

Mr. Aaron M. Hale, P.G.  
Environmental Manager  
Kinder Morgan CO<sub>2</sub> Company, LP  
500 W Illinois Avenue, Suite 500  
Midland, Texas 79701

Arcadis U.S., Inc.  
630 Plaza Drive  
Suite 100  
Highlands Ranch  
Colorado 80129  
Tel 720 344 3500  
Fax 720 344 3535  
[www.arcadis.com](http://www.arcadis.com)

Subject:

**Summary Report for Site GP-19  
McElmo Dome Unit, Southwestern Colorado**

ENVIRONMENT

Dear Mr. Hale:

Date:

August 16, 2016

Included herein is the Summary Report for site GP-19, which is part of the McElmo Dome Unit in southwestern Colorado. Arcadis U.S., Inc. (Arcadis) completed field work at site GP-19 in support of Kinder Morgan CO<sub>2</sub> Company, LP's (KM) efforts to evaluate how the former drill pits were reclaimed and 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-19 (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](mailto:kellijo.preston@arcadis.com)

Our ref:

CO002055

### Methodology

Soil conditions beneath the former pit location were evaluated 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 depth of 2 feet below the bottom of the former pit excavation, or an approximate depth of 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 a CME core barrel sampler. 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 will be 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 for analysis. Each soil sample was analyzed for the following:

- Polycyclic aromatic hydrocarbons (PAHs) by United States Environmental Protection Agency (USEPA) Method SW8270
- 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

One deep groundwater boring was advanced to 50 feet bgs at site GP-19 to evaluate groundwater conditions beneath the site. Boring material was logged in the deep groundwater boring, however, no soil samples were collected. Groundwater was encountered in the GP-19 deep boring, therefore, one groundwater sample was collected. The groundwater sample was analyzed for the following:

*Use or disclosure of information contained on this sheet is subject to the restriction and disclaimer located on the signature page of this document.*

- Volatiles by USEPA Method SW8260
- Total dissolved solids (TDS) by USEPA Method M2540C
- Soluble anions (chloride and sulfate) by USEPA Method E300.0

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-19 is provided in **Attachment C**.

Detailed notes were kept during the field activities completed at site GP-19 and are provided in **Attachment D**.

## Results

Analytical results received from ALS for the soil samples collected at site GP-19 are presented in **Table 1**. Laboratory reports are provided in **Attachment E**.

A total of 26 soil samples collected from eight soil borings, were submitted to ALS for site GP-19. Table 1 provides all applicable screening levels (SLs) as provided per the COGCC Table 910-1. Analytical results that exceed the Table 910-1 SLs are highlighted in yellow. Key findings are summarized as follows:

- One EC exceedance and one pH exceedance were observed in soils shallower than 3 feet, from one boring location (boring 7; **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 identified as a SL exceedance in Table 1.
- DRO was detected above the SL of 500 mg/kg at boring 6 from 5 to 6 feet bgs (680 mg/kg).
- Arsenic was observed in multiple locations greater than SLs, with a maximum observed concentration of 17.1 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). The maximum arsenic detection observed at site GP-19 in boring 3 from 14 to 15 feet bgs exceeded the 11 mg/kg threshold documented in Attachment F. However, all other concentrations were below 11 mg/kg.
- Liner material was observed at 7 feet bgs in boring 6 and at 4 feet bgs in boring 8, but was otherwise absent from the other borings.

Analytical results received from ALS for the groundwater sample collected at site GP-19 are presented in **Table 2**. Laboratory reports are provided in **Attachment E**. **Table 2** provides all applicable SLs as provided per the COGCC Table 910-1. COGCC Table 910-1 indicates that the TDS SL is 1.25 times

Mr. Aaron Hale  
August 16, 2016

background concentrations. According to the United States Geological Survey (USGS 1995), TDS in the region ranges from approximately 1,000 to 3,000 mg/L, which would result in an SL on the order of 1,250 to 3,750 mg/L. KM also located an additional source for evaluating background TDS, chloride, and sulfate concentrations in the area; an analytical report from Green Analytical Laboratories (2015; **Appendix G**). The water sample analyzed in the Green Analytical Laboratories report is from a stock well sample, located approximately 1.70 miles from GP-19 and it suggests background concentrations in the vicinity of site GP-19 are higher than those cited in the USGS report. Assuming the stock well sample is the more appropriate basis for determining background, the calculated SLs for TDS (3,625 mg/L), chloride (141 mg/L), and sulfate (2,100 mg/L) are all higher than observed concentrations on site and therefore, no exceedances were above COGCC SLs.

### 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>
- Green Analytical Laboratories. 2015. Re: Rule 609 Subsequent Sampling. July 6.
- United States Geological Survey (USGS). 1995. Hydrologic Investigations Atlas 730-C, Ground Water Atlas of the United States, Segment 2, Arizona, Colorado, New Mexico, Utah.

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

*Use or disclosure of information contained on this sheet is subject to the restriction and disclaimer located on the signature page of this document.*



Mr. Aaron Hale  
August 16, 2016

**Tables**

- 1 Soil Analytical Results for Samples Collected at McElmo Dome Site GP-19
- 2 Groundwater Analytical Results for Samples Collected at McElmo Dome Site GP-19

**Figures**

- 1 GP-19 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
- G Laboratory Report from Green Analytical Laboratories

*Use or disclosure of information contained on this sheet is subject to the restriction and disclaimer located on the signature page of this document.*

Table 1 - Soil Analytical Results for Samples Collected at McElmo Dome Site GP-19  
Kinder Morgan CO2 Company LP

						PAHs																	
Site	Sample Location	Depth (ft bgs)	Date Collected	Sample ID	Matrix	Acena-phthene	Acena-phthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene		
			Table 910-1 Screening Level					1000	NS	1000	0.22	0.022	0.22	NS	2.2	22	0.022	1000	1000	0.22	23	NS	1000
			Units					mg/kg															
GP-19	Boring 1	1-2	6/10/2016	GP-19-1-1-061016	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 1	6-7	6/10/2016	GP-19-1-6-061016	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 1	20-21	6/10/2016	GP-19-1-20-061016	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 2	1-2	6/10/2016	GP-19-2-1-061016	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 2	12-13	6/10/2016	GP-19-2-12-061016	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 2	18-19	6/10/2016	GP-19-2-18-061016	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 3	1-2	6/10/2016	GP-19-3-1-061016	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 3	5-6	6/10/2016	GP-19-3-5-061016	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	3.7E-03	<3.3E-03		
GP-19	Boring 3	12-13	6/10/2016	GP-19-3-12-061016	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 3	14-15	6/10/2016	GP-19-3-14-061016	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 4	1-2	6/10/2016	GP-19-4-1-061016	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 4	6-7	6/10/2016	GP-19-4-6-061016	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 4	12-13	6/10/2016	GP-19-4-12-061016	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 5	3-4	6/10/2016	GP-19-5-3-061016	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 5	9-10	6/10/2016	GP-19-5-9-061016	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 5	16-17	6/10/2016	GP-19-5-16-061016	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 6	3-4	6/13/2016	GP-19-6-3-061316	Soil	<9.9E-03	<9.9E-03	<9.9E-03	<9.9E-03	<9.9E-03	<9.9E-03	<9.9E-03	<9.9E-03	<9.9E-03	<9.9E-03	<9.9E-03	<9.9E-03	<9.9E-03	<9.9E-03	<9.9E-03	<9.9E-03		
GP-19	Boring 6	5-6	6/13/2016	GP-19-6-5-061316	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 6	9-10	6/13/2016	GP-19-6-9-061316	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	3.9E-03	<3.3E-03		
GP-19	Boring 6	14-15	6/13/2016	GP-19-6-14-061316	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 7	2-3	6/13/2016	GP-19-7-2-061316	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 7	8-9	6/13/2016	GP-19-7-8-061316	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 7	12-13	6/13/2016	GP-19-7-12-061316	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 8	3-4	6/13/2016	GP-19-8-3-061316	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 8	8-9	6/13/2016	GP-19-8-8-061316	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		
GP-19	Boring 8	10-11	6/13/2016	GP-19-8-10-061316	Soil	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03	<3.3E-03		

Notes:  
\* concentrations in ug/kg  
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  
PAH = polycyclic aromatic hydrocarbon  
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-19  
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										ug/kg						
GP-19	Boring 1	1-2	6/10/2016	GP-19-1-1-061016	Soil	2.45	133	3.65	< 0.457	6.26	5.10	5.77	7.00	< 0.457	< 0.457	19.4	<4.8E-03	<4.8E-03	<9.7E-03	<4.8E-03	<4.8E-03	<9.7E-03
GP-19	Boring 1	6-7	6/10/2016	GP-19-1-6-061016	Soil	2.09	99.1	4.06	< 0.454	6.57	4.88	5.79	7.08	< 0.454	< 0.454	19.2	<4.8E-03	<4.8E-03	<9.7E-03	<4.8E-03	<4.8E-03	<9.7E-03
GP-19	Boring 1	20-21	6/10/2016	GP-19-1-20-061016	Soil	4.62	68.7	2.83	< 0.463	5.69	7.46	8.13	11.1	< 0.463	< 0.463	31.8	<5.0E-03	<5.0E-03	<1.0E-02	<5.0E-03	<5.0E-03	<1.0E-02
GP-19	Boring 2	1-2	6/10/2016	GP-19-2-1-061016	Soil	2.44	157	3.48	< 0.455	6.47	5.27	5.94	7.14	< 0.455	< 0.455	19.5	<4.8E-03	<4.8E-03	<9.6E-03	<4.8E-03	<4.8E-03	<9.6E-03
GP-19	Boring 2	12-13	6/10/2016	GP-19-2-12-061016	Soil	2.68	100	7.89	< 0.453	7.21	5.61	6.47	6.52	< 0.453	< 0.453	221	<4.9E-03	<4.9E-03	<9.8E-03	<4.9E-03	<4.9E-03	<9.8E-03
GP-19	Boring 2	18-19	6/10/2016	GP-19-2-18-061016	Soil	4.45	66.3	4.45	< 0.453	5.80	9.13	8.8	11.6	< 0.453	< 0.453	32.8	<4.8E-03	<4.8E-03	<9.7E-03	<4.8E-03	<4.8E-03	<9.7E-03
GP-19	Boring 3	1-2	6/10/2016	GP-19-3-1-061016	Soil	2.61	153	4.23	< 0.484	6.48	5.57	5.84	6.91	0.494	< 0.484	20.7	<4.8E-03	<4.8E-03	<9.7E-03	<4.8E-03	<4.8E-03	<9.7E-03
GP-19	Boring 3	5-6	6/10/2016	GP-19-3-5-061016	Soil	2.69	137	4.58	< 0.469	6.40	5.13	5.89	6.80	< 0.469	< 0.469	30.2	<5.0E-03	<5.0E-03	<9.9E-03	<5.0E-03	<5.0E-03	<9.9E-03
GP-19	Boring 3	12-13	6/10/2016	GP-19-3-12-061016	Soil	4.52	44.8	5.59	< 0.471	5.13	5.05	8.45	7.26	0.611	< 0.471	27.1	<4.8E-03	<4.8E-03	<9.7E-03	<4.8E-03	<4.8E-03	<9.7E-03
GP-19	Boring 3	14-15	6/10/2016	GP-19-3-14-061016	Soil	17.1	40.5	4.55	< 0.478	3.99	9.59	11.0	12.3	0.812	< 0.478	44.1	<4.8E-03	<4.8E-03	<9.7E-03	<4.8E-03	<4.8E-03	<9.7E-03
GP-19	Boring 4	1-2	6/10/2016	GP-19-4-1-061016	Soil	2.53	126	3.11	< 0.454	6.15	5.16	6.09	6.95	< 0.454	< 0.454	19.1	<5.0E-03	<5.0E-03	<1.0E-02	<5.0E-03	<5.0E-03	<1.0E-02
GP-19	Boring 4	6-7	6/10/2016	GP-19-4-6-061016	Soil	3.55	52.0	6.93	< 0.471	5.87	6.15	6.42	10.6	< 0.471	< 0.471	28.8	<4.8E-03	<4.8E-03	<9.7E-03	<4.8E-03	<4.8E-03	<9.7E-03
GP-19	Boring 4	12-13	6/10/2016	GP-19-4-12-061016	Soil	4.48	18.6	5.56	< 0.479	4.54	7.38	7.71	9.67	0.685	< 0.479	29.1	<5.0E-03	<5.0E-03	<1.0E-02	<5.0E-03	<5.0E-03	<1.0E-02
GP-19	Boring 5	3-4	6/10/2016	GP-19-5-3-061016	Soil	2.61	151	2.86	< 0.480	5.35	8.36	5.94	6.24	< 0.480	< 0.480	21.9	<5.0E-03	<5.0E-03	<1.0E-02	<5.0E-03	<5.0E-03	<1.0E-02
GP-19	Boring 5	9-10	6/10/2016	GP-19-5-9-061016	Soil	3.15	93.0	18.7	< 0.478	7.77	5.18	6.81	5.73	0.732	< 0.478	528	<5.0E-03	<5.0E-03	<9.9E-03	<5.0E-03	<5.0E-03	<9.9E-03
GP-19	Boring 5	16-17	6/10/2016	GP-19-5-16-061016	Soil	3.68	142	2.88	< 0.474	3.36	4.52	5.6	11.1	< 0.474	< 0.474	31.8	<4.9E-03	<4.9E-03	<9.8E-03	<4.9E-03	<4.9E-03	<9.8E-03
GP-19	Boring 6	3-4	6/13/2016	GP-19-6-3-061316	Soil	2.13	122	4.21	< 0.467	5.45	4.34	4.92	6.08	< 0.467	< 0.467	16.1	<5.0E-03	<5.0E-03	<1.0E-02	<5.0E-03	<5.0E-03	<1.0E-02
GP-19	Boring 6	5-6	6/13/2016	GP-19-6-5-061316	Soil	3.02	118	10.1	< 0.476	7.84	5.40	5.04	4.75	< 0.476	< 0.476	26.0	<5.0E-03	<5.0E-03	<1.0E-02	<5.0E-03	<5.0E-03	<1.0E-02
GP-19	Boring 6	9-10	6/13/2016	GP-19-6-9-061316	Soil	2.7	140	10.4	< 0.459	8.47	5.66	5.37	5.82	< 0.459	< 0.459	24.8	<4.8E-03	<4.8E-03	<9.5E-03	<4.8E-03	<4.8E-03	<9.5E-03
GP-19	Boring 6	14-15	6/13/2016	GP-19-6-14-061316	Soil	5.73	30.2	8.64	< 0.478	6.39	14.2	10.8	19.8	< 0.478	< 0.478	52.0	<5.0E-03	<5.0E-03	<9.9E-03	<5.0E-03	<5.0E-03	<9.9E-03
GP-19	Boring 7	2-3	6/13/2016	GP-19-7-2-061316	Soil	2.47	113	9.34	< 0.475	6.74	5.49	5.58	5.55	< 0.475	< 0.475	23.9	<4.8E-03	<4.8E-03	<9.7E-03	<4.8E-03	<4.8E-03	<9.7E-03
GP-19	Boring 7	8-9	6/13/2016	GP-19-7-8-061316	Soil	3.36	64.0	4.75	< 0.489	6.47	8.54	10.2	11.1	< 0.489	< 0.489	28.7	<4.9E-03	<4.9E-03	<9.8E-03	<4.9E-03	<4.9E-03	<9.8E-03
GP-19	Boring 7	12-13	6/13/2016	GP-19-7-12-061316	Soil	3.77	35.9	4.63	< 0.472	4.99	9.56	9.92	14.1	< 0.472	< 0.472	41.4	<4.8E-03	<4.8E-03	<9.6E-03	<4.8E-03	<4.8E-03	<9.6E-03
GP-19	Boring 8	3-4	6/13/2016	GP-19-8-3-061316	Soil	2.89	63.8	17.0	< 0.461	7.61	4.17	6.10	5.12	0.571	< 0.461	221	<4.8E-03	<4.8E-03	<9.5E-03	<4.8E-03	<4.8E-03	<9.5E-03
GP-19	Boring 8	8-9	6/13/2016	GP-19-8-8-061316	Soil	3.68	182	5.43	< 0.489	3.47	4.72	5.19	6.55	0.561	< 0.489	18.4	<4.8E-03	<4.8E-03	<9.7E-03	<4.8E-03	<4.8E-03	<9.7E-03
GP-19	Boring 8	10-11	6/13/2016	GP-19-8-10-061316	Soil	4.24	24.1	5.32	< 0.461	4.25	7.17	5.5	9.08	0.719	< 0.461	30.7	<4.9E-03	<4.9E-03	<9.8E-03	<4.9E-03	<4.9E-03	<9.8E-03

Notes:  
\* concentrations in ug/kg  
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  
PAH = polycyclic aromatic hydrocarbon  
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-19  
Kinder Morgan CO2 Company LP

