
Surr: 1,2-Dichloroethane-d4	55.37	0	50	0	111	70 - 128			
Surr: 4-Bromofluorobenzene	53.03	0	50	0	106	73 - 126			
Surr: Dibromofluoromethane	54.33	0	50	0	109	71 - 128			
Surr: Toluene-d8	54.85	0	50	0	110	73 - 127			

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R285469		Instrument: VOA5		Method: SW8260						
MS		Sample ID: HS16111109-21MS		Units: ug/Kg		Analysis Date: 27-Nov-2016 03:32				
Client ID: GP-15-7-2-3-111616		Run ID: VOA5_285469		SeqNo: 3905840		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	45.93	5.0	50.5	0	90.9	79 - 122				
Ethylbenzene	41.91	5.0	50.5	0	83.0	80 - 122				
m,p-Xylene	85.01	10	101	0	84.2	79 - 122				
o-Xylene	43.04	5.0	50.5	0	85.2	80 - 123				
Toluene	45.02	5.0	50.5	0	89.1	79 - 120				
Xylenes, Total	128	5.0	151.5	0	84.5	79 - 123				
Surr: 1,2-Dichloroethane-d4	53.21	0	50.5	0	105	70 - 128				
Surr: 4-Bromofluorobenzene	52.53	0	50.5	0	104	73 - 126				
Surr: Dibromofluoromethane	54.95	0	50.5	0	109	71 - 128				
Surr: Toluene-d8	54.68	0	50.5	0	108	73 - 127				

MSD		Sample ID: HS16111109-21MSD		Units: ug/Kg		Analysis Date: 27-Nov-2016 03:55				
Client ID: GP-15-7-2-3-111616		Run ID: VOA5_285469		SeqNo: 3905841		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	43.8	4.9	49	0	89.4	79 - 122	45.93	4.73	30	
Ethylbenzene	38.98	4.9	49	0	79.6	80 - 122	41.91	7.24	30	S
m,p-Xylene	76.38	9.8	98	0	77.9	79 - 122	85.01	10.7	30	S
o-Xylene	39.28	4.9	49	0	80.2	80 - 123	43.04	9.13	30	
Toluene	41.81	4.9	49	0	85.3	79 - 120	45.02	7.37	30	
Xylenes, Total	115.7	4.9	147	0	78.7	79 - 123	128	10.2	30	S
Surr: 1,2-Dichloroethane-d4	51.84	0	49	0	106	70 - 128	53.21	2.61	30	
Surr: 4-Bromofluorobenzene	50.52	0	49	0	103	73 - 126	52.53	3.91	30	
Surr: Dibromofluoromethane	52.77	0	49	0	108	71 - 128	54.95	4.04	30	
Surr: Toluene-d8	53.02	0	49	0	108	73 - 127	54.68	3.08	30	

The following samples were analyzed in this batch:

HS16111109-19	HS16111109-20	HS16111109-21	HS16111109-22
HS16111109-23	HS16111109-24	HS16111109-25	HS16111109-26

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R285471		Instrument: VOA2		Method: SW8260					
MBLK	Sample ID: VBLKW-161123	Units: ug/L		Analysis Date: 26-Nov-2016 11:08					
Client ID:	Run ID: VOA2_285471	SeqNo: 3905983		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	ND	1.0							
Ethylbenzene	ND	1.0							
m,p-Xylene	ND	2.0							
o-Xylene	ND	1.0							
Toluene	ND	1.0							
Xylenes, Total	ND	1.0							
Surr: 1,2-Dichloroethane-d4	50.1	1.0	50	0	100	71 - 125			
Surr: 4-Bromofluorobenzene	49.83	1.0	50	0	99.7	70 - 125			
Surr: Dibromofluoromethane	49.96	1.0	50	0	99.9	74 - 125			
Surr: Toluene-d8	50.76	1.0	50	0	102	75 - 125			

LCS	Sample ID: VLCSW-161123	Units: ug/L		Analysis Date: 26-Nov-2016 10:18					
Client ID:	Run ID: VOA2_285471	SeqNo: 3905982		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	46.62	1.0	50	0	93.2	75 - 122			
Ethylbenzene	43.98	1.0	50	0	88.0	80 - 120			
m,p-Xylene	88.36	2.0	100	0	88.4	80 - 120			
o-Xylene	45.77	1.0	50	0	91.5	80 - 120			
Toluene	45.08	1.0	50	0	90.2	75 - 121			
Xylenes, Total	134.1	1.0	150	0	89.4	79 - 124			
Surr: 1,2-Dichloroethane-d4	51.52	1.0	50	0	103	71 - 125			
Surr: 4-Bromofluorobenzene	50.98	1.0	50	0	102	70 - 125			
Surr: Dibromofluoromethane	50.74	1.0	50	0	101	74 - 125			
Surr: Toluene-d8	48.68	1.0	50	0	97.4	75 - 125			

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R285471		Instrument: VOA2		Method: SW8260						
MS		Sample ID: HS16111097-01MS		Units: ug/L		Analysis Date: 26-Nov-2016 14:56				
Client ID:		Run ID: VOA2_285471		SeqNo: 3905992		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	46.39	1.0	50	0	92.8	75 - 122				
Ethylbenzene	45.6	1.0	50	0	91.2	80 - 120				
m,p-Xylene	89.15	2.0	100	0	89.2	80 - 120				
o-Xylene	45.66	1.0	50	0	91.3	80 - 120				
Toluene	46.31	1.0	50	0	92.6	75 - 121				
Xylenes, Total	134.8	1.0	150	0	89.9	80 - 124				
Surr: 1,2-Dichloroethane-d4	52.32	1.0	50	0	105	71 - 125				
Surr: 4-Bromofluorobenzene	49.56	1.0	50	0	99.1	70 - 125				
Surr: Dibromofluoromethane	49.03	1.0	50	0	98.1	74 - 125				
Surr: Toluene-d8	49.38	1.0	50	0	98.8	75 - 125				

MSD		Sample ID: HS16111097-01MSD		Units: ug/L		Analysis Date: 26-Nov-2016 15:20				
Client ID:		Run ID: VOA2_285471		SeqNo: 3905993		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	47.82	1.0	50	0	95.6	75 - 122	46.39	3.04	20	
Ethylbenzene	45.15	1.0	50	0	90.3	80 - 120	45.6	0.995	20	
m,p-Xylene	89.47	2.0	100	0	89.5	80 - 120	89.15	0.358	20	
o-Xylene	45.74	1.0	50	0	91.5	80 - 120	45.66	0.164	20	
Toluene	45.41	1.0	50	0	90.8	75 - 121	46.31	1.97	20	
Xylenes, Total	135.2	1.0	150	0	90.1	80 - 124	134.8	0.292	20	
Surr: 1,2-Dichloroethane-d4	51.94	1.0	50	0	104	71 - 125	52.32	0.725	20	
Surr: 4-Bromofluorobenzene	50.44	1.0	50	0	101	70 - 125	49.56	1.75	20	
Surr: Dibromofluoromethane	50.2	1.0	50	0	100	74 - 125	49.03	2.36	20	
Surr: Toluene-d8	49.02	1.0	50	0	98.0	75 - 125	49.38	0.735	20	

The following samples were analyzed in this batch: HS16111109-09 HS16111109-18 HS16111109-27

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110296		Instrument: UV-2450		Method: SW7196	
MBLK	Sample ID: MBLK-110296	Units: mg/kg		Analysis Date: 01-Dec-2016 19:25	
Client ID:	Run ID: UV-2450_285888	SeqNo: 3914796		PrepDate: 30-Nov-2016	DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC Control Limit RPD Ref Value %RPD Limit Qual
Chromium, Hexavalent	ND	2.00			
LCS	Sample ID: LCS-110296	Units: mg/kg		Analysis Date: 01-Dec-2016 19:25	
Client ID:	Run ID: UV-2450_285888	SeqNo: 3914795		PrepDate: 30-Nov-2016	DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC Control Limit RPD Ref Value %RPD Limit Qual
Chromium, Hexavalent	9.48	2.00	10	0	94.8 80 - 120
MS	Sample ID: HS16111109-03MS	Units: mg/kg		Analysis Date: 01-Dec-2016 19:25	
Client ID: GP-15-1-13-14-111616	Run ID: UV-2450_285888	SeqNo: 3914793		PrepDate: 30-Nov-2016	DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC Control Limit RPD Ref Value %RPD Limit Qual
Chromium, Hexavalent	8.181	2.00	9.977	-0.2757	84.8 75 - 125
MSD	Sample ID: HS16111109-03MSD	Units: mg/kg		Analysis Date: 01-Dec-2016 19:25	
Client ID: GP-15-1-13-14-111616	Run ID: UV-2450_285888	SeqNo: 3914794		PrepDate: 30-Nov-2016	DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC Control Limit RPD Ref Value %RPD Limit Qual
Chromium, Hexavalent	9.143	2.00	9.981	-0.2757	94.4 75 - 125 8.181 11.1 20
The following samples were analyzed in this batch:					
HS16111109-01		HS16111109-02		HS16111109-03	
HS16111109-05		HS16111109-06		HS16111109-07	
HS16111109-10		HS16111109-11		HS16111109-12	

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110398		Instrument: UV-2450		Method: SW7196						
MBLK	Sample ID: MBLK-110398	Units: mg/kg		Analysis Date: 05-Dec-2016 16:30						
Client ID:	Run ID: UV-2450_286021	SeqNo: 3917873		PrepDate: 05-Dec-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-110398	Units: mg/kg		Analysis Date: 05-Dec-2016 16:30						
Client ID:	Run ID: UV-2450_286021	SeqNo: 3917872		PrepDate: 05-Dec-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: HS16111271-01MS	Units: mg/kg		Analysis Date: 05-Dec-2016 16:30						
Client ID:	Run ID: UV-2450_286021	SeqNo: 3917870		PrepDate: 05-Dec-2016		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	8.292	1.99	9.966	0	83.2	75 - 125				
MSD	Sample ID: HS16111271-01MSD	Units: mg/kg		Analysis Date: 05-Dec-2016 16:30						
Client ID:	Run ID: UV-2450_286021	SeqNo: 3917871		PrepDate: 05-Dec-2016		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	9.592	1.99	9.951	0	96.4	75 - 125	8.292	14.5	20	
The following samples were analyzed in this batch:										
HS16111109-13		HS16111109-14		HS16111109-15		HS16111109-16				
HS16111109-17		HS16111109-19		HS16111109-20						