						Soluble Cations for SAR			Chromium		EC (mmhos/cm@25C)	TPH		Mercury	pH Units	SAR
Site	Sample Location	Depth (ft bgs)	Date Collected	Sample ID	Matrix	Calcium	Magnesium	Sodium	Cr(III)	Cr(VI)	EC@sat	GRO	DRO	Mercury	pH	SAR
			Table 910-1 Screening Level			NS	NS	NS	120000	23	<4 mmhos/cm or 2x background	500		23	6-9	<12
			Units			mg/l			mg/kg		mmhos/cm	mg/kg		mg/kg	SU	meq/meq
GP-19	Boring 1	1-2	6/10/2016	GP-19-1-1-061016	Soil	62.9	13.0	51.2	6.26	< 2.00	1.72	< 0.050	< 1.7	8.6E-03	8.36	1.54
GP-19	Boring 1	6-7	6/10/2016	GP-19-1-6-061016	Soil	148	21.9	455	6.57	< 1.99	7.94	< 0.050	< 1.7	1.1E-02	8.45	9.23
GP-19	Boring 1	20-21	6/10/2016	GP-19-1-20-061016	Soil	10.5	11.3	35.3	5.69	< 1.99	0.559	< 0.050	< 1.7	9.7E-03	8.94	1.80
GP-19	Boring 2	1-2	6/10/2016	GP-19-2-1-061016	Soil	32.3	6.55	12.5	6.47	< 2.00	0.528	< 0.050	< 1.7	1.2E-02	8.59	0.524
GP-19	Boring 2	12-13	6/10/2016	GP-19-2-12-061016	Soil	1740	< 4.99	12800	7.21	< 2.00	192	< 0.050	6.0	5.7E-03	11.0	84.5
GP-19	Boring 2	18-19	6/10/2016	GP-19-2-18-061016	Soil	13.1	9.64	39.8	5.80	< 1.99	0.495	< 0.050	< 1.7	3.4E-02	8.99	2.04
GP-19	Boring 3	1-2	6/10/2016	GP-19-3-1-061016	Soil	67.1	17.8	34.8	6.48	< 1.98	1.23	< 0.050	< 1.7	9.3E-03	8.82	0.976
GP-19	Boring 3	5-6	6/10/2016	GP-19-3-5-061016	Soil	751	< 5.00	347	6.40	< 1.96	9.43	< 0.050	5.5	8.8E-03	10.3	3.49
GP-19	Boring 3	12-13	6/10/2016	GP-19-3-12-061016	Soil	505	167	7180	5.13	< 2.00	56.1	< 0.050	< 5.0	1.0E-02	8.46	70.8
GP-19	Boring 3	14-15	6/10/2016	GP-19-3-14-061016	Soil	605	296	1250	< 5.00	< 2.00	21.9	< 0.050	3.0	2.2E-02	8.05	10.4
GP-19	Boring 4	1-2	6/10/2016	GP-19-4-1-061016	Soil	36.7	5.21	13.1	6.15	< 1.99	0.564	< 0.050	< 1.7	9.0E-03	8.78	0.536
GP-19	Boring 4	6-7	6/10/2016	GP-19-4-6-061016	Soil	404	213	2300	5.87	< 1.98	26.5	< 0.050	< 1.7	6.3E-03	8.04	23.0
GP-19	Boring 4	12-13	6/10/2016	GP-19-4-12-061016	Soil	299	209	498	< 5.00	< 2.00	9.5	< 0.050	< 1.7	1.6E-02	7.97	5.41
GP-19	Boring 5	3-4	6/10/2016	GP-19-5-3-061016	Soil	46.7	15.0	46.0	5.35	< 2.00	1.43	< 0.050	< 3.4	1.1E-02	8.58	1.50
GP-19	Boring 5	9-10	6/10/2016	GP-19-5-9-061016	Soil	1430	< 4.99	18100	7.77	< 1.99	190	< 0.050	93	4.9E-03	11.7	132
GP-19	Boring 5	16-17	6/10/2016	GP-19-5-16-061016	Soil	16.6	6.46	52.7	< 5.00	< 2.00	0.805	< 0.050	< 1.7	3.2E-02	8.98	2.78
GP-19	Boring 6	3-4	6/13/2016	GP-19-6-3-061316	Soil	230	< 4.99	395	5.45	< 1.99	5.86	0.4	58	7.3E-03	11.8	7.17
GP-19	Boring 6	5-6	6/13/2016	GP-19-6-5-061316	Soil	193	< 4.99	551	7.84	< 2.00	7.13	0.87	680	6.4E-03	11.7	10.9
GP-19	Boring 6	9-10	6/13/2016	GP-19-6-9-061316	Soil	318	< 4.99	610	8.47	< 2.00	9.74	0.78	250	7.5E-03	11.5	9.42
GP-19	Boring 6	14-15	6/13/2016	GP-19-6-14-061316	Soil	14.5	5.20	37.2	6.39	< 1.99	0.517	< 0.050	< 1.7	6.6E-02	8.67	2.13
GP-19	Boring 7	2-3	6/13/2016	GP-19-7-2-061316	Soil	411	< 4.99	756	6.74	< 2.00	10.6	0.088	20	4.8E-03	11.7	10.3
GP-19	Boring 7	8-9	6/13/2016	GP-19-7-8-061316	Soil	23.9	10.0	63.7	6.47	< 1.99	1.07	< 0.050	< 1.7	1.7E-02	8.64	2.76
GP-19	Boring 7	12-13	6/13/2016	GP-19-7-12-061316	Soil	17.0	6.62	16.3	< 5.00	< 2.00	0.245	< 0.050	< 1.7	3.5E-02	8.76	0.850
GP-19	Boring 8	3-4	6/13/2016	GP-19-8-3-061316	Soil	1630	< 4.99	13100	7.61	< 1.99	155	0.24	4.5	5.9E-03	11.0	89.4
GP-19	Boring 8	8-9	6/13/2016	GP-19-8-8-061316	Soil	827	159	7660	< 5.00	< 1.99	64.0	< 0.050	< 3.4	1.6E-02	8.18	63.9
GP-19	Boring 8	10-11	6/13/2016	GP-19-8-10-061316	Soil	966	269	1290	< 5.00	< 1.99	26.8	< 0.050	< 1.7	3.9E-02	7.75	9.46

Notes:  
\* concentrations in ug/kg  
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  
PAH = polycyclic aromatic hydrocarbon  
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 2 - Groundwater Analytical Results for Samples Collected at McElmo Dome Site GP-19**

Kinder Morgan CO2 Company LP

						Volatiles						TDS	Anions	
						Benzene	Ethylbenzene	m&p-Xylenes	o-Xylene	Toluene	Total Xylenes	Total Dissolved Solids*	Chloride*	Sulfate*
Site	Sample Location	Depth (ft bgs)	Date Collected	Sample ID	Matrix	5	700	NS	NS	560 to 1,000	1,400 to 10,000	3,625	141	2,100
			Table 910-1 Screening Level											
			Units			ug/L						mg/L		
GP-19	Boring 50	50	6/16/2016	GP-19-50-061616	GW	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 3.0	860	57.4	102

**Notes:**

bgs = below ground surface

ft = feet

GW = groundwater

mg/L = milligrams per liter

NS = not specified

TDS = total dissolved solids

ug/L = micrograms per liter

exceed the corresponding Table 910-1 concentration screening level.

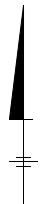
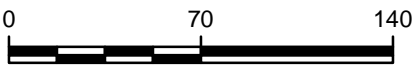
\* Screening level calculated as 1.25 times the background (assuming background level of TDS is at 2,900 mg/L, chloride is at 113 mg/L, and sulfate is at 1,680 mg/L).






**LEGEND**

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

SCALE IN FEET

KINDER MORGAN CORTEZ, CO	
GP-19 SITE FEATURES	
	FIGURE <b>1</b>

# ATTACHMENT A

Form 27 Application







## **General Scope of Work for Goodman Point (GP-19)**

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

### **Applicable COGCC 910 Table**

Current Table 910

### **Groundwater Anticipated**

There is a water well located approximately 2,200 feet to the north of the location. Residences in this area are also connected to the local water supply system. Kinder Morgan will advance a soil boring to a depth of up to 50 feet in depth to evaluate the potential for shallow groundwater in the area.

### **Site Assessment**

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

- Photographic documentation of current surface vegetation and current land use.
- Soil samples from 8 boring locations within the former pit area to gather the following data:
  - Thickness of the “clean” soil cap and collection of soil samples to determine constituents of the boring.
  - Thickness of any drilling material left in the former drilling pit and soil samples to evaluate current concentrations of applicable constituents.
  - Document the presence or absence of any liner material.
  - Depth to native soils below the former drilling pit.
- One soil boring to a depth of 50 feet below ground surface (or until groundwater is encountered) including soil sampling and water sampling (if encountered).
- GPS coordinates of each soil boring location.
- Summary report

### **Soil Boring Program:**

Eight soil borings will be advanced to native soils below the former drilling pit location to assess the current conditions of the former drilling pits. Borings will not extend more than 2 feet below the bottom of the former drilling pit. Also, an additional soil borings will be advanced outside of the pit area to either 50 feet in depth or until groundwater is encountered. The soil boring program will be conducted as follows:

- All necessary utility notifications will be made prior to advancing soil borings.
- A hollow stem auger rig will be utilized to collect a continuous sample of each boring.



- Photograph each full diameter split spoon for inclusion in the assessment report.
- Field screen a sample of each 1 foot interval for total chloride concentration and note on a boring log. Jar the remainder of the sample for potential laboratory analysis for constituents identified on the current COGCC Table 910. The typical sample submittal for laboratory analysis for each boring will be as follows:
  - Highest chloride sample interval observed from the surface to 3 feet bgs.
  - Highest chloride concentration of the visually identified drilling waste. If no waste is visible, the highest observed chloride concentration from 3 feet bgs to 20 feet bgs.
  - The bottom boring sample.
  - The deeper soil boring will only have a 1 foot soil sample collected every 5 feet to the total depth of the boring. The highest chloride sample interval and the sample from the bottom of the boring will be submitted for laboratory analysis. In addition, if groundwater is encountered, a water sample will be collected and submitted for analysis by the current COGCC Table 910 constituents.
  - Please note that groundwater is not anticipated to be encountered in the shallow borings, however, perched water may be encountered in the bottom of the hole in select locations. If groundwater is encountered, a sample will be submitted for analysis as well by the applicable COGCC Table 910 constituents.
- Collect the GPS coordinate for each boring with an accuracy of less than 1 foot.
- Backfill each boring with removed material. There may be a few locations where placing the drill cuttings on plastic will be required. If so, the cuttings will be moved from the former drilling pit location and placed on the adjacent Kinder Morgan CO2 well pad and stored in a manner acceptable to the COGCC.

#### Summary Report:

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

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.

**CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED**

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

OGCC Employee:

☐ Spill ☐ Complaint  
☐ Inspection ☐ NOAV

Tracking No:

OGCC Operator Number: 46685

Name of Operator: Kinder Morgan CO2 Co

Address: 17801 Hwy 491

City: Cortez State: CO Zip: 81321

Contact Name and Telephone:

Andrew Antipas

No: 970-882-5534

Fax: 970-882-5521

API Number: 05-083-06655

County: Montezuma

Facility Name: N/A

Facility Number: N/A

Well Name: Goodman Point (GP-19)

Well Number: 19

Location: (QtrQtr, Sec, Twp, Rng, Meridian): NW 1/4, SW 1/4, Sec 5, T36N, R17W Latitude: 37.406012 N Longitude: 108.754744 W

**TECHNICAL CONDITIONS**

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Potential for CO2 well drill cuttings exceeding Current 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.): Farm Land

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

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Water well located approximately 2,200 feet north of this location.

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

Impacted Media (check):

Extent of Impact:

How Determined:



Soils

Not yet determined



Vegetation



Groundwater

Not yet determined



Surface Water

**REMEDIALATION WORKPLAN**

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

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

Describe how source is to be removed:

Upon completion of assessment activities, Kinder Morgan will meet with COGCC 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.



**REMEDIATION WORKPLAN (Cont.)**

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

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, however, there is a water well located with 1/2 mile of this location. This water well is approximately 2,200 feet north of the well location. Residence in this area are connected to a municipal water system. An additional boring will be advanced to a depth of 50 feet below ground surface at the location to evaluate the potential for shallow groundwater in the area. If groundwater is present in this 50 foot boring, a water sample will be collected and submitted for analysis by the current COGCC Table 910 constituents.

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

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

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

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

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

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

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

**IMPLEMENTATION SCHEDULE**

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

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

Print Name: Andrew Antipas Signed: \_\_\_\_\_

Title: Project Manager Date: 5-19-2016

OGCC Approved: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

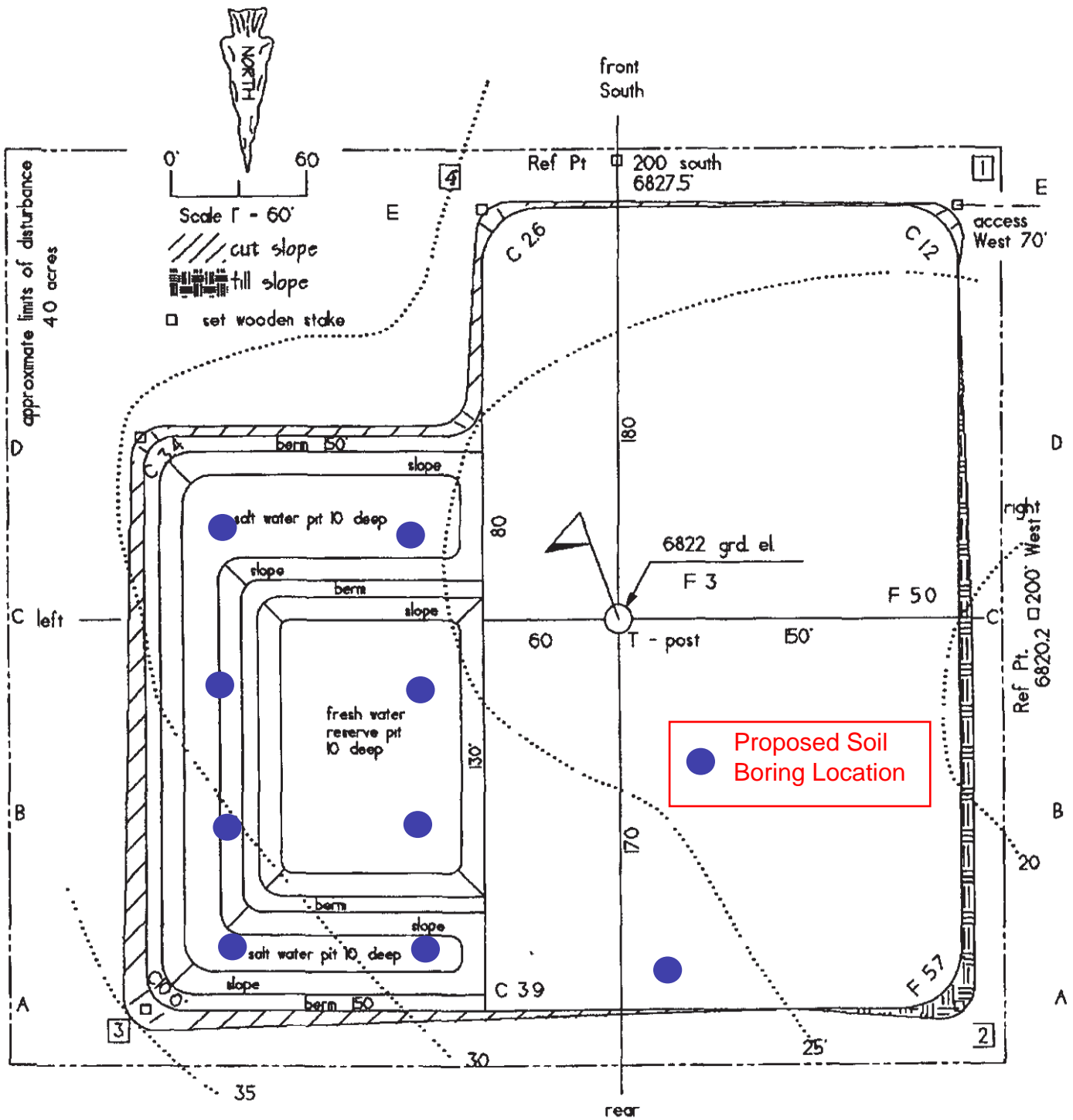
RECEIVED

AUG 11 2008

COGCC

GP - 19

pad planview



# ATTACHMENT B

Boring Logs



GP-19

ID	Latitude	Longitude
Production Well	37.4060115	-108.7537468
19-1	37.406392	-108.753162
19-2	37.406247	-108.753166
19-3	37.406080	-108.753149
19-4	37.405903	-108.753161
19-5	37.406393	-108.753442
19-6	37.406247	-108.753433
19-7	37.406095	-108.753447
19-8	37.405912	-108.753435
19-50	37.406434	-108.753822



[illegible]

PROJECT NAME/NUMBER: McElmo Dome

DATE/WEATHER: 6/10/16 sunny

DRILLING FIRM/METHOD: HJA

ELEVATION:

DRILLER &amp; HELPERS: Kelly, Gabe, Carlos

LOGGED BY: H. Stoller

BORING ID: GP-19-2

Location of Boring: GP-19-2

Lat: 37.406247

Long: -108.753166

Well  
Diagram

Depth in Feet

Depth in Feet

PID (ppm)

Sp. Cond  
USGS Symbol

sample  
collected  
Blows per  
six inches

Recovery (in.)