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: 110541		Instrument: UV-2450		Method: SW7196						
MBLK	Sample ID: MBLK-110541	Units: mg/kg			Analysis Date: 08-Dec-2016 15:00					
Client ID:		Run ID: UV-2450_286231	SeqNo: 3922155		PrepDate: 08-Dec-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual		
Chromium, Hexavalent	ND	2.00								
LCS	Sample ID: LCS-110541	Units: mg/kg			Analysis Date: 08-Dec-2016 15:00					
Client ID:		Run ID: UV-2450_286231	SeqNo: 3922154		PrepDate: 08-Dec-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual		
Chromium, Hexavalent	9.08	2.00	10	0	90.8	80 - 120				
MS	Sample ID: HS16111121-12MS	Units: mg/kg			Analysis Date: 08-Dec-2016 15:00					
Client ID:		Run ID: UV-2450_286231	SeqNo: 3922152		PrepDate: 08-Dec-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual		
Chromium, Hexavalent	8.996	2.00	9.996	-0.07979	90.8	75 - 125				
MSD	Sample ID: HS16111121-12MSD	Units: mg/kg			Analysis Date: 08-Dec-2016 15:00					
Client ID:		Run ID: UV-2450_286231	SeqNo: 3922153		PrepDate: 08-Dec-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual		
Chromium, Hexavalent	8.421	2.00	9.978	-0.07979	85.2	75 - 125	8.996	6.6	20	
The following samples were analyzed in this batch:										
			HS16111109-21	HS16111109-22	HS16111109-23		HS16111109-24			
			HS16111109-25	HS16111109-26						

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R285840		Instrument: Balance1		Method: SW3550	
DUP	Sample ID: HS16111338-16DUP	Units: wt%		Analysis Date: 01-Dec-2016 08:27	
Client ID:	Run ID: Balance1_285840	SeqNo: 3913841		PrepDate:	DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Percent Moisture	11.7	0.0100			12.6 7.41 20
The following samples were analyzed in this batch:					
HS16111109-01 HS16111109-02 HS16111109-03 HS16111109-04					

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R285924		Instrument: Balance1		Method: SW3550	
DUP	Sample ID: HS16120056-03DUP	Units: wt%		Analysis Date: 02-Dec-2016 11:21	
Client ID:	Run ID: Balance1_285924	SeqNo: 3915704		PrepDate:	DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Percent Moisture	15.3	0.0100			16.8 9.35 20

The following samples were analyzed in this batch:

HS16111109-05	HS16111109-06	HS16111109-07	HS16111109-08
HS16111109-10	HS16111109-11	HS16111109-12	HS16111109-13
HS16111109-14	HS16111109-15	HS16111109-16	HS16111109-17
HS16111109-19	HS16111109-20	HS16111109-21	HS16111109-22
HS16111109-23			

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R285925		Instrument: Balance1		Method: SW3550	
DUP	Sample ID: HS16111121-18DUP	Units: wt%		Analysis Date: 02-Dec-2016 11:27	
Client ID:	Run ID: Balance1_285925	SeqNo: 3915752		PrepDate:	DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual

Percent Moisture	13.6	0.0100			14.1	3.61	20
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The following samples were analyzed in this batch:

HS16111109-24	HS16111109-25	HS16111109-26
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Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R285960		Instrument: WetChem_HS		Method: SW9045B						
DUP	Sample ID: HS16120062-01DUP	Units: pH Units		Analysis Date: 05-Dec-2016 13:50						
Client ID:	Run ID: WetChem_HS_285960	SeqNo: 3916396		PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.9	0.100					8.93	0.337	10	
Temp Deg C @pH	20.1	0					20.1	0	10	

The following samples were analyzed in this batch:

HS16111109-01	HS16111109-02	HS16111109-03	HS16111109-04
HS16111109-05	HS16111109-06	HS16111109-07	HS16111109-08
HS16111109-10	HS16111109-11	HS16111109-12	HS16111109-13
HS16111109-14	HS16111109-15	HS16111109-16	HS16111109-17
HS16111109-19			

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R286057		Instrument: WetChem_HS		Method: SW9045B					
DUP		Sample ID: HS16111109-26DUP		Units: pH Units		Analysis Date: 05-Dec-2016 17:30			
Client ID: GP-15-8-12-13-111616		Run ID: WetChem_HS_286057		SeqNo: 3918511		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
pH	8.82	0.100					8.8	0.227	10
Temp Deg C @pH	19.5	0					19.5	0	10
The following samples were analyzed in this batch:									
HS16111109-20		HS16111109-21		HS16111109-22		HS16111109-23			
HS16111109-24		HS16111109-25		HS16111109-26					

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R286151		Instrument: Balance1		Method: LaDNR-29B SP					
DUP	Sample ID: HS16111109-19DUP	Units: SP as fraction		Analysis Date: 07-Dec-2016 11:50					
Client ID: GP-15-6-4-5-111616	Run ID: Balance1_286151		SeqNo: 3920631		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Saturation Point	0.461	0.100					0.478	3.62	30

The following samples were analyzed in this batch:

HS16111109-01	HS16111109-02	HS16111109-03	HS16111109-04
HS16111109-05	HS16111109-06	HS16111109-07	HS16111109-08
HS16111109-10	HS16111109-11	HS16111109-12	HS16111109-13
HS16111109-14	HS16111109-15	HS16111109-16	HS16111109-17
HS16111109-19	HS16111109-20	HS16111109-21	HS16111109-22

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R286157		Instrument: Balance1		Method: LaDNR-29B SP					
DUP		Sample ID: HS16111109-25DUP		Units: SP as fraction		Analysis Date: 07-Dec-2016 11:55			
Client ID: GP-15-8-10-11-111616		Run ID: Balance1_286157		SeqNo: 3920636		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Saturation Point	0.527	0.100					0.538	2.07	30
The following samples were analyzed in this batch:									
HS16111109-23		HS16111109-24		HS16111109-25		HS16111109-26			