Description: (Group Name, Color, Density, Moisture, Plasticity, Soil  
Sampling Method, Hourly Air Monitoring Readings, Water Levels, TD

1

2.1

0.65

X

red brown silty sand 72% clay

2

1.5

0.62

↓

contamination visible - gray black

3

1.0

0.63

coarse grained fly ash

4

1.0

0.73

back to orange red - med moisture - plasticity

5

0.7

0.61

malleable very soft clay silty sa

6

0.8

0.73

low to med plasticity + moisture, very  
soft + fine grained < 30% clay

7

0.9

0.79

8

49.2

1.03

drier flakier silty sand < 20% clay  
moisture low - 10% plasticity

9

2.1

1.08

soft &lt; 30% clay - malleable

10

96.8

0.43

11

84.5

0.45

becomes flakier/drier - silty sand  
< 20% clay

12

16.0

8.23

X

zero plasticity

13

7.4

1.85

contamination visible - black gray

14

16.3

3.60

fly ash

15

2.7

1.47

contamination - all black fly ash

16

2.0

1.36

gray/white - no moisture - crumbly

17

4.0

0.85

contamination ends - transitions to  
native yellow, light < 20% clay

18

1.2

0.25

X

low moisture - low plasticity



PROJECT NAME/NUMBER: McElmo Dome

DATE/WEATHER: 6/10/16 sunny

DRILLING FIRM/METHOD: *HSA*

**ELEVATION:**

**DRILLER & HELPERS:** Kelly, Gabe, Carlos

LOGGED BY: *H. Stoller*

BORING ID: GP-19-3

Location of Boring: GP-19-3

[illegible]

PROJECT NAME/NUMBER: *McElmo Dome*

DATE/WEATHER: 6/16/16, sunny

DRILLING FIRM/METHOD: H3A

**ELEVATION:**

DRILLER & HELPERS: Kelly, Gabe, Carlos

LOGGED BY: H. Stoller

**BORING ID:**

Location of Boring: GP-19-4

[illegible]

PROJECT NAME/NUMBER: <u>McElmo Dome</u>					DATE/WEATHER: <u>6/16/16 sunny</u>	
DRILLING FIRM/METHOD: <u>HSA</u>					ELEVATION:	
DRILLER & HELPERS: <u>Kelly, Gabe, Carlos</u>					LOGGED BY: <u>H. Stoller</u>	
BORING ID: <u>GP-19-5</u>					Location of Boring: <u>GP-19-5</u>	
Depth in Feet	PID (ppm)	sp. cond. USCS-Symbol	sample collected  Blows per six inches	Recovery (in.)	Description: (Group Name, Color, Density, Moisture, Plasticity, Soil Sampling Method, Hourly Air Monitoring Readings, Water Levels, TD)	Well Diagram
1	1.0	0.46			Red brown silty sand <20% clay low moisture, low plasticity Red brown silty sand with medium to high plasticity <30% clay Silty sand becomes drier with less plasticity.	
2	1.3	0.02				
3	1.3	1.06	X			
4	0.6	1.03				
5	1.3	6.56				
6	5.1	0.82			contamination visible with coarse black, gray fly ash with no moisture or plasticity, contamination still visible mixed with brown red silty clay.	
7	10.4	2.05				
8	7.4	2.68				
9	4.2	11.50	X		visible transition to red brown silty sand with <20% clay. Low moisture + low plasticity. red brown silty sand with buff silty sand <20% clay, turning to	
10	6.7	1.32				
11	6.1	3.12				
12	5.7	2.22			a buff silty sandstone with medium moisture / plasticity.	
13	4.9	0.36				
14	3.2	0.44				
15	3.0	0.92				
16	2.9	0.53	X			



PROJECT NAME/NUMBER: McElmo Dome						DATE/WEATHER: 6/13/16					
DRILLING FIRM/METHOD: HSA						ELEVATION:					
DRILLER & HELPERS: Kelly, Gabe, Carlos						LOGGED BY: H. Stoller					
BORING ID: GP-19-6						Location of Boring: GP-19-6					
Depth in Feet	PID (ppm)	SP Cond USCS Symbol	sample collected	Recovery (in.)	Description: (Group Name, Color, Density, Moisture, Plasticity, Soil Sampling Method, Hourly Air Monitoring Readings, Water Levels, TD)						
			Blows per six inches								
1	6.1	0.39			Red brown silty sand with <30% clay with medium moisture + plasticity. Much drier/brittle silty sand <15% clay possible contamination visible.						
2	13.2	0.64									
3	443.0	0.04	X								
4	285.6	0.14									
5	532.0	0.14									
6	334.1	0.21			Plastic liner in spoon With hard black fly ash Another layer of plastic liner, with really moist silty sand, <20% clay with no plasticity, slight visible contamination.						
7	184.2	0.43									
8	155.4	0.32									
9	95.6	1.31	X								
10	115.7	0.23									
11	215.5	0.30			transition to light buff hard silty sandstone with no plasticity or moisture. no more visible contamination.						
12	9.5	0.74									
13	7.4	0.11									
14	7.3	0.35	X								

PROJECT NAME/NUMBER: MCE/mo Dome

DATE/WEATHER: 6/13/16 cloudy

DRILLING FIRM/METHOD: H5A

**ELEVATION:**

**DRILLER & HELPERS:** Kelly, Gabe, Carlos

LOGGED BY: H. Stoller

BORING ID: GP-19-7.

Location of Boring: GP-19-7

[illegible]

PROJECT NAME/NUMBER: McElmo Dome

DATE/WEATHER: 6/13/16, cloudy/stormy

DRILLING FIRM/METHOD: H5A

**ELEVATION:**

**DRILLER & HELPERS:** Kelly, Gabe, Carlos

LOGGED BY: H. Stoller

**BORING ID:**

Location of Boring: GP-19-8

[illegible]



PROJECT NAME/NUMBER:					DATE/WEATHER:		
DRILLING FIRM/METHOD:					ELEVATION:		
DRILLER & HELPERS:					LOGGED BY:		
BORING ID: GP-19-50					Location of Boring: GP-19-50		Well Diagram
Depth in Feet	PID (ppm)	USCS Symbol	Blows per six inches	Recovery (in.)	Description: (Group Name, Color, Density, Moisture, Plasticity, Soil Sampling Method, Hourly Air Monitoring Readings, Water Levels, TD)		
5					Red brown silty sand, with some clay present. Very little moisture present.		
10					fine grained, red/orange silty sand, <20% clay no moisture present.		
15					light orange, buff silty sand becomes more fine grained, very smooth. switched over to air rotary		
20					light brown silty sand with <20% clay, fine grained no moisture.		
25					light brown silty sand		
30					continues and becomes a darker brown color, 20-30% clay present.		

PROJECT NAME/NUMBER:					DATE/WEATHER:	
DRILLING FIRM/METHOD:					ELEVATION:	
DRILLER & HELPERS:					LOGGED BY:	
BORING ID: GP-19-50					Location of Boring: GP-19-50	
Depth in Feet	PID (ppm)	USCS Symbol	Blows per six inches	Recovery (in.)	Description: (Group Name, Color, Density, Moisture, Plasticity, Soil Sampling Method, Hourly Air Monitoring Readings, Water Levels, TD)	Well Diagram
					Dark brown silty sand with ~20% clay, smooth texture, no moisture.	
35					Slowly becomes a light buff colored silty sand, becoming harder in texture. Hard drilling	
40					Dark gray silty clay, very fine grained, no moisture very smooth texture, gray silty clay darkens to almost a black very	
45					fine grained possible coal seam. Lightens to light gray, fine grained silty clay,	
50					groundwater encountered sample collected @ 1230	



# ATTACHMENT C

Photo Log



## Project Photographs

McElmo Dome  
Cortez, Colorado



**Photo: 1**

**Date:**  
6/10/16

**Description:**  
Looking east

**Location:**  
GP-19



**Photo: 2**

**Date:**  
6/10/16

**Description:**  
Looking north

**Location:**  
GP-19

## Project Photographs

McElmo Dome  
Cortez, Colorado



**Photo: 3**

**Date:**  
6/10/16

**Description:**  
Looking south

**Location:**  
GP-19



**Photo: 4**

**Date:**  
6/10/16

**Description:**  
Looking towards GP-19

**Location:**  
GP-19

# ATTACHMENT D

Field Notes





change coordinates @ GP-19

1950 - 837.4633  
-108.75391

GP-17-7

start @ 1355 3 samples

confirmation @ 4:15 ✓ GP-17-7-3 @ 1400  
end @ 1425 ✓ GP-17-7-5 @ 1410  
✓ GP-17-7-12 @ 1420

GP-17-8

start @ 1435 ✓ GP-17-8-3 @ 1445  
✓ GP-17-8-9 @ 1455  
✓ GP-17-8-14 @ 1510

6/10/16

GP-19-4

start @ 0800  
end @ 0830

slight visible contamination but  
no PID hits

0820: Jimmy left GP-19 to go to  
a few other KM sites + check  
on charger.

3 samples ✓ GP-19-4-1 @ 0805  
✓ GP-19-4-6 @ 0815  
✓ GP-19-4-12 @ 0825

GP-19-3

start @ 0840 ✓ GP-19-3-1 @ 0845  
end 0915 ✓ GP-19-3-5 @ 0855  
✓ GP-19-12 @ 0905  
4 samples taken GP-19-14 @ 0910

PID hits into 200.0's ppm

6/10/16

GP-19-2start @ 0930  
end @ 1020

✓ GP-19-2-1 @ 0935  
 ✓ GP-19-2-12 @ 0955  
 ✓ GP-19-2-18 @ 1015

3 samples - contamination  
 deeper than what we've seen  
 so far.

GP-19-7start @ 1030  
end @ 1200

✓ GP-19-7-1 @ 1035  
 ✓ GP-19-7-6 @ 1050  
 ✓ GP-19-7-20 @ 1150

3 samples  
 no contamination

struck blue 4" PVC line @ 5' in  
 spoon and cuttings came up.  
 water then came into the  
 borehole and wet cuttings  
 came up.

Called Jimmy @ 1045 and shut  
 down drilling until he came.  
 After inspection he said its  
 trash abandoned line and  
 drilling commenced @ ~~1045~~ 1115

GP-19-5start @ ~~1200~~ 1215  
end @ 1300

✓ GP-19-5-3 @ 1215  
 ✓ GP-19-5-9 @ 1225  
 ✓ GP-19-5-16 @ 1250

6/13/16

weather cloudy +  
stormyGP-19-6start @ 0950  
end @ ~~09~~ 10254 samples

✓ GP-19-6-3 @ 1000  
 ✓ GP-19-6-9 @ 1010  
 ✓ GP-19-6-14 @ 1020

GP-19-6-5 @ 1025

GP-19-7start @ 1035  
end @ 1100

3 samples

✓ GP-19-7-2 @ 1040  
 ✓ GP-19-7-8 @ 1050  
 ✓ GP-19-7-12 @ 1100

Rite in the Rain



6/13/16

GP-19-8

start @ 1110

end @ 1215

GP-19-8-3

1115 ✓

GP-19-8-8

1130 ✓

GP-19-8-10

1145

shipped off coolers w/  
GP-19 on Tues 6/14.

# ATTACHMENT E

Laboratory Analytical Reports







---

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

June 29, 2016

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

Work Order: **HS16060846**

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

Dear Aaron,

ALS Environmental received 29 sample(s) on Jun 15, 2016 for the analysis presented in the following report.

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

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

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

Sincerely,

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

Generated By: Jumoke.Lawal  
Sonia West  
Project Manager

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**Work Order:** HS16060846

**SAMPLE SUMMARY**

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS16060846-01	GP-19-6-3-061316	Soil		13-Jun-2016 10:00	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-02	GP-19-6-5-061316	Soil		13-Jun-2016 10:05	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-03	GP-19-6-9-061316	Soil		13-Jun-2016 10:10	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-04	GP-19-6-14-061316	Soil		13-Jun-2016 10:20	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-05	GP-19-7-2-061316	Soil		13-Jun-2016 10:40	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-06	GP-19-7-8-061316	Soil		13-Jun-2016 10:50	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-07	GP-19-7-12-061316	Soil		13-Jun-2016 11:10	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-08	GP-19-8-3-061316	Soil		13-Jun-2016 11:15	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-09	GP-19-8-8-061316	Soil		13-Jun-2016 11:30	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-10	GP-19-8-10-061316	Soil		13-Jun-2016 11:45	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-11	GP-19-2-1-061016	Soil		10-Jun-2016 09:35	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-12	GP-19-2-12-061016	Soil		10-Jun-2016 09:55	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-13	GP-19-2-18-061016	Soil		10-Jun-2016 10:15	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-14	GP-19-1-1-061016	Soil		10-Jun-2016 10:35	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-15	GP-19-1-6-061016	Soil		10-Jun-2016 10:50	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-16	GP-19-1-20-061016	Soil		10-Jun-2016 11:50	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-17	GP-19-5-3-061016	Soil		10-Jun-2016 12:15	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-18	GP-19-5-9-061016	Soil		10-Jun-2016 12:25	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-19	GP-19-5-16-061016	Soil		10-Jun-2016 12:50	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-20	GP-19-4-1-061016	Soil		10-Jun-2016 08:05	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-21	GP-19-4-6-061016	Soil		10-Jun-2016 08:15	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-22	GP-19-4-12-061016	Soil		10-Jun-2016 08:25	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-23	GP-19-3-1-061016	Soil		10-Jun-2016 08:45	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-24	GP-19-3-5-061016	Soil		10-Jun-2016 08:55	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-25	GP-19-3-12-061016	Soil		10-Jun-2016 09:05	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-26	GP-19-3-14-061016	Soil		10-Jun-2016 09:10	15-Jun-2016 09:05	<input type="checkbox"/>
HS16060846-27	VBLKW-053116-09	Water	VBLKW-053116-09	10-Jun-2016 00:00	15-Jun-2016 09:05	<input checked="" type="checkbox"/>

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**Work Order:** HS16060846

**SAMPLE SUMMARY**

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS16060846-28	VBKWK-053116-16	Water	VBKWK-053116-16	10-Jun-2016 00:00	15-Jun-2016 09:05	<input checked="" type="checkbox"/>
HS16060846-29	VBKWK-053116-20	Water	VBKWK-053116-20	13-Jun-2016 00:00	15-Jun-2016 09:05	<input checked="" type="checkbox"/>

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**Work Order:** HS16060846

**CASE NARRATIVE****Work Order Comments**

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

**GC Semivolatiles by Method SW8015M****Batch ID: 105640**

Sample ID: **GP-19-6-3-061316 (HS16060846-01MS)**

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: **GP-19-6-3-061316 (HS16060846-01MSD)**

- The recovery of the Matrix Spike Duplicate (MSD) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The failed recovery of the MSD may be due to sample matrix interference.

Sample ID: **GP-19-6-5-061316 (HS16060846-02)**

- The surrogate recoveries could not be determined due to dilution below the calibration range.

Sample ID: **GP-19-6-9-061316 (HS16060846-03)**

- Due to sample matrix interferences, the surrogate recovery was outside of the established control limits.

**Batch ID: 105663**

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

**GC Volatile Organics by Method SW8015****Batch ID: R276509**

Sample ID: **GP-19-5-9-061016 (HS16060846-18)**

- Surrogate failure due to sample matrix.

Sample ID: **GP-19-6-3-061316 (HS16060846-01MS)**

- The MS and/or MSD recovery was below the lower control limit.

**GC Volatiles by Method SW8015****Batch ID: R276509**

Sample ID: **GP-19-6-3-061316 (HS16060846-01MS)**

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: **GP-19-6-3-061316 (HS16060846-01MSD)**

- The recovery of the Matrix Spike Duplicate (MSD) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The failed recovery of the MSD may be due to sample matrix interference.

**Batch ID: R276511,R276584**

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

**GCMS Semivolatiles by Method SW8270****Batch ID: 105543**

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

**Batch ID: 105590**

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**Work Order:** HS16060846

**CASE NARRATIVE**

---

**GCMS Volatiles by Method SW8260****Batch ID: R276570**

Sample ID: **GP-19-5-9-061016 (HS16060846-18)**

- Surrogates failure for due to sample matrix.

Sample ID: **GP-19-3-5-061016 (HS16060846-24)**

- Surrogate failure due to sample matrix.

**Batch ID: R276485**

Sample ID: **GP-19-6-14-061316 (HS16060846-04MS)**

- MS/MSD failed QC limits for compounds.

Sample ID: **GP-19-6-3-061316 (HS16060846-01)**

Sample ID: **GP-19-6-9-061316 (HS16060846-03)**

Sample ID: **GP-19-8-3-061316 (HS16060846-08)**

- Surrogate failure due to sample matrix.

---

**Metals by Method SW7471A****Batch ID: 105679,105680**

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

---

**Metals by Method Calculation****Batch ID: R277161,R277188**

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

---

**Metals by Method SW6020****Batch ID: 105616**

Sample ID: **GP-19-6-5-061316 (HS16060846-02BS)**

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

Sample ID: **GP-19-6-5-061316 (HS16060846-02MS)**

- 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 for Barium.

Sample ID: **GP-19-6-5-061316 (HS16060846-02MSD)**

- Zinc failed in the MSD but passed in the MS and PDS.

**Batch ID: 105662**

Sample ID: **HS16061221-01MS**

- MS and MSD are for an unrelated sample

---

**Metals by Method La29B SAR****Batch ID: 105594A**

Sample ID: **GP-19-7-2-061316 (HS16060846-05)**

- Surrogate failure due to sample matrix.

**Batch ID: 105594A,105629A**

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



**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**Work Order:** HS16060846

**CASE NARRATIVE**

---

**Metals by Method La29B-6020**

**Batch ID: 105594,105629**

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

---

**WetChemistry by Method LaDNR-29B SP**

**Batch ID: R276962,R277134**

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

---

**WetChemistry by Method LaDNR-29B EC**

**Batch ID: R277018,R277219**

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

---

**WetChemistry by Method SW9045B**

**Batch ID: R276560,R276984**

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

---

**WetChemistry by Method SW7196**

**Batch ID: 105709,105740**

- 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-19-6-3-061316  
 Collection Date: 13-Jun-2016 10:00

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-01  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 21-Jun-2016		Analyst: LG
Acenaphthene	ND		9.9	ug/Kg	1	23-Jun-2016 21:46
Acenaphthylene	ND		9.9	ug/Kg	1	23-Jun-2016 21:46
Anthracene	ND		9.9	ug/Kg	1	23-Jun-2016 21:46
Benz(a)anthracene	ND		9.9	ug/Kg	1	23-Jun-2016 21:46
Benzo(a)pyrene	ND		9.9	ug/Kg	1	23-Jun-2016 21:46
Benzo(b)fluoranthene	ND		9.9	ug/Kg	1	23-Jun-2016 21:46
Benzo(g,h,i)perylene	ND		9.9	ug/Kg	1	23-Jun-2016 21:46
Benzo(k)fluoranthene	ND		9.9	ug/Kg	1	23-Jun-2016 21:46
Chrysene	ND		9.9	ug/Kg	1	23-Jun-2016 21:46
Dibenz(a,h)anthracene	ND		9.9	ug/Kg	1	23-Jun-2016 21:46
Fluoranthene	ND		9.9	ug/Kg	1	23-Jun-2016 21:46
Fluorene	ND		9.9	ug/Kg	1	23-Jun-2016 21:46
Indeno(1,2,3-cd)pyrene	ND		9.9	ug/Kg	1	23-Jun-2016 21:46
Naphthalene	ND		9.9	ug/Kg	1	23-Jun-2016 21:46
Phenanthrene	ND		9.9	ug/Kg	1	23-Jun-2016 21:46
Pyrene	ND		9.9	ug/Kg	1	23-Jun-2016 21:46
<i>Surr: 2-Fluorobiphenyl</i>	62.7		43-125	%REC	1	23-Jun-2016 21:46
<i>Surr: 4-Terphenyl-d14</i>	86.1		32-125	%REC	1	23-Jun-2016 21:46
<i>Surr: Nitrobenzene-d5</i>	68.1		37-125	%REC	1	23-Jun-2016 21:46
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>2.13</b>		<b>0.467</b>	<b>mg/Kg</b>	1	27-Jun-2016 11:50
<b>Barium</b>	<b>122</b>		<b>0.467</b>	<b>mg/Kg</b>	1	27-Jun-2016 11:50
<b>Boron</b>	<b>4.21</b>		<b>2.33</b>	<b>mg/Kg</b>	1	27-Jun-2016 11:50
Cadmium	ND		0.467	mg/Kg	1	27-Jun-2016 11:50
<b>Chromium</b>	<b>5.45</b>		<b>0.467</b>	<b>mg/Kg</b>	1	27-Jun-2016 11:50
<b>Copper</b>	<b>4.34</b>		<b>0.187</b>	<b>mg/Kg</b>	1	27-Jun-2016 11:50
<b>Lead</b>	<b>4.92</b>		<b>0.467</b>	<b>mg/Kg</b>	1	27-Jun-2016 11:50
<b>Nickel</b>	<b>6.08</b>		<b>0.467</b>	<b>mg/Kg</b>	1	27-Jun-2016 11:50
Selenium	ND		0.467	mg/Kg	1	27-Jun-2016 11:50
Silver	ND		0.467	mg/Kg	1	27-Jun-2016 11:50
<b>Zinc</b>	<b>16.1</b>		<b>0.467</b>	<b>mg/Kg</b>	1	27-Jun-2016 11:50

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-6-3-061316  
 Collection Date: 13-Jun-2016 10:00

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-01  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	17-Jun-2016 00:25
Ethylbenzene	ND		5.0	ug/Kg	1	17-Jun-2016 00:25
m,p-Xylene	ND		10	ug/Kg	1	17-Jun-2016 00:25
o-Xylene	ND		5.0	ug/Kg	1	17-Jun-2016 00:25
Toluene	ND		5.0	ug/Kg	1	17-Jun-2016 00:25
Xylenes, Total	ND		10	ug/Kg	1	17-Jun-2016 00:25
Surr: 1,2-Dichloroethane-d4	92.8		70-128	%REC	1	17-Jun-2016 00:25
Surr: 4-Bromofluorobenzene	98.5		73-126	%REC	1	17-Jun-2016 00:25
Surr: Dibromofluoromethane	69.6	S	71-128	%REC	1	17-Jun-2016 00:25
Surr: Toluene-d8	98.2		73-127	%REC	1	17-Jun-2016 00:25
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	230		4.99	mg/L	10	24-Jun-2016 12:17
Magnesium	ND		4.99	mg/L	10	24-Jun-2016 12:17
Sodium	395		4.99	mg/L	10	24-Jun-2016 12:17
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		1.99	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	5.45		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	5.86		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	4.42		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.754		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	0.40		0.050	mg/Kg	1	16-Jun-2016 21:27
Surr: 4-Bromofluorobenzene	92.8		70-130	%REC	1	16-Jun-2016 21:27
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	7.31		3.41	ug/Kg	1	24-Jun-2016 16:38
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	11.8	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.2	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.754		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	7.17		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-6-3-061316  
Collection Date: 13-Jun-2016 10:00

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-01  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH DRO/ORO BY SW8015C	Method:SW8015M			Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	58		5.0	mg/Kg	1	23-Jun-2016 19:28
Surr: 2-Fluorobiphenyl	68.5		60-135	%REC	1	23-Jun-2016 19:28

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-6-5-061316  
 Collection Date: 13-Jun-2016 10:05

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-02  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 21-Jun-2016		Analyst: LG
Acenaphthene	ND		3.3	ug/Kg	1	23-Jun-2016 22:05
Acenaphthylene	ND		3.3	ug/Kg	1	23-Jun-2016 22:05
Anthracene	ND		3.3	ug/Kg	1	23-Jun-2016 22:05
Benz(a)anthracene	ND		3.3	ug/Kg	1	23-Jun-2016 22:05
Benzo(a)pyrene	ND		3.3	ug/Kg	1	23-Jun-2016 22:05
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	23-Jun-2016 22:05
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	23-Jun-2016 22:05
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	23-Jun-2016 22:05
Chrysene	ND		3.3	ug/Kg	1	23-Jun-2016 22:05
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	23-Jun-2016 22:05
Fluoranthene	ND		3.3	ug/Kg	1	23-Jun-2016 22:05
Fluorene	ND		3.3	ug/Kg	1	23-Jun-2016 22:05
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	23-Jun-2016 22:05
Naphthalene	ND		3.3	ug/Kg	1	23-Jun-2016 22:05
Phenanthrene	ND		3.3	ug/Kg	1	23-Jun-2016 22:05
Pyrene	ND		3.3	ug/Kg	1	23-Jun-2016 22:05
<i>Surr: 2-Fluorobiphenyl</i>	92.9		43-125	%REC	1	23-Jun-2016 22:05
<i>Surr: 4-Terphenyl-d14</i>	85.4		32-125	%REC	1	23-Jun-2016 22:05
<i>Surr: Nitrobenzene-d5</i>	92.6		37-125	%REC	1	23-Jun-2016 22:05
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>3.02</b>		<b>0.476</b>	<b>mg/Kg</b>	1	27-Jun-2016 11:54
<b>Barium</b>	<b>118</b>		<b>0.476</b>	<b>mg/Kg</b>	1	27-Jun-2016 11:54
<b>Boron</b>	<b>10.1</b>		<b>2.38</b>	<b>mg/Kg</b>	1	27-Jun-2016 11:54
Cadmium	ND		0.476	mg/Kg	1	27-Jun-2016 11:54
<b>Chromium</b>	<b>7.84</b>		<b>0.476</b>	<b>mg/Kg</b>	1	27-Jun-2016 11:54
<b>Copper</b>	<b>5.40</b>		<b>0.190</b>	<b>mg/Kg</b>	1	27-Jun-2016 11:54
<b>Lead</b>	<b>5.04</b>		<b>0.476</b>	<b>mg/Kg</b>	1	27-Jun-2016 11:54
<b>Nickel</b>	<b>4.75</b>		<b>0.476</b>	<b>mg/Kg</b>	1	27-Jun-2016 11:54
Selenium	ND		0.476	mg/Kg	1	27-Jun-2016 11:54
Silver	ND		0.476	mg/Kg	1	27-Jun-2016 11:54
<b>Zinc</b>	<b>26.0</b>		<b>0.476</b>	<b>mg/Kg</b>	1	27-Jun-2016 11:54

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



Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-6-5-061316  
 Collection Date: 13-Jun-2016 10:05

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-02  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	17-Jun-2016 00:48
Ethylbenzene	ND		5.0	ug/Kg	1	17-Jun-2016 00:48
m,p-Xylene	ND		10	ug/Kg	1	17-Jun-2016 00:48
o-Xylene	ND		5.0	ug/Kg	1	17-Jun-2016 00:48
Toluene	ND		5.0	ug/Kg	1	17-Jun-2016 00:48
Xylenes, Total	ND		10	ug/Kg	1	17-Jun-2016 00:48
Surr: 1,2-Dichloroethane-d4	96.4		70-128	%REC	1	17-Jun-2016 00:48
Surr: 4-Bromofluorobenzene	98.7		73-126	%REC	1	17-Jun-2016 00:48
Surr: Dibromofluoromethane	67.3	S	71-128	%REC	1	17-Jun-2016 00:48
Surr: Toluene-d8	96.6		73-127	%REC	1	17-Jun-2016 00:48
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	193		4.99	mg/L	10	24-Jun-2016 12:20
Magnesium	ND		4.99	mg/L	10	24-Jun-2016 12:20
Sodium	551		4.99	mg/L	10	24-Jun-2016 12:20
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		2.00	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	7.84		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	7.13		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	5.21		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.731		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	0.87		0.050	mg/Kg	1	16-Jun-2016 22:15
Surr: 4-Bromofluorobenzene	75.4		70-130	%REC	1	16-Jun-2016 22:15
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	6.40		3.63	ug/Kg	1	24-Jun-2016 16:40
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	11.7	H	0.100	pH Units	1	17-Jun-2016 16:05
Temp Deg C @pH	24.9	H	0	°C	1	17-Jun-2016 16:05
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.731		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	10.9		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-6-5-061316  
Collection Date: 13-Jun-2016 10:05

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-02  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH DRO/ORO BY SW8015C	Method:SW8015M			Prep:SW3541 / 23-Jun-2016	Analyst: AAP	
TPH (Diesel Range)	680		340	mg/Kg	200	28-Jun-2016 17:27
Surr: 2-Fluorobiphenyl	0	JS	60-135	%REC	200	28-Jun-2016 17:27

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-6-9-061316  
 Collection Date: 13-Jun-2016 10:10

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-03  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 21-Jun-2016		Analyst: LG
Acenaphthene	ND		3.3	ug/Kg	1	23-Jun-2016 22:24
Acenaphthylene	ND		3.3	ug/Kg	1	23-Jun-2016 22:24
Anthracene	ND		3.3	ug/Kg	1	23-Jun-2016 22:24
Benz(a)anthracene	ND		3.3	ug/Kg	1	23-Jun-2016 22:24
Benzo(a)pyrene	ND		3.3	ug/Kg	1	23-Jun-2016 22:24
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	23-Jun-2016 22:24
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	23-Jun-2016 22:24
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	23-Jun-2016 22:24
Chrysene	ND		3.3	ug/Kg	1	23-Jun-2016 22:24
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	23-Jun-2016 22:24
Fluoranthene	ND		3.3	ug/Kg	1	23-Jun-2016 22:24
Fluorene	ND		3.3	ug/Kg	1	23-Jun-2016 22:24
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	23-Jun-2016 22:24
Naphthalene	ND		3.3	ug/Kg	1	23-Jun-2016 22:24
<b>Phenanthrene</b>	<b>3.9</b>		<b>3.3</b>	<b>ug/Kg</b>	1	23-Jun-2016 22:24
Pyrene	ND		3.3	ug/Kg	1	23-Jun-2016 22:24
<i>Surr: 2-Fluorobiphenyl</i>	<i>123</i>		<i>43-125</i>	<i>%REC</i>	<i>1</i>	<i>23-Jun-2016 22:24</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>89.9</i>		<i>32-125</i>	<i>%REC</i>	<i>1</i>	<i>23-Jun-2016 22:24</i>
<i>Surr: Nitrobenzene-d5</i>	<i>80.8</i>		<i>37-125</i>	<i>%REC</i>	<i>1</i>	<i>23-Jun-2016 22:24</i>
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>2.70</b>		<b>0.459</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:33
<b>Barium</b>	<b>140</b>		<b>0.459</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:33
<b>Boron</b>	<b>10.4</b>		<b>2.30</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:33
Cadmium	ND		0.459	mg/Kg	1	27-Jun-2016 12:33
<b>Chromium</b>	<b>8.47</b>		<b>0.459</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:33
<b>Copper</b>	<b>5.66</b>		<b>0.184</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:33
<b>Lead</b>	<b>5.37</b>		<b>0.459</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:33
<b>Nickel</b>	<b>5.82</b>		<b>0.459</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:33
Selenium	ND		0.459	mg/Kg	1	27-Jun-2016 12:33
Silver	ND		0.459	mg/Kg	1	27-Jun-2016 12:33
<b>Zinc</b>	<b>24.8</b>		<b>0.459</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:33

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-6-9-061316  
 Collection Date: 13-Jun-2016 10:10

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-03  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	17-Jun-2016 01:12
Ethylbenzene	ND		4.8	ug/Kg	1	17-Jun-2016 01:12
m,p-Xylene	ND		9.5	ug/Kg	1	17-Jun-2016 01:12
o-Xylene	ND		4.8	ug/Kg	1	17-Jun-2016 01:12
Toluene	ND		4.8	ug/Kg	1	17-Jun-2016 01:12
Xylenes, Total	ND		9.5	ug/Kg	1	17-Jun-2016 01:12
Surr: 1,2-Dichloroethane-d4	94.5		70-128	%REC	1	17-Jun-2016 01:12
Surr: 4-Bromofluorobenzene	98.3		73-126	%REC	1	17-Jun-2016 01:12
Surr: Dibromofluoromethane	65.6	S	71-128	%REC	1	17-Jun-2016 01:12
Surr: Toluene-d8	97.6		73-127	%REC	1	17-Jun-2016 01:12
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	318		4.99	mg/L	10	24-Jun-2016 12:23
Magnesium	ND		4.99	mg/L	10	24-Jun-2016 12:23
Sodium	610		4.99	mg/L	10	24-Jun-2016 12:23
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		2.00	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	8.47		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	9.74		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	5.30		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.544		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	0.78		0.050	mg/Kg	1	16-Jun-2016 22:31
Surr: 4-Bromofluorobenzene	88.4		70-130	%REC	1	16-Jun-2016 22:31
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	7.45		3.57	ug/Kg	1	24-Jun-2016 16:42
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	11.5	H	0.100	pH Units	1	17-Jun-2016 16:05
Temp Deg C @pH	24.9	H	0	°C	1	17-Jun-2016 16:05
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.544		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	9.42		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-6-9-061316  
Collection Date: 13-Jun-2016 10:10

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-03  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH DRO/ORO BY SW8015C	Method:SW8015M			Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	250		10	mg/Kg	5	28-Jun-2016 17:03
Surr: 2-Fluorobiphenyl	187	S	60-135	%REC	5	28-Jun-2016 17:03

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



Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-6-14-061316  
 Collection Date: 13-Jun-2016 10:20