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R286300		Instrument: WetChem_HS		Method: LaDNR-29B EC					
DUP	Sample ID: HS16111109-19DUP	Units: mmhos/cm @25° C		Analysis Date: 09-Dec-2016 16:28					
Client ID: GP-15-6-4-5-111616	Run ID: WetChem_HS_286300	SeqNo: 3923613		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Electrical Conductivity @ saturation	3.201	0.0100					3.033	5.39	20
Electrical Conductivity, 1:1 aqueous	1.476	0.0100					1.451	1.71	20
Saturation % as decimal	0.461	0					0.478	3.62	20
The following samples were analyzed in this batch:									
HS16111109-01		HS16111109-02		HS16111109-03		HS16111109-04			
HS16111109-05		HS16111109-06		HS16111109-07		HS16111109-08			
HS16111109-10		HS16111109-11		HS16111109-12		HS16111109-13			
HS16111109-14		HS16111109-15		HS16111109-16		HS16111109-17			
HS16111109-19		HS16111109-20		HS16111109-21		HS16111109-22			

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

QC BATCH REPORT

Batch ID: R286301		Instrument: WetChem_HS		Method: LaDNR-29B EC					
DUP		Sample ID: HS16111109-25DUP		Units: mmhos/cm @25° C		Analysis Date: 09-Dec-2016 16:30			
Client ID: GP-15-8-10-11-111616		Run ID: WetChem_HS_286301		SeqNo: 3923648		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Electrical Conductivity @ saturation	16.32	0.0100					15.95	2.25	20
Electrical Conductivity, 1:1 aqueous	8.6	0.0100					8.58	0.233	20
Saturation % as decimal	0.527	0					0.538	2.07	20
The following samples were analyzed in this batch:									
HS16111109-23		HS16111109-24		HS16111109-25		HS16111109-26			

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
WorkOrder: HS16111109

**QUALIFIERS,
ACRONYMS, UNITS**

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

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

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

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

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16111109

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS16111109-01	GP-15-1-1-2-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-01	GP-15-1-1-2-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-01	GP-15-1-1-2-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-02	GP-15-1-9-10-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-02	GP-15-1-9-10-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-02	GP-15-1-9-10-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-03	GP-15-1-13-14-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-03	GP-15-1-13-14-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-03	GP-15-1-13-14-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-04	GP-15-2-1-2-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-04	GP-15-2-1-2-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-04	GP-15-2-1-2-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-05	GP-15-2-7-8-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-05	GP-15-2-7-8-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-05	GP-15-2-7-8-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-06	GP-15-2-10-11-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-06	GP-15-2-10-11-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-06	GP-15-2-10-11-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-07	GP-15-3-0-1-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-07	GP-15-3-0-1-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-07	GP-15-3-0-1-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-08	GP-15-3-5-6-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-08	GP-15-3-5-6-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-08	GP-15-3-5-6-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-09	TRIP BLANK 082916-86	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-10	GP-15-3-11-12-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-10	GP-15-3-11-12-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-10	GP-15-3-11-12-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-11	GP-15-4-0-1-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-11	GP-15-4-0-1-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-11	GP-15-4-0-1-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-12	GP-15-4-5-6-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-12	GP-15-4-5-6-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-12	GP-15-4-5-6-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-13	GP-15-4-11-12-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-13	GP-15-4-11-12-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-13	GP-15-4-11-12-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-14	GP-15-5-2-3-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-14	GP-15-5-2-3-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-14	GP-15-5-2-3-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16111109

SAMPLE TRACKING

HS16111109-15	GP-15-5-4-5-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-15	GP-15-5-4-5-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-15	GP-15-5-4-5-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-16	GP-15-5-12-13-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-16	GP-15-5-12-13-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-16	GP-15-5-12-13-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-17	GP-15-6-1-2-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-17	GP-15-6-1-2-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-17	GP-15-6-1-2-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-18	TRIP BLANK 082916-79	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-19	GP-15-6-4-5-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-19	GP-15-6-4-5-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-19	GP-15-6-4-5-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-20	GP-15-6-10-11-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-20	GP-15-6-10-11-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-20	GP-15-6-10-11-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-21	GP-15-7-2-3-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-21	GP-15-7-2-3-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-21	GP-15-7-2-3-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-22	GP-15-7-5-6-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-22	GP-15-7-5-6-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-22	GP-15-7-5-6-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-23	GP-15-7-11-12-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-23	GP-15-7-11-12-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-23	GP-15-7-11-12-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-24	GP-15-8-1-2-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-24	GP-15-8-1-2-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-24	GP-15-8-1-2-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-25	GP-15-8-10-11-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-25	GP-15-8-10-11-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-25	GP-15-8-10-11-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-26	GP-15-8-12-13-111616	Login	11/23/2016 3:41:14 PM	KRM	7D
HS16111109-26	GP-15-8-12-13-111616	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-26	GP-15-8-12-13-111616	Login	11/23/2016 3:41:14 PM	KRM	BTEX B1
HS16111109-27	TRIP BLANK 082916-97	Login	11/23/2016 3:41:14 PM	KRM	VW-2
HS16111109-01	GP-15-1-1-2-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-02	GP-15-1-9-10-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-03	GP-15-1-13-14-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-04	GP-15-2-1-2-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-05	GP-15-2-7-8-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-06	GP-15-2-10-11-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-07	GP-15-3-0-1-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16111109

SAMPLE TRACKING

HS16111109-08	GP-15-3-5-6-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-10	GP-15-3-11-12-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-11	GP-15-4-0-1-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-12	GP-15-4-5-6-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-13	GP-15-4-11-12-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-14	GP-15-5-2-3-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-15	GP-15-5-4-5-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-16	GP-15-5-12-13-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-17	GP-15-6-1-2-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-19	GP-15-6-4-5-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-20	GP-15-6-10-11-111616	Out	12/1/2016 6:19:56 PM	PVL	METPREP
HS16111109-01	GP-15-1-1-2-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-02	GP-15-1-9-10-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-03	GP-15-1-13-14-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-04	GP-15-2-1-2-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-05	GP-15-2-7-8-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-06	GP-15-2-10-11-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-07	GP-15-3-0-1-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-08	GP-15-3-5-6-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-10	GP-15-3-11-12-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-11	GP-15-4-0-1-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-12	GP-15-4-5-6-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-13	GP-15-4-11-12-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-14	GP-15-5-2-3-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-15	GP-15-5-4-5-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-16	GP-15-5-12-13-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-17	GP-15-6-1-2-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-19	GP-15-6-4-5-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-20	GP-15-6-10-11-111616	Return	12/1/2016 6:20:17 PM	PVL	7D
HS16111109-21	GP-15-7-2-3-111616	Out	12/2/2016 11:08:58 AM	PVL	METPREP
HS16111109-22	GP-15-7-5-6-111616	Out	12/2/2016 11:08:58 AM	PVL	METPREP
HS16111109-23	GP-15-7-11-12-111616	Out	12/2/2016 11:08:58 AM	PVL	METPREP
HS16111109-24	GP-15-8-1-2-111616	Out	12/2/2016 11:08:58 AM	PVL	METPREP
HS16111109-25	GP-15-8-10-11-111616	Out	12/2/2016 11:08:58 AM	PVL	METPREP
HS16111109-26	GP-15-8-12-13-111616	Out	12/2/2016 11:08:58 AM	PVL	METPREP
HS16111109-21	GP-15-7-2-3-111616	Return	12/2/2016 11:09:18 AM	PVL	7D
HS16111109-22	GP-15-7-5-6-111616	Return	12/2/2016 11:09:18 AM	PVL	7D
HS16111109-23	GP-15-7-11-12-111616	Return	12/2/2016 11:09:18 AM	PVL	7D
HS16111109-24	GP-15-8-1-2-111616	Return	12/2/2016 11:09:18 AM	PVL	7D
HS16111109-25	GP-15-8-10-11-111616	Return	12/2/2016 11:09:18 AM	PVL	7D
HS16111109-26	GP-15-8-12-13-111616	Return	12/2/2016 11:09:18 AM	PVL	7D
HS16111109-19	GP-15-6-4-5-111616	Out	12/6/2016 7:06:56 PM	JCJ	METPREP

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16111109

SAMPLE TRACKING

HS16111109-20	GP-15-6-10-11-111616	Out	12/6/2016 7:06:56 PM	JCJ	METPREP
HS16111109-21	GP-15-7-2-3-111616	Out	12/6/2016 7:06:56 PM	JCJ	METPREP
HS16111109-22	GP-15-7-5-6-111616	Out	12/6/2016 7:06:56 PM	JCJ	METPREP
HS16111109-23	GP-15-7-11-12-111616	Out	12/6/2016 7:06:56 PM	JCJ	METPREP
HS16111109-24	GP-15-8-1-2-111616	Out	12/6/2016 7:06:56 PM	JCJ	METPREP
HS16111109-25	GP-15-8-10-11-111616	Out	12/6/2016 7:06:56 PM	JCJ	METPREP
HS16111109-26	GP-15-8-12-13-111616	Out	12/6/2016 7:06:56 PM	JCJ	METPREP
HS16111109-19	GP-15-6-4-5-111616	Return	12/6/2016 7:09:19 PM	JCJ	7D
HS16111109-20	GP-15-6-10-11-111616	Return	12/6/2016 7:09:19 PM	JCJ	7D
HS16111109-21	GP-15-7-2-3-111616	Return	12/6/2016 7:09:19 PM	JCJ	7D
HS16111109-22	GP-15-7-5-6-111616	Return	12/6/2016 7:09:19 PM	JCJ	7D
HS16111109-23	GP-15-7-11-12-111616	Return	12/6/2016 7:09:19 PM	JCJ	7D
HS16111109-24	GP-15-8-1-2-111616	Return	12/6/2016 7:09:19 PM	JCJ	7D
HS16111109-25	GP-15-8-10-11-111616	Return	12/6/2016 7:09:19 PM	JCJ	7D
HS16111109-26	GP-15-8-12-13-111616	Return	12/6/2016 7:09:19 PM	JCJ	7D
HS16111109-01	GP-15-1-1-2-111616	Out	12/6/2016 7:09:49 PM	JCJ	METPREP
HS16111109-02	GP-15-1-9-10-111616	Out	12/6/2016 7:09:49 PM	JCJ	METPREP
HS16111109-03	GP-15-1-13-14-111616	Out	12/6/2016 7:09:49 PM	JCJ	METPREP
HS16111109-04	GP-15-2-1-2-111616	Out	12/6/2016 7:09:49 PM	JCJ	METPREP
HS16111109-05	GP-15-2-7-8-111616	Out	12/6/2016 7:09:49 PM	JCJ	METPREP
HS16111109-06	GP-15-2-10-11-111616	Out	12/6/2016 7:09:49 PM	JCJ	METPREP
HS16111109-07	GP-15-3-0-1-111616	Out	12/6/2016 7:09:49 PM	JCJ	METPREP
HS16111109-08	GP-15-3-5-6-111616	Out	12/6/2016 7:09:49 PM	JCJ	METPREP
HS16111109-10	GP-15-3-11-12-111616	Out	12/6/2016 7:09:49 PM	JCJ	METPREP
HS16111109-11	GP-15-4-0-1-111616	Out	12/6/2016 7:09:49 PM	JCJ	METPREP
HS16111109-12	GP-15-4-5-6-111616	Out	12/6/2016 7:09:49 PM	JCJ	METPREP
HS16111109-13	GP-15-4-11-12-111616	Out	12/6/2016 7:09:49 PM	JCJ	METPREP
HS16111109-14	GP-15-5-2-3-111616	Out	12/6/2016 7:09:49 PM	JCJ	METPREP
HS16111109-15	GP-15-5-4-5-111616	Out	12/6/2016 7:09:49 PM	JCJ	METPREP
HS16111109-16	GP-15-5-12-13-111616	Out	12/6/2016 7:09:49 PM	JCJ	METPREP
HS16111109-17	GP-15-6-1-2-111616	Out	12/6/2016 7:09:49 PM	JCJ	METPREP
HS16111109-01	GP-15-1-1-2-111616	Return	12/6/2016 7:10:14 PM	JCJ	7D
HS16111109-02	GP-15-1-9-10-111616	Return	12/6/2016 7:10:14 PM	JCJ	7D
HS16111109-03	GP-15-1-13-14-111616	Return	12/6/2016 7:10:14 PM	JCJ	7D
HS16111109-04	GP-15-2-1-2-111616	Return	12/6/2016 7:10:14 PM	JCJ	7D
HS16111109-05	GP-15-2-7-8-111616	Return	12/6/2016 7:10:14 PM	JCJ	7D
HS16111109-06	GP-15-2-10-11-111616	Return	12/6/2016 7:10:14 PM	JCJ	7D
HS16111109-07	GP-15-3-0-1-111616	Return	12/6/2016 7:10:14 PM	JCJ	7D
HS16111109-08	GP-15-3-5-6-111616	Return	12/6/2016 7:10:14 PM	JCJ	7D
HS16111109-10	GP-15-3-11-12-111616	Return	12/6/2016 7:10:14 PM	JCJ	7D
HS16111109-11	GP-15-4-0-1-111616	Return	12/6/2016 7:10:14 PM	JCJ	7D
HS16111109-12	GP-15-4-5-6-111616	Return	12/6/2016 7:10:14 PM	JCJ	7D