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-04  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 21-Jun-2016		Analyst: LG
Acenaphthene	ND		3.3	ug/Kg	1	23-Jun-2016 22:44
Acenaphthylene	ND		3.3	ug/Kg	1	23-Jun-2016 22:44
Anthracene	ND		3.3	ug/Kg	1	23-Jun-2016 22:44
Benz(a)anthracene	ND		3.3	ug/Kg	1	23-Jun-2016 22:44
Benzo(a)pyrene	ND		3.3	ug/Kg	1	23-Jun-2016 22:44
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	23-Jun-2016 22:44
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	23-Jun-2016 22:44
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	23-Jun-2016 22:44
Chrysene	ND		3.3	ug/Kg	1	23-Jun-2016 22:44
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	23-Jun-2016 22:44
Fluoranthene	ND		3.3	ug/Kg	1	23-Jun-2016 22:44
Fluorene	ND		3.3	ug/Kg	1	23-Jun-2016 22:44
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	23-Jun-2016 22:44
Naphthalene	ND		3.3	ug/Kg	1	23-Jun-2016 22:44
Phenanthrene	ND		3.3	ug/Kg	1	23-Jun-2016 22:44
Pyrene	ND		3.3	ug/Kg	1	23-Jun-2016 22:44
Surr: 2-Fluorobiphenyl	80.2		43-125	%REC	1	23-Jun-2016 22:44
Surr: 4-Terphenyl-d14	92.5		32-125	%REC	1	23-Jun-2016 22:44
Surr: Nitrobenzene-d5	56.6		37-125	%REC	1	23-Jun-2016 22:44
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
Arsenic	5.73		0.478	mg/Kg	1	27-Jun-2016 12:41
Barium	30.2		0.478	mg/Kg	1	27-Jun-2016 12:41
Boron	8.64		2.39	mg/Kg	1	27-Jun-2016 12:41
Cadmium	ND		0.478	mg/Kg	1	27-Jun-2016 12:41
Chromium	6.39		0.478	mg/Kg	1	27-Jun-2016 12:41
Copper	14.2		0.191	mg/Kg	1	27-Jun-2016 12:41
Lead	10.8		0.478	mg/Kg	1	27-Jun-2016 12:41
Nickel	19.8		0.478	mg/Kg	1	27-Jun-2016 12:41
Selenium	ND		0.478	mg/Kg	1	27-Jun-2016 12:41
Silver	ND		0.478	mg/Kg	1	27-Jun-2016 12:41
Zinc	52.0		0.478	mg/Kg	1	27-Jun-2016 12:41

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-6-14-061316  
 Collection Date: 13-Jun-2016 10:20

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-04  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	17-Jun-2016 01:35
Ethylbenzene	ND		5.0	ug/Kg	1	17-Jun-2016 01:35
m,p-Xylene	ND		9.9	ug/Kg	1	17-Jun-2016 01:35
o-Xylene	ND		5.0	ug/Kg	1	17-Jun-2016 01:35
Toluene	ND		5.0	ug/Kg	1	17-Jun-2016 01:35
Xylenes, Total	ND		9.9	ug/Kg	1	17-Jun-2016 01:35
Surr: 1,2-Dichloroethane-d4	100		70-128	%REC	1	17-Jun-2016 01:35
Surr: 4-Bromofluorobenzene	98.6		73-126	%REC	1	17-Jun-2016 01:35
Surr: Dibromofluoromethane	110		71-128	%REC	1	17-Jun-2016 01:35
Surr: Toluene-d8	98.1		73-127	%REC	1	17-Jun-2016 01:35
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	14.5		4.99	mg/L	10	24-Jun-2016 12:26
Magnesium	5.20		4.99	mg/L	10	24-Jun-2016 12:26
Sodium	37.2		4.99	mg/L	10	24-Jun-2016 12:26
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		1.99	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	6.39		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	0.517		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	0.327		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.633		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Jun-2016 22:47
Surr: 4-Bromofluorobenzene	84.4		70-130	%REC	1	16-Jun-2016 22:47
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	65.6		3.46	ug/Kg	1	24-Jun-2016 16:47
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	8.67	H	0.100	pH Units	1	17-Jun-2016 16:05
Temp Deg C @pH	24.9	H	0	°C	1	17-Jun-2016 16:05
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.633		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	2.13		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-6-14-061316  
Collection Date: 13-Jun-2016 10:20

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-04  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>TPH DRO/ORO BY SW8015C</b>		<b>Method:SW8015M</b>		Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	23-Jun-2016 21:29
Surr: 2-Fluorobiphenyl	71.7		60-135	%REC	1	23-Jun-2016 21:29

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-7-2-061316  
 Collection Date: 13-Jun-2016 10:40

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-05  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 21-Jun-2016		Analyst: LG
Acenaphthene	ND		3.3	ug/Kg	1	24-Jun-2016 19:41
Acenaphthylene	ND		3.3	ug/Kg	1	24-Jun-2016 19:41
Anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 19:41
Benz(a)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 19:41
Benzo(a)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 19:41
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 19:41
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	24-Jun-2016 19:41
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 19:41
Chrysene	ND		3.3	ug/Kg	1	24-Jun-2016 19:41
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 19:41
Fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 19:41
Fluorene	ND		3.3	ug/Kg	1	24-Jun-2016 19:41
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 19:41
Naphthalene	ND		3.3	ug/Kg	1	24-Jun-2016 19:41
Phenanthrene	ND		3.3	ug/Kg	1	24-Jun-2016 19:41
Pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 19:41
<i>Surr: 2-Fluorobiphenyl</i>	59.9		43-125	%REC	1	24-Jun-2016 19:41
<i>Surr: 4-Terphenyl-d14</i>	74.3		32-125	%REC	1	24-Jun-2016 19:41
<i>Surr: Nitrobenzene-d5</i>	70.5		37-125	%REC	1	24-Jun-2016 19:41
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>2.47</b>		<b>0.475</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:46
<b>Barium</b>	<b>113</b>		<b>0.475</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:46
<b>Boron</b>	<b>9.34</b>		<b>2.37</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:46
Cadmium	ND		0.475	mg/Kg	1	27-Jun-2016 12:46
<b>Chromium</b>	<b>6.74</b>		<b>0.475</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:46
<b>Copper</b>	<b>5.49</b>		<b>0.190</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:46
<b>Lead</b>	<b>5.58</b>		<b>0.475</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:46
<b>Nickel</b>	<b>5.55</b>		<b>0.475</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:46
Selenium	ND		0.475	mg/Kg	1	27-Jun-2016 12:46
Silver	ND		0.475	mg/Kg	1	27-Jun-2016 12:46
<b>Zinc</b>	<b>23.9</b>		<b>0.475</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:46

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-7-2-061316  
 Collection Date: 13-Jun-2016 10:40

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-05  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	17-Jun-2016 01:58
Ethylbenzene	ND		4.8	ug/Kg	1	17-Jun-2016 01:58
m,p-Xylene	ND		9.7	ug/Kg	1	17-Jun-2016 01:58
o-Xylene	ND		4.8	ug/Kg	1	17-Jun-2016 01:58
Toluene	ND		4.8	ug/Kg	1	17-Jun-2016 01:58
Xylenes, Total	ND		9.7	ug/Kg	1	17-Jun-2016 01:58
Surr: 1,2-Dichloroethane-d4	89.4		70-128	%REC	1	17-Jun-2016 01:58
Surr: 4-Bromofluorobenzene	98.2		73-126	%REC	1	17-Jun-2016 01:58
Surr: Dibromofluoromethane	68.6	S	71-128	%REC	1	17-Jun-2016 01:58
Surr: Toluene-d8	97.9		73-127	%REC	1	17-Jun-2016 01:58
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	411		4.99	mg/L	10	24-Jun-2016 12:29
Magnesium	ND		4.99	mg/L	10	24-Jun-2016 12:29
Sodium	756		4.99	mg/L	10	24-Jun-2016 12:29
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		2.00	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	6.74		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	10.6		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	6.83		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.647		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	0.088		0.050	mg/Kg	1	16-Jun-2016 23:03
Surr: 4-Bromofluorobenzene	82.7		70-130	%REC	1	16-Jun-2016 23:03
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	4.80		3.57	ug/Kg	1	24-Jun-2016 16:49
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	11.7	H	0.100	pH Units	1	17-Jun-2016 16:05
Temp Deg C @pH	24.8	H	0	°C	1	17-Jun-2016 16:05
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.647		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	10.3		0.0100	meq/meq	1	28-Jun-2016 09:24

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



Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-7-2-061316  
Collection Date: 13-Jun-2016 10:40

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-05  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH DRO/ORO BY SW8015C	Method:SW8015M			Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	20		1.7	mg/Kg	1	23-Jun-2016 21:53
Surr: 2-Fluorobiphenyl	63.7		60-135	%REC	1	23-Jun-2016 21:53

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-7-8-061316  
 Collection Date: 13-Jun-2016 10:50

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-06  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 21-Jun-2016		Analyst: LG
Acenaphthene	ND		3.3	ug/Kg	1	24-Jun-2016 20:00
Acenaphthylene	ND		3.3	ug/Kg	1	24-Jun-2016 20:00
Anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 20:00
Benz(a)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 20:00
Benzo(a)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 20:00
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 20:00
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	24-Jun-2016 20:00
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 20:00
Chrysene	ND		3.3	ug/Kg	1	24-Jun-2016 20:00
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 20:00
Fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 20:00
Fluorene	ND		3.3	ug/Kg	1	24-Jun-2016 20:00
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 20:00
Naphthalene	ND		3.3	ug/Kg	1	24-Jun-2016 20:00
Phenanthrene	ND		3.3	ug/Kg	1	24-Jun-2016 20:00
Pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 20:00
<i>Surr: 2-Fluorobiphenyl</i>	64.4		43-125	%REC	1	24-Jun-2016 20:00
<i>Surr: 4-Terphenyl-d14</i>	79.6		32-125	%REC	1	24-Jun-2016 20:00
<i>Surr: Nitrobenzene-d5</i>	89.7		37-125	%REC	1	24-Jun-2016 20:00
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>3.36</b>		<b>0.489</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:50
<b>Barium</b>	<b>64.0</b>		<b>0.489</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:50
<b>Boron</b>	<b>4.75</b>		<b>2.45</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:50
Cadmium	ND		0.489	mg/Kg	1	27-Jun-2016 12:50
<b>Chromium</b>	<b>6.47</b>		<b>0.489</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:50
<b>Copper</b>	<b>8.54</b>		<b>0.196</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:50
<b>Lead</b>	<b>10.2</b>		<b>0.489</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:50
<b>Nickel</b>	<b>11.1</b>		<b>0.489</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:50
Selenium	ND		0.489	mg/Kg	1	27-Jun-2016 12:50
Silver	ND		0.489	mg/Kg	1	27-Jun-2016 12:50
<b>Zinc</b>	<b>28.7</b>		<b>0.489</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:50

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-7-8-061316  
 Collection Date: 13-Jun-2016 10:50

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-06  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.9	ug/Kg	1	17-Jun-2016 05:05
Ethylbenzene	ND		4.9	ug/Kg	1	17-Jun-2016 05:05
m,p-Xylene	ND		9.8	ug/Kg	1	17-Jun-2016 05:05
o-Xylene	ND		4.9	ug/Kg	1	17-Jun-2016 05:05
Toluene	ND		4.9	ug/Kg	1	17-Jun-2016 05:05
Xylenes, Total	ND		9.8	ug/Kg	1	17-Jun-2016 05:05
Surr: 1,2-Dichloroethane-d4	93.6		70-128	%REC	1	17-Jun-2016 05:05
Surr: 4-Bromofluorobenzene	99.4		73-126	%REC	1	17-Jun-2016 05:05
Surr: Dibromofluoromethane	106		71-128	%REC	1	17-Jun-2016 05:05
Surr: Toluene-d8	99.0		73-127	%REC	1	17-Jun-2016 05:05
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	23.9		4.99	mg/L	10	24-Jun-2016 12:31
Magnesium	10.00		4.99	mg/L	10	24-Jun-2016 12:31
Sodium	63.7		4.99	mg/L	10	24-Jun-2016 12:31
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		1.99	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	6.47		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	1.07		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	0.592		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.552		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Jun-2016 23:52
Surr: 4-Bromofluorobenzene	78.7		70-130	%REC	1	16-Jun-2016 23:52
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	17.0		3.57	ug/Kg	1	24-Jun-2016 16:50
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	8.64	H	0.100	pH Units	1	17-Jun-2016 16:05
Temp Deg C @pH	25.0	H	0	°C	1	17-Jun-2016 16:05
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.552		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	2.76		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-7-8-061316  
Collection Date: 13-Jun-2016 10:50

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-06  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>TPH DRO/ORO BY SW8015C</b>	<b>Method:SW8015M</b>			Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	23-Jun-2016 22:17
Surr: 2-Fluorobiphenyl	70.8		60-135	%REC	1	23-Jun-2016 22:17

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-7-12-061316  
 Collection Date: 13-Jun-2016 11:10

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-07  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 21-Jun-2016		Analyst: LG
Acenaphthene	ND		3.3	ug/Kg	1	24-Jun-2016 20:19
Acenaphthylene	ND		3.3	ug/Kg	1	24-Jun-2016 20:19
Anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 20:19
Benz(a)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 20:19
Benzo(a)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 20:19
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 20:19
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	24-Jun-2016 20:19
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 20:19
Chrysene	ND		3.3	ug/Kg	1	24-Jun-2016 20:19
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 20:19
Fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 20:19
Fluorene	ND		3.3	ug/Kg	1	24-Jun-2016 20:19
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 20:19
Naphthalene	ND		3.3	ug/Kg	1	24-Jun-2016 20:19
Phenanthrene	ND		3.3	ug/Kg	1	24-Jun-2016 20:19
Pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 20:19
<i>Surr: 2-Fluorobiphenyl</i>	71.0		43-125	%REC	1	24-Jun-2016 20:19
<i>Surr: 4-Terphenyl-d14</i>	89.4		32-125	%REC	1	24-Jun-2016 20:19
<i>Surr: Nitrobenzene-d5</i>	79.2		37-125	%REC	1	24-Jun-2016 20:19
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>3.77</b>		<b>0.472</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:54
<b>Barium</b>	<b>35.9</b>		<b>0.472</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:54
<b>Boron</b>	<b>4.63</b>		<b>2.36</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:54
Cadmium	ND		0.472	mg/Kg	1	27-Jun-2016 12:54
<b>Chromium</b>	<b>4.99</b>		<b>0.472</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:54
<b>Copper</b>	<b>9.56</b>		<b>0.189</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:54
<b>Lead</b>	<b>9.92</b>		<b>0.472</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:54
<b>Nickel</b>	<b>14.1</b>		<b>0.472</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:54
Selenium	ND		0.472	mg/Kg	1	27-Jun-2016 12:54
Silver	ND		0.472	mg/Kg	1	27-Jun-2016 12:54
<b>Zinc</b>	<b>41.4</b>		<b>0.472</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:54

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



Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-7-12-061316  
 Collection Date: 13-Jun-2016 11:10

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-07  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	17-Jun-2016 05:29
Ethylbenzene	ND		4.8	ug/Kg	1	17-Jun-2016 05:29
m,p-Xylene	ND		9.6	ug/Kg	1	17-Jun-2016 05:29
o-Xylene	ND		4.8	ug/Kg	1	17-Jun-2016 05:29
Toluene	ND		4.8	ug/Kg	1	17-Jun-2016 05:29
Xylenes, Total	ND		9.6	ug/Kg	1	17-Jun-2016 05:29
Surr: 1,2-Dichloroethane-d4	97.8		70-128	%REC	1	17-Jun-2016 05:29
Surr: 4-Bromofluorobenzene	99.3		73-126	%REC	1	17-Jun-2016 05:29
Surr: Dibromofluoromethane	108		71-128	%REC	1	17-Jun-2016 05:29
Surr: Toluene-d8	100		73-127	%REC	1	17-Jun-2016 05:29
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	17.0		5.00	mg/L	10	24-Jun-2016 12:37
Magnesium	6.62		5.00	mg/L	10	24-Jun-2016 12:37
Sodium	16.3		5.00	mg/L	10	24-Jun-2016 12:37
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		2.00	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	0.245		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	0.137		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.559		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 00:08
Surr: 4-Bromofluorobenzene	90.5		70-130	%REC	1	17-Jun-2016 00:08
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	35.1		3.51	ug/Kg	1	24-Jun-2016 16:52
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	8.76	H	0.100	pH Units	1	17-Jun-2016 16:05
Temp Deg C @pH	24.9	H	0	°C	1	17-Jun-2016 16:05
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.559		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	0.850		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-7-12-061316  
Collection Date: 13-Jun-2016 11:10

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-07  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	23-Jun-2016 22:41
Surr: 2-Fluorobiphenyl	60.3		60-135	%REC	1	23-Jun-2016 22:41

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-8-3-061316  
 Collection Date: 13-Jun-2016 11:15