Client: Kinder Morgan
Project: McElmo Dome & Doe Canyon
Work Order: HS16111109

SAMPLE TRACKING

HS16111109-13	GP-15-4-11-12-111616	Return	12/6/2016 7:10:14 PM	JCJ	7D
HS16111109-14	GP-15-5-2-3-111616	Return	12/6/2016 7:10:14 PM	JCJ	7D
HS16111109-15	GP-15-5-4-5-111616	Return	12/6/2016 7:10:14 PM	JCJ	7D
HS16111109-16	GP-15-5-12-13-111616	Return	12/6/2016 7:10:14 PM	JCJ	7D
HS16111109-17	GP-15-6-1-2-111616	Return	12/6/2016 7:10:14 PM	JCJ	7D

Sample Receipt Checklist

Client Name: Kinder Morgan
Work Order: HS16111109

Date/Time Received: **23-Nov-2016 08:51**
Received by: **NDR**

Checklist completed by: Krysta Mathis 23-Nov-2016 Reviewed by: Corey Grandits 28-Nov-2016
eSignature Date eSignature Date

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

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Not Present <input type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
TX1005 solids received in hermetically sealed vials?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	5.2/5.5, 3.7/4.0, 0.5/0.8 U/C		11
Cooler(s)/Kit(s):	25422, 2296, 24511		
Date/Time sample(s) sent to storage:	11/23/2016 19:00		
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted by:			

Login Notes: **Sample ID discrepancy, sample GP-15-5-4-5-111616 listed on chain of custody labeled as GP-15-5-5-4-111616.**

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:



Environmental

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Chain of Custody Fo

Page 1 of 1

COC ID: 147538

HS16111109

Kinder Morgan
McElmo Dome & Doe Canyon

ston, WV
168

280

ALS Project Manager:



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

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	GP-15-1-1-2-111616	11/16/16	0850	Soil	—	4	X	X	X	X	X	X	X	X	X	X	
2	GP-15-1- 5-10 -111616		0900														
3	GP-15-1-13-14-111616		0915														
4	GP-15-2-1-2-111616		0920														
5	GP-15-2-7-8-111616		0930														
6	GP-15-2-10-11-111616		0945														
7	GP-15-3-0-1-111616		1000														
8	GP-15-3-3-6-111616		1010														
9	Trip Blank					2											
10																	

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date:	
Bethany Draeger <i>Bethany</i>		Fed Ex		TAT 10 days			
Relinquished by:	Date: 11/16/16	Time: 1600	Received by:				
Bethany Draeger			NR 11/23/16 09.47				
Relinquished by:	Date:	Time:	Checked by (Laboratory):				
ogged by (Laboratory):	Date:	Time:					
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035				Notes: [KM CO2 RFP 16MDLRFP077]			
				Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
				25422	0.5	QC Level STD	
						Other:	

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 are not guaranteed.

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Chain of Custody Form

Page 1 of 1

COC ID: 147537

HS16111109

i, WV

Kinder Morgan

McElmo Dome & Doe Canyon



Customer Information		ALS Project Manager:	
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	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	GP-15-3-11-12-111616	11/16/16	1020	Soil	—	4	X	X	X	X	X	X	X	X	X	X	
2	GP-15-4-0-1-111616		1030														
3	GP-15-4-5-6-111616		1040														
4	GP-15-4-11-12-111616		1100														
5	GP-15-5-2-3-111616		1115														
6	GP-15-5-4-5-111616		1120														
7	GP-15-5-12-13-111616		1145														
8	GP-15-6-1-2-111616		1230														
9	Trip Blank					2											

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date:	
Bethany Draeger		Fed Ex		TAT 10 days			
Relinquished by:		Date:	Time:	Received by:		Notes:	
Bethany Draeger		11/16/16	1600	NR 11/22/16		[KM CO2 RFP 16MDLRFP077]	
Relinquished by:		Date:	Time:	Received by (Laboratory):		Cooler ID	
				Checked by (Laboratory):		Cooler Temp.	
Signed by (Laboratory):		Date:	Time:			QC Package: (Check One Box Below)	
						QC Level STD	
Preservative Key:		Other:					

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

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Chain of Custody Form

Page 1 of 1

COC ID: 147536

HS16111109

Kinder Morgan
McElmo Dome & Doe Canyon

Weston, WV
3168

5280

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	

lo.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	GP-05-6-4-5-111616	1240	↔ 11/16/16	Soil	—	4	X	X	X	X	X	X	X	X	X	X	
2	GP-15-6-10-11-111616	1250	↔														
3	GP-15-7-2-3-111616	1300	↔														
4	GP-15-7-5-6-111616	1315	↔														
5	GP-15-7-11-12-111616	1330	↔														
6	GP-15-8-1-2-111616	1340	↔														
7	GP-15-8-10-11-111616	1410	↔														
8	GP-15-8-12-13-111616	1415	↔														
9	Trip Blank					2											

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date:	
Bethany Draeger <i>Bethany Draeger</i>		Fed Ex		TAT 10 days			
Relinquished by:		Date:	Time:	Received by:		Notes:	
Bethany Draeger		11/18/16	1600	NA 11/23/16 08:51		[KM CO2 RFP 16MDLRFP077]	
Relinquished by:		Date:	Time:	Received by (Laboratory):		Cooler ID	
						24551	
Signed by (Laboratory):		Date:	Time:	Checked by (Laboratory):		Cooler Temp.	
						317	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035							
QC Package: (Check One Box Below)							
QC Level STD							
Other:							

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 Fax. +1 281 530 5887

2296

CUSTODY SEAL		Seal Broken By: NR
Date:	Time:	Date: 11-23-16
Name:		
Company:		

FedEx
 TRK# 0221 6786 7200 4200
XH SGRA

TUE - 22 NOV 10:30A
 PRIORITY OVERNIGHT
 2296 77099
 TX-US
 IAH

FedEx
 TRK# 0221 6786 7201 6281
XH SGRA

RET 23 NOV 10:30A
 PRIORITY OVERNIGHT
 4274 77099
 TX-US

ALS Environmental
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 Houston, Texas 77099
 Tel. +1 281 530 5656
 Fax. +1 281 530 5887

2296

CUSTODY SEAL		Seal Broken By: NR
Date:	Time:	Date: 11-23-16
Name:		
Company:		

ALS Environmental
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 Houston, Texas 77099
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 Fax. +1 281 530 5887

42742

Date: 11/21/16
 Name: M H F
 Company: KMZ

CUSTODY SEAL		Seal Broken By: NR
Date:	Time: 21:00	Date: 11-23-16
Name:	OR BD	
Company:	ARCADIS	

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 10450 Stancliff Rd., Suite 210
 Houston, Texas 77099
 Tel. +1 281 530 5656
 Fax. +1 281 530 5887

42742

Date: 11/21/16
 Name: M H F
 Company: KMZ

CUSTODY SEAL		Seal Broken By: NR
Date:	Time: 21:00	Date: 11-23-16
Name:	OR BD	
Company:	ARCADIS	

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 Houston, Texas 77099
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 Fax. +1 281 530 5887

CUSTODY SEAL		Seal Broken By: NR
Date:	Time:	Date:
Name:		
Company:		

FedEx
 TRK# 0221 6786 7200 4255
XH SGRA

24551

22 NOV 10:30A
 PRIORITY OVERNIGHT
 77099
 TX-US
 IAH

ALS Environmental
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 Houston, Texas 77099
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 Fax. +1 281 530 5887

24551

CUSTODY SEAL		Seal Broken By: NR
Date:	Time:	Date: 11-23-16
Name:		
Company:		

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 10450 Stancilff Rd., Suite 210
 Houston, Texas 77099
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 Fax. +1 281 530 5887

Date: 11/21/16
 Name: MH
 Company: KM/ARCADIS

25462

CUSTODY SEAL

Seal Broken By: NR
 Date: 11-23-16

Time: 21:00
 Name: MH
 Company: KM/ARCADIS

ALS Environmental
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 Fax. +1 281 530 5887

Date: 11/21/16
 Name: MH
 Company: KM/ARCADIS

25462

CUSTODY SEAL

Seal Broken By: NR
 Date: 11-23-16

Time: 21:00
 Name: MH
 Company: KM/ARCADIS

FedEx
 TRK# 0221 6786 7200 4520

WED - 23 NOV 10:30A
 PRIORITY OVERNIGHT

XH SGRA

25462

77099
 TX-US
 IAH

FedEx
 TRK# 0221 6786 7200 4163

WED - 23 NOV 10:30A
 PRIORITY OVERNIGHT

XH SGRA

42765

77099
 TX-US
 IAH

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 Houston, Texas 77099
 Tel. +1 281 530 5656
 Fax. +1 281 530 5887

Date: 11/21/16
 Name: MH
 Company: KM/ARCADIS

42765

CUSTODY SEAL

Seal Broken By: NR
 Date: 11-23-16

Time: 21:00
 Name: MH
 Company: KM/ARCADIS

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 Fax. +1 281 530 5887

Date: 11/21/16
 Name: MH
 Company: KM/ARCADIS

42765

CUSTODY SEAL

Seal Broken By: NR
 Date: 11-23-16

Time: 21:00
 Name: MH
 Company: KM/ARCADIS

FedEx
 TRK# 0221 6786 7200 4494

TUE - 22 NOV 10:30A
 PRIORITY OVERNIGHT

XH SGRA

24380

77099
 TX-US
 IAH

FedEx
 TRK# 0221 6786 7200 4406

TUE - 22 NOV 10:30A
 PRIORITY OVERNIGHT

XH SGRA

25513

77099
 TX-US
 IAH

ALS Environmental
 10450 Stancilff Rd., Suite 210
 Houston, Texas 77099
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 Fax. +1 281 530 5887