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-08  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 21-Jun-2016		Analyst: LG
Acenaphthene	ND		3.3	ug/Kg	1	24-Jun-2016 20:38
Acenaphthylene	ND		3.3	ug/Kg	1	24-Jun-2016 20:38
Anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 20:38
Benz(a)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 20:38
Benzo(a)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 20:38
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 20:38
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	24-Jun-2016 20:38
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 20:38
Chrysene	ND		3.3	ug/Kg	1	24-Jun-2016 20:38
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 20:38
Fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 20:38
Fluorene	ND		3.3	ug/Kg	1	24-Jun-2016 20:38
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 20:38
Naphthalene	ND		3.3	ug/Kg	1	24-Jun-2016 20:38
Phenanthrene	ND		3.3	ug/Kg	1	24-Jun-2016 20:38
Pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 20:38
<i>Surr: 2-Fluorobiphenyl</i>	<i>54.0</i>		<i>43-125</i>	<i>%REC</i>	<i>1</i>	<i>24-Jun-2016 20:38</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>79.1</i>		<i>32-125</i>	<i>%REC</i>	<i>1</i>	<i>24-Jun-2016 20:38</i>
<i>Surr: Nitrobenzene-d5</i>	<i>55.7</i>		<i>37-125</i>	<i>%REC</i>	<i>1</i>	<i>24-Jun-2016 20:38</i>
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>2.89</b>		<b>0.461</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:59
<b>Barium</b>	<b>63.8</b>		<b>0.461</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:59
<b>Boron</b>	<b>17.0</b>		<b>2.31</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:59
Cadmium	ND		0.461	mg/Kg	1	27-Jun-2016 12:59
<b>Chromium</b>	<b>7.61</b>		<b>0.461</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:59
<b>Copper</b>	<b>4.17</b>		<b>0.185</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:59
<b>Lead</b>	<b>6.10</b>		<b>0.461</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:59
<b>Nickel</b>	<b>5.12</b>		<b>0.461</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:59
<b>Selenium</b>	<b>0.571</b>		<b>0.461</b>	<b>mg/Kg</b>	1	27-Jun-2016 12:59
Silver	ND		0.461	mg/Kg	1	27-Jun-2016 12:59
<b>Zinc</b>	<b>221</b>		<b>4.61</b>	<b>mg/Kg</b>	10	27-Jun-2016 15:26

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-8-3-061316  
 Collection Date: 13-Jun-2016 11:15

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-08  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	17-Jun-2016 02:22
Ethylbenzene	ND		4.8	ug/Kg	1	17-Jun-2016 02:22
m,p-Xylene	ND		9.5	ug/Kg	1	17-Jun-2016 02:22
o-Xylene	ND		4.8	ug/Kg	1	17-Jun-2016 02:22
Toluene	ND		4.8	ug/Kg	1	17-Jun-2016 02:22
Xylenes, Total	ND		9.5	ug/Kg	1	17-Jun-2016 02:22
Surr: 1,2-Dichloroethane-d4	101		70-128	%REC	1	17-Jun-2016 02:22
Surr: 4-Bromofluorobenzene	99.0		73-126	%REC	1	17-Jun-2016 02:22
Surr: Dibromofluoromethane	27.7	S	71-128	%REC	1	17-Jun-2016 02:22
Surr: Toluene-d8	96.4		73-127	%REC	1	17-Jun-2016 02:22
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	1,630		4.99	mg/L	10	24-Jun-2016 12:40
Magnesium	ND		4.99	mg/L	10	24-Jun-2016 12:40
Sodium	13,100		49.9	mg/L	100	24-Jun-2016 13:30
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		1.99	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	7.61		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	155		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	92.9		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.599		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	0.24		0.050	mg/Kg	1	17-Jun-2016 00:24
Surr: 4-Bromofluorobenzene	88.2		70-130	%REC	1	17-Jun-2016 00:24
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	5.90		3.46	ug/Kg	1	24-Jun-2016 16:54
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	11.0	H	0.100	pH Units	1	17-Jun-2016 16:05
Temp Deg C @pH	24.9	H	0	°C	1	17-Jun-2016 16:05
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.599		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	89.4		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-8-3-061316  
Collection Date: 13-Jun-2016 11:15

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-08  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH DRO/ORO BY SW8015C	Method:SW8015M			Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	4.5		1.7	mg/Kg	1	23-Jun-2016 23:05
Surr: 2-Fluorobiphenyl	67.3		60-135	%REC	1	23-Jun-2016 23:05

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-8-8-061316  
 Collection Date: 13-Jun-2016 11:30

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-09  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 21-Jun-2016		Analyst: LG
Acenaphthene	ND		3.3	ug/Kg	1	24-Jun-2016 20:58
Acenaphthylene	ND		3.3	ug/Kg	1	24-Jun-2016 20:58
Anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 20:58
Benz(a)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 20:58
Benzo(a)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 20:58
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 20:58
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	24-Jun-2016 20:58
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 20:58
Chrysene	ND		3.3	ug/Kg	1	24-Jun-2016 20:58
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 20:58
Fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 20:58
Fluorene	ND		3.3	ug/Kg	1	24-Jun-2016 20:58
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 20:58
Naphthalene	ND		3.3	ug/Kg	1	24-Jun-2016 20:58
Phenanthrene	ND		3.3	ug/Kg	1	24-Jun-2016 20:58
Pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 20:58
<i>Surr: 2-Fluorobiphenyl</i>	<i>73.0</i>		<i>43-125</i>	<i>%REC</i>	<i>1</i>	<i>24-Jun-2016 20:58</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>85.2</i>		<i>32-125</i>	<i>%REC</i>	<i>1</i>	<i>24-Jun-2016 20:58</i>
<i>Surr: Nitrobenzene-d5</i>	<i>87.8</i>		<i>37-125</i>	<i>%REC</i>	<i>1</i>	<i>24-Jun-2016 20:58</i>
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>3.68</b>		<b>0.489</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:03
<b>Barium</b>	<b>182</b>		<b>4.89</b>	<b>mg/Kg</b>	10	27-Jun-2016 15:31
<b>Boron</b>	<b>5.43</b>		<b>2.45</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:03
Cadmium	ND		0.489	mg/Kg	1	27-Jun-2016 13:03
<b>Chromium</b>	<b>3.47</b>		<b>0.489</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:03
<b>Copper</b>	<b>4.72</b>		<b>0.196</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:03
<b>Lead</b>	<b>5.19</b>		<b>0.489</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:03
<b>Nickel</b>	<b>6.55</b>		<b>0.489</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:03
<b>Selenium</b>	<b>0.561</b>		<b>0.489</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:03
Silver	ND		0.489	mg/Kg	1	27-Jun-2016 13:03
<b>Zinc</b>	<b>18.4</b>		<b>0.489</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:03

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



Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-8-8-061316  
 Collection Date: 13-Jun-2016 11:30

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-09  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	17-Jun-2016 05:52
Ethylbenzene	ND		4.8	ug/Kg	1	17-Jun-2016 05:52
m,p-Xylene	ND		9.7	ug/Kg	1	17-Jun-2016 05:52
o-Xylene	ND		4.8	ug/Kg	1	17-Jun-2016 05:52
Toluene	ND		4.8	ug/Kg	1	17-Jun-2016 05:52
Xylenes, Total	ND		9.7	ug/Kg	1	17-Jun-2016 05:52
Surr: 1,2-Dichloroethane-d4	102		70-128	%REC	1	17-Jun-2016 05:52
Surr: 4-Bromofluorobenzene	101		73-126	%REC	1	17-Jun-2016 05:52
Surr: Dibromofluoromethane	112		71-128	%REC	1	17-Jun-2016 05:52
Surr: Toluene-d8	97.6		73-127	%REC	1	17-Jun-2016 05:52
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	827		5.00	mg/L	10	24-Jun-2016 12:49
Magnesium	159		5.00	mg/L	10	24-Jun-2016 12:49
Sodium	7,660		50.0	mg/L	100	24-Jun-2016 13:33
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		1.99	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	64.0		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	52.6		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.822		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 00:40
Surr: 4-Bromofluorobenzene	89.3		70-130	%REC	1	17-Jun-2016 00:40
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	15.5		3.52	ug/Kg	1	24-Jun-2016 16:56
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	8.18	H	0.100	pH Units	1	17-Jun-2016 16:05
Temp Deg C @pH	25.0	H	0	°C	1	17-Jun-2016 16:05
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.651		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	63.9		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-8-8-061316  
Collection Date: 13-Jun-2016 11:30

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-09  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>TPH DRO/ORO BY SW8015C</b>		<b>Method:SW8015M</b>		Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	ND		3.4	mg/Kg	1	28-Jun-2016 16:14
TPH (Diesel Range)	ND		3.4	mg/Kg	1	28-Jun-2016 16:14
Surr: 2-Fluorobiphenyl	76.3		60-135	%REC	1	28-Jun-2016 16:14
Surr: 2-Fluorobiphenyl	76.3		60-135	%REC	1	28-Jun-2016 16:14

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-8-10-061316  
 Collection Date: 13-Jun-2016 11:45

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-10  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 21-Jun-2016		Analyst: LG
Acenaphthene	ND		3.3	ug/Kg	1	24-Jun-2016 21:17
Acenaphthylene	ND		3.3	ug/Kg	1	24-Jun-2016 21:17
Anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 21:17
Benz(a)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 21:17
Benzo(a)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 21:17
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 21:17
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	24-Jun-2016 21:17
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 21:17
Chrysene	ND		3.3	ug/Kg	1	24-Jun-2016 21:17
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 21:17
Fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 21:17
Fluorene	ND		3.3	ug/Kg	1	24-Jun-2016 21:17
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 21:17
Naphthalene	ND		3.3	ug/Kg	1	24-Jun-2016 21:17
Phenanthrene	ND		3.3	ug/Kg	1	24-Jun-2016 21:17
Pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 21:17
<i>Surr: 2-Fluorobiphenyl</i>	68.5		43-125	%REC	1	24-Jun-2016 21:17
<i>Surr: 4-Terphenyl-d14</i>	88.5		32-125	%REC	1	24-Jun-2016 21:17
<i>Surr: Nitrobenzene-d5</i>	82.0		37-125	%REC	1	24-Jun-2016 21:17
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>4.24</b>		<b>0.461</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:07
<b>Barium</b>	<b>24.1</b>		<b>0.461</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:07
<b>Boron</b>	<b>5.32</b>		<b>2.30</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:07
Cadmium	ND		0.461	mg/Kg	1	27-Jun-2016 13:07
<b>Chromium</b>	<b>4.25</b>		<b>0.461</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:07
<b>Copper</b>	<b>7.17</b>		<b>0.184</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:07
<b>Lead</b>	<b>5.50</b>		<b>0.461</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:07
<b>Nickel</b>	<b>9.08</b>		<b>0.461</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:07
<b>Selenium</b>	<b>0.719</b>		<b>0.461</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:07
Silver	ND		0.461	mg/Kg	1	27-Jun-2016 13:07
<b>Zinc</b>	<b>30.7</b>		<b>0.461</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:07

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-8-10-061316  
 Collection Date: 13-Jun-2016 11:45

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-10  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.9	ug/Kg	1	17-Jun-2016 06:15
Ethylbenzene	ND		4.9	ug/Kg	1	17-Jun-2016 06:15
m,p-Xylene	ND		9.8	ug/Kg	1	17-Jun-2016 06:15
o-Xylene	ND		4.9	ug/Kg	1	17-Jun-2016 06:15
Toluene	ND		4.9	ug/Kg	1	17-Jun-2016 06:15
Xylenes, Total	ND		9.8	ug/Kg	1	17-Jun-2016 06:15
Surr: 1,2-Dichloroethane-d4	101		70-128	%REC	1	17-Jun-2016 06:15
Surr: 4-Bromofluorobenzene	102		73-126	%REC	1	17-Jun-2016 06:15
Surr: Dibromofluoromethane	111		71-128	%REC	1	17-Jun-2016 06:15
Surr: Toluene-d8	99.7		73-127	%REC	1	17-Jun-2016 06:15
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	966		4.99	mg/L	10	24-Jun-2016 12:52
Magnesium	269		4.99	mg/L	10	24-Jun-2016 12:52
Sodium	1,290		4.99	mg/L	10	24-Jun-2016 12:52
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		1.99	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	26.8		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	17.4		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.651		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 15:47
Surr: 4-Bromofluorobenzene	78.0		70-130	%REC	1	17-Jun-2016 15:47
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	38.6		3.58	ug/Kg	1	24-Jun-2016 16:57
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	7.75	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	23.8	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.822		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	9.46		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-8-10-061316  
Collection Date: 13-Jun-2016 11:45

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-10  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH DRO/ORO BY SW8015C	Method:SW8015M			Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	23-Jun-2016 23:53
Surr: 2-Fluorobiphenyl	66.6		60-135	%REC	1	23-Jun-2016 23:53

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-2-1-061016  
 Collection Date: 10-Jun-2016 09:35

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-11  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 21-Jun-2016		Analyst: LG
Acenaphthene	ND		3.3	ug/Kg	1	24-Jun-2016 21:36
Acenaphthylene	ND		3.3	ug/Kg	1	24-Jun-2016 21:36
Anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 21:36
Benz(a)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 21:36
Benzo(a)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 21:36
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 21:36
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	24-Jun-2016 21:36
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 21:36
Chrysene	ND		3.3	ug/Kg	1	24-Jun-2016 21:36
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 21:36
Fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 21:36
Fluorene	ND		3.3	ug/Kg	1	24-Jun-2016 21:36
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 21:36
Naphthalene	ND		3.3	ug/Kg	1	24-Jun-2016 21:36
Phenanthrene	ND		3.3	ug/Kg	1	24-Jun-2016 21:36
Pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 21:36
<i>Surr: 2-Fluorobiphenyl</i>	70.6		43-125	%REC	1	24-Jun-2016 21:36
<i>Surr: 4-Terphenyl-d14</i>	87.3		32-125	%REC	1	24-Jun-2016 21:36
<i>Surr: Nitrobenzene-d5</i>	86.1		37-125	%REC	1	24-Jun-2016 21:36
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>2.44</b>		<b>0.455</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:12
<b>Barium</b>	<b>157</b>		<b>0.455</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:12
<b>Boron</b>	<b>3.48</b>		<b>2.28</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:12
Cadmium	ND		0.455	mg/Kg	1	27-Jun-2016 13:12
<b>Chromium</b>	<b>6.47</b>		<b>0.455</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:12
<b>Copper</b>	<b>5.27</b>		<b>0.182</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:12
<b>Lead</b>	<b>5.94</b>		<b>0.455</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:12
<b>Nickel</b>	<b>7.14</b>		<b>0.455</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:12
Selenium	ND		0.455	mg/Kg	1	27-Jun-2016 13:12
Silver	ND		0.455	mg/Kg	1	27-Jun-2016 13:12
<b>Zinc</b>	<b>19.5</b>		<b>0.455</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:12

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



Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-2-1-061016  
 Collection Date: 10-Jun-2016 09:35

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-11  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	17-Jun-2016 06:39
Ethylbenzene	ND		4.8	ug/Kg	1	17-Jun-2016 06:39
m,p-Xylene	ND		9.6	ug/Kg	1	17-Jun-2016 06:39
o-Xylene	ND		4.8	ug/Kg	1	17-Jun-2016 06:39
Toluene	ND		4.8	ug/Kg	1	17-Jun-2016 06:39
Xylenes, Total	ND		9.6	ug/Kg	1	17-Jun-2016 06:39
Surr: 1,2-Dichloroethane-d4	98.1		70-128	%REC	1	17-Jun-2016 06:39
Surr: 4-Bromofluorobenzene	100		73-126	%REC	1	17-Jun-2016 06:39
Surr: Dibromofluoromethane	111		71-128	%REC	1	17-Jun-2016 06:39
Surr: Toluene-d8	98.3		73-127	%REC	1	17-Jun-2016 06:39
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	32.3		4.98	mg/L	10	24-Jun-2016 12:55
Magnesium	6.55		4.98	mg/L	10	24-Jun-2016 12:55
Sodium	12.5		4.98	mg/L	10	24-Jun-2016 12:55
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		2.00	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	6.47		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	0.528		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	0.247		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.468		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 01:12
Surr: 4-Bromofluorobenzene	84.5		70-130	%REC	1	17-Jun-2016 01:12
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	11.5		3.52	ug/Kg	1	24-Jun-2016 17:04
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	8.59	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.2	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.468		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	0.524		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-2-1-061016  
Collection Date: 10-Jun-2016 09:35

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-11  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>TPH DRO/ORO BY SW8015C</b>		<b>Method:SW8015M</b>		Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	24-Jun-2016 00:17
Surr: 2-Fluorobiphenyl	64.2		60-135	%REC	1	24-Jun-2016 00:17

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-2-12-061016  
 Collection Date: 10-Jun-2016 09:55

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-12  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 21-Jun-2016		Analyst: LG
Acenaphthene	ND		3.3	ug/Kg	1	24-Jun-2016 21:55
Acenaphthylene	ND		3.3	ug/Kg	1	24-Jun-2016 21:55
Anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 21:55
Benz(a)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 21:55
Benzo(a)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 21:55
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 21:55
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	24-Jun-2016 21:55
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 21:55
Chrysene	ND		3.3	ug/Kg	1	24-Jun-2016 21:55
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 21:55
Fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 21:55
Fluorene	ND		3.3	ug/Kg	1	24-Jun-2016 21:55
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 21:55
Naphthalene	ND		3.3	ug/Kg	1	24-Jun-2016 21:55
Phenanthrene	ND		3.3	ug/Kg	1	24-Jun-2016 21:55
Pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 21:55
<i>Surr: 2-Fluorobiphenyl</i>	62.7		43-125	%REC	1	24-Jun-2016 21:55
<i>Surr: 4-Terphenyl-d14</i>	91.6		32-125	%REC	1	24-Jun-2016 21:55
<i>Surr: Nitrobenzene-d5</i>	67.9		37-125	%REC	1	24-Jun-2016 21:55
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>2.68</b>		<b>0.453</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:26
<b>Barium</b>	<b>100</b>		<b>0.453</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:26
<b>Boron</b>	<b>7.89</b>		<b>2.27</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:26
Cadmium	ND		0.453	mg/Kg	1	27-Jun-2016 13:26
<b>Chromium</b>	<b>7.21</b>		<b>0.453</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:26
<b>Copper</b>	<b>5.61</b>		<b>0.181</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:26
<b>Lead</b>	<b>6.47</b>		<b>0.453</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:26
<b>Nickel</b>	<b>6.52</b>		<b>0.453</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:26
Selenium	ND		0.453	mg/Kg	1	27-Jun-2016 13:26
Silver	ND		0.453	mg/Kg	1	27-Jun-2016 13:26
<b>Zinc</b>	<b>221</b>		<b>4.53</b>	<b>mg/Kg</b>	10	27-Jun-2016 15:35

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-2-12-061016  
 Collection Date: 10-Jun-2016 09:55

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-12  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.9	ug/Kg	1	17-Jun-2016 07:02
Ethylbenzene	ND		4.9	ug/Kg	1	17-Jun-2016 07:02
m,p-Xylene	ND		9.8	ug/Kg	1	17-Jun-2016 07:02
o-Xylene	ND		4.9	ug/Kg	1	17-Jun-2016 07:02
Toluene	ND		4.9	ug/Kg	1	17-Jun-2016 07:02
Xylenes, Total	ND		9.8	ug/Kg	1	17-Jun-2016 07:02
Surr: 1,2-Dichloroethane-d4	101		70-128	%REC	1	17-Jun-2016 07:02
Surr: 4-Bromofluorobenzene	101		73-126	%REC	1	17-Jun-2016 07:02
Surr: Dibromofluoromethane	107		71-128	%REC	1	17-Jun-2016 07:02
Surr: Toluene-d8	97.0		73-127	%REC	1	17-Jun-2016 07:02
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	1,740		4.99	mg/L	10	24-Jun-2016 12:58
Magnesium	ND		4.99	mg/L	10	24-Jun-2016 12:58
Sodium	12,800		49.9	mg/L	100	24-Jun-2016 13:36
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		2.00	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	7.21		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	192		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	87.0		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.453		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 14:59
Surr: 4-Bromofluorobenzene	81.3		70-130	%REC	1	17-Jun-2016 14:59
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	5.70		3.55	ug/Kg	1	24-Jun-2016 17:06
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	11.0	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.3	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.453		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	84.5		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-2-12-061016  
Collection Date: 10-Jun-2016 09:55

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-12  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH DRO/ORO BY SW8015C	Method:SW8015M			Prep:SW3541 / 23-Jun-2016	Analyst: AAP	
TPH (Diesel Range)	6.0		2.5	mg/Kg	1	24-Jun-2016 00:41
Surr: 2-Fluorobiphenyl	61.0		60-135	%REC	1	24-Jun-2016 00:41

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-2-18-061016  
 Collection Date: 10-Jun-2016 10:15

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-13  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 21-Jun-2016		Analyst: LG
Acenaphthene	ND		3.3	ug/Kg	1	24-Jun-2016 22:14
Acenaphthylene	ND		3.3	ug/Kg	1	24-Jun-2016 22:14
Anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 22:14
Benz(a)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 22:14
Benzo(a)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 22:14
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 22:14
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	24-Jun-2016 22:14
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 22:14
Chrysene	ND		3.3	ug/Kg	1	24-Jun-2016 22:14
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 22:14
Fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 22:14
Fluorene	ND		3.3	ug/Kg	1	24-Jun-2016 22:14
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 22:14
Naphthalene	ND		3.3	ug/Kg	1	24-Jun-2016 22:14
Phenanthrene	ND		3.3	ug/Kg	1	24-Jun-2016 22:14
Pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 22:14
<i>Surr: 2-Fluorobiphenyl</i>	93.7		43-125	%REC	1	24-Jun-2016 22:14
<i>Surr: 4-Terphenyl-d14</i>	96.7		32-125	%REC	1	24-Jun-2016 22:14
<i>Surr: Nitrobenzene-d5</i>	87.3		37-125	%REC	1	24-Jun-2016 22:14
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>4.45</b>		<b>0.453</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:31
<b>Barium</b>	<b>66.3</b>		<b>0.453</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:31
<b>Boron</b>	<b>4.45</b>		<b>2.26</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:31
Cadmium	ND		0.453	mg/Kg	1	27-Jun-2016 13:31
<b>Chromium</b>	<b>5.80</b>		<b>0.453</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:31
<b>Copper</b>	<b>9.13</b>		<b>0.181</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:31
<b>Lead</b>	<b>8.80</b>		<b>0.453</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:31
<b>Nickel</b>	<b>11.6</b>		<b>0.453</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:31
Selenium	ND		0.453	mg/Kg	1	27-Jun-2016 13:31
Silver	ND		0.453	mg/Kg	1	27-Jun-2016 13:31
<b>Zinc</b>	<b>32.8</b>		<b>0.453</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:31

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



Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-2-18-061016  
 Collection Date: 10-Jun-2016 10:15

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-13  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	17-Jun-2016 07:49
Ethylbenzene	ND		4.8	ug/Kg	1	17-Jun-2016 07:49
m,p-Xylene	ND		9.7	ug/Kg	1	17-Jun-2016 07:49
o-Xylene	ND		4.8	ug/Kg	1	17-Jun-2016 07:49
Toluene	ND		4.8	ug/Kg	1	17-Jun-2016 07:49
Xylenes, Total	ND		9.7	ug/Kg	1	17-Jun-2016 07:49
Surr: 1,2-Dichloroethane-d4	88.9		70-128	%REC	1	17-Jun-2016 07:49
Surr: 4-Bromofluorobenzene	95.9		73-126	%REC	1	17-Jun-2016 07:49
Surr: Dibromofluoromethane	99.5		71-128	%REC	1	17-Jun-2016 07:49
Surr: Toluene-d8	94.8		73-127	%REC	1	17-Jun-2016 07:49
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	13.1		5.00	mg/L	10	24-Jun-2016 13:01
Magnesium	9.64		5.00	mg/L	10	24-Jun-2016 13:01
Sodium	39.8		5.00	mg/L	10	24-Jun-2016 13:01
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		1.99	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	5.80		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	0.495		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	0.335		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.677		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 01:44
Surr: 4-Bromofluorobenzene	93.1		70-130	%REC	1	17-Jun-2016 01:44
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	34.4		3.49	ug/Kg	1	24-Jun-2016 17:08
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	8.99	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.2	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.677		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	2.04		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-2-18-061016  
Collection Date: 10-Jun-2016 10:15

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-13  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>TPH DRO/ORO BY SW8015C</b>		<b>Method:SW8015M</b>		Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	24-Jun-2016 01:54
Surr: 2-Fluorobiphenyl	65.9		60-135	%REC	1	24-Jun-2016 01:54

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-1-1-061016  
 Collection Date: 10-Jun-2016 10:35

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-14  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 22-Jun-2016		Analyst: ACN
Acenaphthene	ND		3.3	ug/Kg	1	27-Jun-2016 15:31
Acenaphthylene	ND		3.3	ug/Kg	1	27-Jun-2016 15:31
Anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 15:31
Benz(a)anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 15:31
Benzo(a)pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 15:31
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 15:31
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	27-Jun-2016 15:31
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 15:31
Chrysene	ND		3.3	ug/Kg	1	27-Jun-2016 15:31
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 15:31
Fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 15:31
Fluorene	ND		3.3	ug/Kg	1	27-Jun-2016 15:31
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 15:31
Naphthalene	ND		3.3	ug/Kg	1	27-Jun-2016 15:31
Phenanthrene	ND		3.3	ug/Kg	1	27-Jun-2016 15:31
Pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 15:31
<i>Surr: 2-Fluorobiphenyl</i>	66.5		43-125	%REC	1	27-Jun-2016 15:31
<i>Surr: 4-Terphenyl-d14</i>	86.0		32-125	%REC	1	27-Jun-2016 15:31
<i>Surr: Nitrobenzene-d5</i>	82.1		37-125	%REC	1	27-Jun-2016 15:31
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>2.45</b>		<b>0.457</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:35
<b>Barium</b>	<b>133</b>		<b>0.457</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:35
<b>Boron</b>	<b>3.65</b>		<b>2.28</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:35
Cadmium	ND		0.457	mg/Kg	1	27-Jun-2016 13:35
<b>Chromium</b>	<b>6.26</b>		<b>0.457</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:35
<b>Copper</b>	<b>5.10</b>		<b>0.183</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:35
<b>Lead</b>	<b>5.77</b>		<b>0.457</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:35
<b>Nickel</b>	<b>7.00</b>		<b>0.457</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:35
Selenium	ND		0.457	mg/Kg	1	27-Jun-2016 13:35
Silver	ND		0.457	mg/Kg	1	27-Jun-2016 13:35
<b>Zinc</b>	<b>19.4</b>		<b>0.457</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:35

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-1-1-061016  
 Collection Date: 10-Jun-2016 10:35

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-14  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	17-Jun-2016 08:12
Ethylbenzene	ND		4.8	ug/Kg	1	17-Jun-2016 08:12
m,p-Xylene	ND		9.7	ug/Kg	1	17-Jun-2016 08:12
o-Xylene	ND		4.8	ug/Kg	1	17-Jun-2016 08:12
Toluene	ND		4.8	ug/Kg	1	17-Jun-2016 08:12
Xylenes, Total	ND		9.7	ug/Kg	1	17-Jun-2016 08:12
Surr: 1,2-Dichloroethane-d4	96.1		70-128	%REC	1	17-Jun-2016 08:12
Surr: 4-Bromofluorobenzene	101		73-126	%REC	1	17-Jun-2016 08:12
Surr: Dibromofluoromethane	110		71-128	%REC	1	17-Jun-2016 08:12
Surr: Toluene-d8	101		73-127	%REC	1	17-Jun-2016 08:12
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	62.9		4.99	mg/L	10	24-Jun-2016 13:04
Magnesium	13.0		4.99	mg/L	10	24-Jun-2016 13:04
Sodium	51.2		4.99	mg/L	10	24-Jun-2016 13:04
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		2.00	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	6.26		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	1.72		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	0.759		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.442		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 02:00
Surr: 4-Bromofluorobenzene	96.3		70-130	%REC	1	17-Jun-2016 02:00
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	8.57		3.53	ug/Kg	1	24-Jun-2016 17:13
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	8.36	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.3	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.442		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	1.54		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-1-1-061016  
Collection Date: 10-Jun-2016 10:35

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-14  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>TPH DRO/ORO BY SW8015C</b>		<b>Method:SW8015M</b>		Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	24-Jun-2016 02:18
Surr: 2-Fluorobiphenyl	71.8		60-135	%REC	1	24-Jun-2016 02:18

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-1-6-061016  
 Collection Date: 10-Jun-2016 10:50

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-15  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 22-Jun-2016		Analyst: ACN
Acenaphthene	ND		3.3	ug/Kg	1	27-Jun-2016 15:50
Acenaphthylene	ND		3.3	ug/Kg	1	27-Jun-2016 15:50
Anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 15:50
Benz(a)anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 15:50
Benzo(a)pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 15:50
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 15:50
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	27-Jun-2016 15:50
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 15:50
Chrysene	ND		3.3	ug/Kg	1	27-Jun-2016 15:50
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 15:50
Fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 15:50
Fluorene	ND		3.3	ug/Kg	1	27-Jun-2016 15:50
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 15:50
Naphthalene	ND		3.3	ug/Kg	1	27-Jun-2016 15:50
Phenanthrene	ND		3.3	ug/Kg	1	27-Jun-2016 15:50
Pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 15:50
<i>Surr: 2-Fluorobiphenyl</i>	64.8		43-125	%REC	1	27-Jun-2016 15:50
<i>Surr: 4-Terphenyl-d14</i>	92.6		32-125	%REC	1	27-Jun-2016 15:50
<i>Surr: Nitrobenzene-d5</i>	82.8		37-125	%REC	1	27-Jun-2016 15:50
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>2.09</b>		<b>0.454</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:40
<b>Barium</b>	<b>99.1</b>		<b>0.454</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:40
<b>Boron</b>	<b>4.06</b>		<b>2.27</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:40
Cadmium	ND		0.454	mg/Kg	1	27-Jun-2016 13:40
<b>Chromium</b>	<b>6.57</b>		<b>0.454</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:40
<b>Copper</b>	<b>4.88</b>		<b>0.182</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:40
<b>Lead</b>	<b>5.79</b>		<b>0.454</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:40
<b>Nickel</b>	<b>7.08</b>		<b>0.454</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:40
Selenium	ND		0.454	mg/Kg	1	27-Jun-2016 13:40
Silver	ND		0.454	mg/Kg	1	27-Jun-2016 13:40
<b>Zinc</b>	<b>19.2</b>		<b>0.454</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:40

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-1-6-061016  
 Collection Date: 10-Jun-2016 10:50

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-15  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	17-Jun-2016 08:36
Ethylbenzene	ND		4.8	ug/Kg	1	17-Jun-2016 08:36
m,p-Xylene	ND		9.7	ug/Kg	1	17-Jun-2016 08:36
o-Xylene	ND		4.8	ug/Kg	1	17-Jun-2016 08:36
Toluene	ND		4.8	ug/Kg	1	17-Jun-2016 08:36
Xylenes, Total	ND		9.7	ug/Kg	1	17-Jun-2016 08:36
Surr: 1,2-Dichloroethane-d4	97.5		70-128	%REC	1	17-Jun-2016 08:36
Surr: 4-Bromofluorobenzene	103		73-126	%REC	1	17-Jun-2016 08:36
Surr: Dibromofluoromethane	110		71-128	%REC	1	17-Jun-2016 08:36
Surr: Toluene-d8	98.0		73-127	%REC	1	17-Jun-2016 08:36
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	148		4.99	mg/L	10	24-Jun-2016 13:07
Magnesium	21.9		4.99	mg/L	10	24-Jun-2016 13:07
Sodium	455		4.99	mg/L	10	24-Jun-2016 13:07
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		1.99	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	6.57		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	7.94		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	3.78		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.476		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 02:17
Surr: 4-Bromofluorobenzene	86.8		70-130	%REC	1	17-Jun-2016 02:17
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	11.3		3.47	ug/Kg	1	24-Jun-2016 17:15
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	8.45	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.2	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.476		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	9.23		0.0100	meq/meq	1	28-Jun-2016 09:24

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



Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-1-6-061016  
Collection Date: 10-Jun-2016 10:50

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-15  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>TPH DRO/ORO BY SW8015C</b>		<b>Method:SW8015M</b>		Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	24-Jun-2016 02:42
Surr: 2-Fluorobiphenyl	64.3		60-135	%REC	1	24-Jun-2016 02:42

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-1-20-061016  
 Collection Date: 10-Jun-2016 11:50

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-16  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 22-Jun-2016		Analyst: ACN
Acenaphthene	ND		3.3	ug/Kg	1	25-Jun-2016 01:07
Acenaphthylene	ND		3.3	ug/Kg	1	25-Jun-2016 01:07
Anthracene	ND		3.3	ug/Kg	1	25-Jun-2016 01:07
Benz(a)anthracene	ND		3.3	ug/Kg	1	25-Jun-2016 01:07
Benzo(a)pyrene	ND		3.3	ug/Kg	1	25-Jun-2016 01:07
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	25-Jun-2016 01:07
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	25-Jun-2016 01:07
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	25-Jun-2016 01:07
Chrysene	ND		3.3	ug/Kg	1	25-Jun-2016 01:07
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	25-Jun-2016 01:07
Fluoranthene	ND		3.3	ug/Kg	1	25-Jun-2016 01:07
Fluorene	ND		3.3	ug/Kg	1	25-Jun-2016 01:07
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	25-Jun-2016 01:07
Naphthalene	ND		3.3	ug/Kg	1	25-Jun-2016 01:07
Phenanthrene	ND		3.3	ug/Kg	1	25-Jun-2016 01:07
Pyrene	ND		3.3	ug/Kg	1	25-Jun-2016 01:07
<i>Surr: 2-Fluorobiphenyl</i>	69.8		43-125	%REC	1	25-Jun-2016 01:07
<i>Surr: 4-Terphenyl-d14</i>	91.1		32-125	%REC	1	25-Jun-2016 01:07
<i>Surr: Nitrobenzene-d5</i>	70.8		37-125	%REC	1	25-Jun-2016 01:07
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>4.62</b>		<b>0.463</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:44
<b>Barium</b>	<b>68.7</b>		<b>0.463</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:44
<b>Boron</b>	<b>2.83</b>		<b>2.32</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:44
Cadmium	ND		0.463	mg/Kg	1	27-Jun-2016 13:44
<b>Chromium</b>	<b>5.69</b>		<b>0.463</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:44
<b>Copper</b>	<b>7.46</b>		<b>0.185</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:44
<b>Lead</b>	<b>8.13</b>		<b>0.463</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:44
<b>Nickel</b>	<b>11.1</b>		<b>0.463</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:44
Selenium	ND		0.463	mg/Kg	1	27-Jun-2016 13:44
Silver	ND		0.463	mg/Kg	1	27-Jun-2016 13:44
<b>Zinc</b>	<b>31.8</b>		<b>0.463</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:44