Date: 11/21/16
 Name: MH
 Company: KM/ARCADIS

25513

CUSTODY SEAL

Seal Broken By: NR
 Date: 11-23-16

Time: 21:00
 Name: MH
 Company: KM/ARCADIS

ALS Environmental
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 Houston, Texas 77099
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 Fax. +1 281 530 5887

Date: 11/21/16
 Name: MH
 Company: KM/ARCADIS

25513

CUSTODY SEAL

Seal Broken By: NR
 Date: 11-23-16

Time: 21:00
 Name: MH
 Company: KM/ARCADIS



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Project #:

25422

CUSTODY SEAL

Date:

Time:

Name:

Company:

Seal Broken By:

NR

Date:

11-23-16



TRK# 6786 7200 4450
0221

XH SORA

**TUE - 22 NOV 10:30A
PRIORITY OVERNIGHT**

25422-77099

TX-US
IAH



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Fax. +1 281 530 5887

25422

CUSTODY SEAL

Date:

Time:

Name:

Company:

Seal Broken By:

NR

Date:

11-23-16

ATTACHMENT F

CDPHE White Paper on Arsenic Concentrations in Soil





Arsenic Concentrations in Soil

Risk management guidance for evaluating

reviewed/revised July 2014

Regulatory Limitation

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

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

Purpose

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

Background

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

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

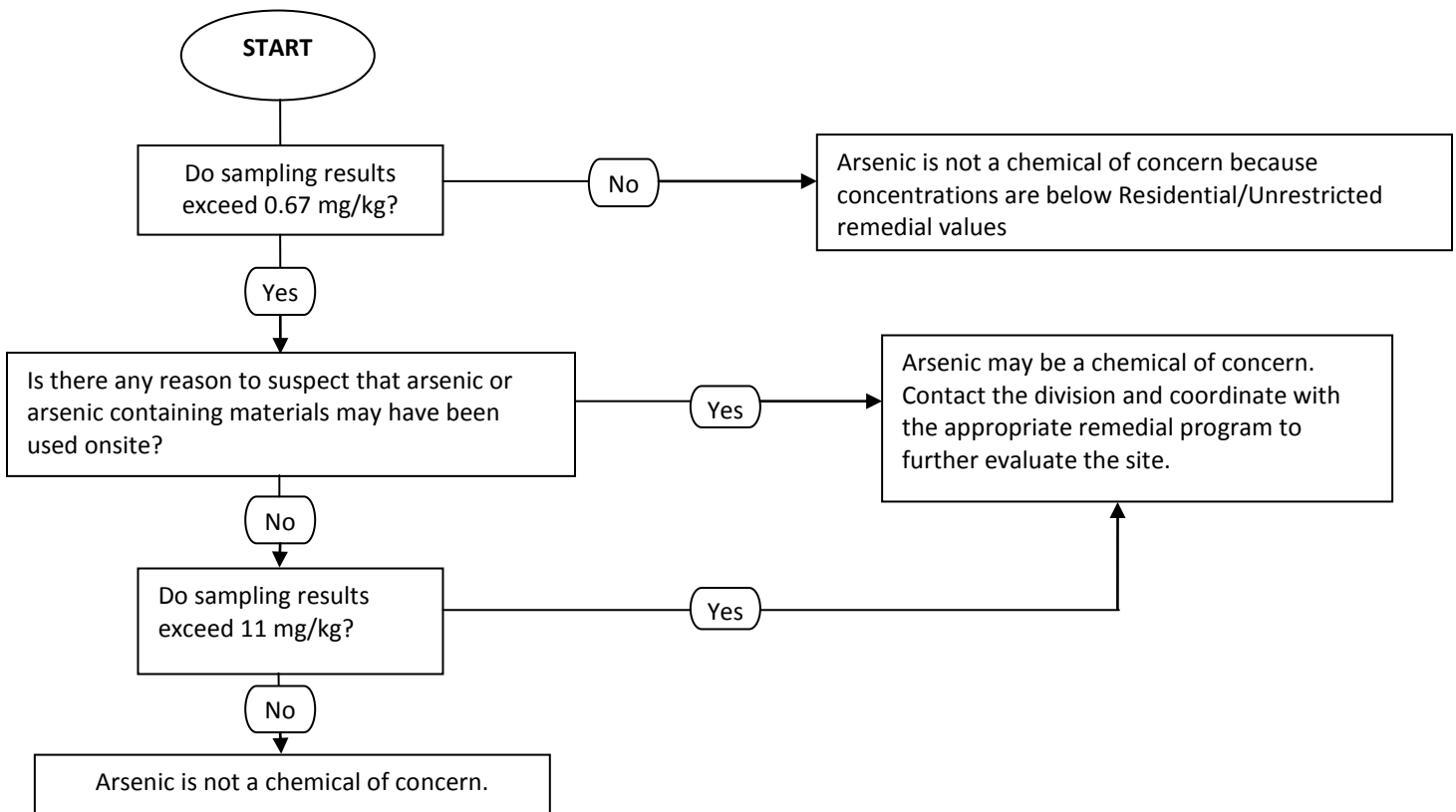
Region 8 U.S. EPA 95% UCLM Background Soil Arsenic Concentrations in Colorado

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

Division Guidance Regarding Background Arsenic Concentration

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

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



For more information please contact:

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

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