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-1-20-061016  
 Collection Date: 10-Jun-2016 11:50

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-16  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	17-Jun-2016 08:59
Ethylbenzene	ND		5.0	ug/Kg	1	17-Jun-2016 08:59
m,p-Xylene	ND		10	ug/Kg	1	17-Jun-2016 08:59
o-Xylene	ND		5.0	ug/Kg	1	17-Jun-2016 08:59
Toluene	ND		5.0	ug/Kg	1	17-Jun-2016 08:59
Xylenes, Total	ND		10	ug/Kg	1	17-Jun-2016 08:59
Surr: 1,2-Dichloroethane-d4	96.1		70-128	%REC	1	17-Jun-2016 08:59
Surr: 4-Bromofluorobenzene	97.5		73-126	%REC	1	17-Jun-2016 08:59
Surr: Dibromofluoromethane	107		71-128	%REC	1	17-Jun-2016 08:59
Surr: Toluene-d8	96.1		73-127	%REC	1	17-Jun-2016 08:59
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	10.5		4.99	mg/L	10	24-Jun-2016 13:10
Magnesium	11.3		4.99	mg/L	10	24-Jun-2016 13:10
Sodium	35.3		4.99	mg/L	10	24-Jun-2016 13:10
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		1.99	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	5.69		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	0.559		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	0.326		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.583		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 03:21
Surr: 4-Bromofluorobenzene	84.0		70-130	%REC	1	17-Jun-2016 03:21
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	9.74		3.57	ug/Kg	1	24-Jun-2016 17:16
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	8.94	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.4	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.583		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	1.80		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-1-20-061016  
Collection Date: 10-Jun-2016 11:50

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-16  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>TPH DRO/ORO BY SW8015C</b>		<b>Method:SW8015M</b>		Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	24-Jun-2016 03:06
Surr: 2-Fluorobiphenyl	64.5		60-135	%REC	1	24-Jun-2016 03:06

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-5-3-061016  
 Collection Date: 10-Jun-2016 12:15

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-17  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 22-Jun-2016		Analyst: ACN
Acenaphthene	ND		3.3	ug/Kg	1	24-Jun-2016 15:07
Acenaphthylene	ND		3.3	ug/Kg	1	24-Jun-2016 15:07
Anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 15:07
Benz(a)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 15:07
Benzo(a)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 15:07
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 15:07
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	24-Jun-2016 15:07
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 15:07
Chrysene	ND		3.3	ug/Kg	1	24-Jun-2016 15:07
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	24-Jun-2016 15:07
Fluoranthene	ND		3.3	ug/Kg	1	24-Jun-2016 15:07
Fluorene	ND		3.3	ug/Kg	1	24-Jun-2016 15:07
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 15:07
Naphthalene	ND		3.3	ug/Kg	1	24-Jun-2016 15:07
Phenanthrene	ND		3.3	ug/Kg	1	24-Jun-2016 15:07
Pyrene	ND		3.3	ug/Kg	1	24-Jun-2016 15:07
<i>Surr: 2-Fluorobiphenyl</i>	68.6		43-125	%REC	1	24-Jun-2016 15:07
<i>Surr: 4-Terphenyl-d14</i>	86.6		32-125	%REC	1	24-Jun-2016 15:07
<i>Surr: Nitrobenzene-d5</i>	82.6		37-125	%REC	1	24-Jun-2016 15:07
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>2.61</b>		<b>0.480</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:48
<b>Barium</b>	<b>151</b>		<b>0.480</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:48
<b>Boron</b>	<b>2.86</b>		<b>2.40</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:48
Cadmium	ND		0.480	mg/Kg	1	27-Jun-2016 13:48
<b>Chromium</b>	<b>5.35</b>		<b>0.480</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:48
<b>Copper</b>	<b>8.36</b>		<b>0.192</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:48
<b>Lead</b>	<b>5.94</b>		<b>0.480</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:48
<b>Nickel</b>	<b>6.24</b>		<b>0.480</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:48
Selenium	ND		0.480	mg/Kg	1	27-Jun-2016 13:48
Silver	ND		0.480	mg/Kg	1	27-Jun-2016 13:48
<b>Zinc</b>	<b>21.9</b>		<b>0.480</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:48

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-5-3-061016  
 Collection Date: 10-Jun-2016 12:15

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-17  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	18-Jun-2016 10:40
Ethylbenzene	ND		5.0	ug/Kg	1	18-Jun-2016 10:40
m,p-Xylene	ND		10	ug/Kg	1	18-Jun-2016 10:40
o-Xylene	ND		5.0	ug/Kg	1	18-Jun-2016 10:40
Toluene	ND		5.0	ug/Kg	1	18-Jun-2016 10:40
Xylenes, Total	ND		10	ug/Kg	1	18-Jun-2016 10:40
Surr: 1,2-Dichloroethane-d4	76.2		70-128	%REC	1	18-Jun-2016 10:40
Surr: 4-Bromofluorobenzene	84.7		73-126	%REC	1	18-Jun-2016 10:40
Surr: Dibromofluoromethane	95.6		71-128	%REC	1	18-Jun-2016 10:40
Surr: Toluene-d8	98.0		73-127	%REC	1	18-Jun-2016 10:40
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	46.7		5.00	mg/L	10	24-Jun-2016 13:13
Magnesium	15.0		5.00	mg/L	10	24-Jun-2016 13:13
Sodium	46.0		5.00	mg/L	10	24-Jun-2016 13:13
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		2.00	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	5.35		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	1.43		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	0.664		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.463		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 03:37
Surr: 4-Bromofluorobenzene	85.7		70-130	%REC	1	17-Jun-2016 03:37
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	10.6		3.51	ug/Kg	1	24-Jun-2016 17:18
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	8.58	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.4	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.463		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	1.50		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-5-3-061016  
Collection Date: 10-Jun-2016 12:15

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-17  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>TPH DRO/ORO BY SW8015C</b>		<b>Method:SW8015M</b>		Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	ND		3.4	mg/Kg	1	24-Jun-2016 03:30
Surr: 2-Fluorobiphenyl	71.5		60-135	%REC	1	24-Jun-2016 03:30

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



Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-5-9-061016  
 Collection Date: 10-Jun-2016 12:25

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-18  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 22-Jun-2016		Analyst: ACN
Acenaphthene	ND		3.3	ug/Kg	1	25-Jun-2016 01:26
Acenaphthylene	ND		3.3	ug/Kg	1	25-Jun-2016 01:26
Anthracene	ND		3.3	ug/Kg	1	25-Jun-2016 01:26
Benz(a)anthracene	ND		3.3	ug/Kg	1	25-Jun-2016 01:26
Benzo(a)pyrene	ND		3.3	ug/Kg	1	25-Jun-2016 01:26
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	25-Jun-2016 01:26
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	25-Jun-2016 01:26
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	25-Jun-2016 01:26
Chrysene	ND		3.3	ug/Kg	1	25-Jun-2016 01:26
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	25-Jun-2016 01:26
Fluoranthene	ND		3.3	ug/Kg	1	25-Jun-2016 01:26
Fluorene	ND		3.3	ug/Kg	1	25-Jun-2016 01:26
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	25-Jun-2016 01:26
Naphthalene	ND		3.3	ug/Kg	1	25-Jun-2016 01:26
Phenanthrene	ND		3.3	ug/Kg	1	25-Jun-2016 01:26
Pyrene	ND		3.3	ug/Kg	1	25-Jun-2016 01:26
<i>Surr: 2-Fluorobiphenyl</i>	58.5		43-125	%REC	1	25-Jun-2016 01:26
<i>Surr: 4-Terphenyl-d14</i>	83.4		32-125	%REC	1	25-Jun-2016 01:26
<i>Surr: Nitrobenzene-d5</i>	63.3		37-125	%REC	1	25-Jun-2016 01:26
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>3.15</b>		<b>0.478</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:53
<b>Barium</b>	<b>93.0</b>		<b>0.478</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:53
<b>Boron</b>	<b>18.7</b>		<b>2.39</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:53
Cadmium	ND		0.478	mg/Kg	1	27-Jun-2016 13:53
<b>Chromium</b>	<b>7.77</b>		<b>0.478</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:53
<b>Copper</b>	<b>5.18</b>		<b>0.191</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:53
<b>Lead</b>	<b>6.81</b>		<b>0.478</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:53
<b>Nickel</b>	<b>5.73</b>		<b>0.478</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:53
<b>Selenium</b>	<b>0.732</b>		<b>0.478</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:53
Silver	ND		0.478	mg/Kg	1	27-Jun-2016 13:53
<b>Zinc</b>	<b>528</b>		<b>4.78</b>	<b>mg/Kg</b>	10	27-Jun-2016 15:40

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-5-9-061016  
 Collection Date: 10-Jun-2016 12:25

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-18  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	18-Jun-2016 11:08
Ethylbenzene	ND		5.0	ug/Kg	1	18-Jun-2016 11:08
m,p-Xylene	ND		9.9	ug/Kg	1	18-Jun-2016 11:08
o-Xylene	ND		5.0	ug/Kg	1	18-Jun-2016 11:08
Toluene	ND		5.0	ug/Kg	1	18-Jun-2016 11:08
Xylenes, Total	ND		9.9	ug/Kg	1	18-Jun-2016 11:08
Surr: 1,2-Dichloroethane-d4	85.7		70-128	%REC	1	18-Jun-2016 11:08
Surr: 4-Bromofluorobenzene	88.6		73-126	%REC	1	18-Jun-2016 11:08
Surr: Dibromofluoromethane	29.4	S	71-128	%REC	1	18-Jun-2016 11:08
Surr: Toluene-d8	97.5		73-127	%REC	1	18-Jun-2016 11:08
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	1,430		4.99	mg/L	10	24-Jun-2016 13:16
Magnesium	ND		4.99	mg/L	10	24-Jun-2016 13:16
Sodium	18,100		499	mg/L	1000	24-Jun-2016 15:26
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		1.99	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	7.77		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	190		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	120		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.630		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 03:54
Surr: 4-Bromofluorobenzene	83.0		70-130	%REC	1	17-Jun-2016 03:54
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	4.94		3.52	ug/Kg	1	24-Jun-2016 17:20
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	11.7	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.3	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.630		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	132		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-5-9-061016  
Collection Date: 10-Jun-2016 12:25

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-18  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH DRO/ORO BY SW8015C	Method:SW8015M			Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	93		17	mg/Kg	1	28-Jun-2016 16:38
TPH (Diesel Range)	71		17	mg/Kg	1	24-Jun-2016 03:54
Surr: 2-Fluorobiphenyl	63.2		60-135	%REC	1	24-Jun-2016 03:54
Surr: 2-Fluorobiphenyl	78.0		60-135	%REC	1	28-Jun-2016 16:38

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-5-16-061016  
 Collection Date: 10-Jun-2016 12:50

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-19  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 22-Jun-2016		Analyst: ACN
Acenaphthene	ND		3.3	ug/Kg	1	25-Jun-2016 01:45
Acenaphthylene	ND		3.3	ug/Kg	1	25-Jun-2016 01:45
Anthracene	ND		3.3	ug/Kg	1	25-Jun-2016 01:45
Benz(a)anthracene	ND		3.3	ug/Kg	1	25-Jun-2016 01:45
Benzo(a)pyrene	ND		3.3	ug/Kg	1	25-Jun-2016 01:45
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	25-Jun-2016 01:45
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	25-Jun-2016 01:45
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	25-Jun-2016 01:45
Chrysene	ND		3.3	ug/Kg	1	25-Jun-2016 01:45
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	25-Jun-2016 01:45
Fluoranthene	ND		3.3	ug/Kg	1	25-Jun-2016 01:45
Fluorene	ND		3.3	ug/Kg	1	25-Jun-2016 01:45
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	25-Jun-2016 01:45
Naphthalene	ND		3.3	ug/Kg	1	25-Jun-2016 01:45
Phenanthrene	ND		3.3	ug/Kg	1	25-Jun-2016 01:45
Pyrene	ND		3.3	ug/Kg	1	25-Jun-2016 01:45
<i>Surr: 2-Fluorobiphenyl</i>	75.4		43-125	%REC	1	25-Jun-2016 01:45
<i>Surr: 4-Terphenyl-d14</i>	94.3		32-125	%REC	1	25-Jun-2016 01:45
<i>Surr: Nitrobenzene-d5</i>	81.8		37-125	%REC	1	25-Jun-2016 01:45
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>3.68</b>		<b>0.474</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:57
<b>Barium</b>	<b>142</b>		<b>0.474</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:57
<b>Boron</b>	<b>2.88</b>		<b>2.37</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:57
Cadmium	ND		0.474	mg/Kg	1	27-Jun-2016 13:57
<b>Chromium</b>	<b>3.36</b>		<b>0.474</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:57
<b>Copper</b>	<b>4.52</b>		<b>0.190</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:57
<b>Lead</b>	<b>5.60</b>		<b>0.474</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:57
<b>Nickel</b>	<b>11.1</b>		<b>0.474</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:57
Selenium	ND		0.474	mg/Kg	1	27-Jun-2016 13:57
Silver	ND		0.474	mg/Kg	1	27-Jun-2016 13:57
<b>Zinc</b>	<b>31.8</b>		<b>0.474</b>	<b>mg/Kg</b>	1	27-Jun-2016 13:57

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-5-16-061016  
 Collection Date: 10-Jun-2016 12:50

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-19  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.9	ug/Kg	1	18-Jun-2016 11:37
Ethylbenzene	ND		4.9	ug/Kg	1	18-Jun-2016 11:37
m,p-Xylene	ND		9.8	ug/Kg	1	18-Jun-2016 11:37
o-Xylene	ND		4.9	ug/Kg	1	18-Jun-2016 11:37
Toluene	ND		4.9	ug/Kg	1	18-Jun-2016 11:37
Xylenes, Total	ND		9.8	ug/Kg	1	18-Jun-2016 11:37
Surr: 1,2-Dichloroethane-d4	89.1		70-128	%REC	1	18-Jun-2016 11:37
Surr: 4-Bromofluorobenzene	85.4		73-126	%REC	1	18-Jun-2016 11:37
Surr: Dibromofluoromethane	97.5		71-128	%REC	1	18-Jun-2016 11:37
Surr: Toluene-d8	93.7		73-127	%REC	1	18-Jun-2016 11:37
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	16.6		5.00	mg/L	10	24-Jun-2016 13:25
Magnesium	6.46		5.00	mg/L	10	24-Jun-2016 13:25
Sodium	52.7		5.00	mg/L	10	24-Jun-2016 13:25
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		2.00	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	0.805		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	0.406		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.504		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 04:10
Surr: 4-Bromofluorobenzene	84.2		70-130	%REC	1	17-Jun-2016 04:10
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	32.0		3.55	ug/Kg	1	24-Jun-2016 17:21
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	8.98	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.3	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.504		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	2.78		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-5-16-061016  
Collection Date: 10-Jun-2016 12:50

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-19  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>TPH DRO/ORO BY SW8015C</b>	<b>Method:SW8015M</b>			Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	24-Jun-2016 04:18
Surr: 2-Fluorobiphenyl	64.7		60-135	%REC	1	24-Jun-2016 04:18

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-4-1-061016  
 Collection Date: 10-Jun-2016 08:05

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-20  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 22-Jun-2016		Analyst: ACN
Acenaphthene	ND		3.3	ug/Kg	1	25-Jun-2016 02:04
Acenaphthylene	ND		3.3	ug/Kg	1	25-Jun-2016 02:04
Anthracene	ND		3.3	ug/Kg	1	25-Jun-2016 02:04
Benz(a)anthracene	ND		3.3	ug/Kg	1	25-Jun-2016 02:04
Benzo(a)pyrene	ND		3.3	ug/Kg	1	25-Jun-2016 02:04
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	25-Jun-2016 02:04
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	25-Jun-2016 02:04
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	25-Jun-2016 02:04
Chrysene	ND		3.3	ug/Kg	1	25-Jun-2016 02:04
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	25-Jun-2016 02:04
Fluoranthene	ND		3.3	ug/Kg	1	25-Jun-2016 02:04
Fluorene	ND		3.3	ug/Kg	1	25-Jun-2016 02:04
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	25-Jun-2016 02:04
Naphthalene	ND		3.3	ug/Kg	1	25-Jun-2016 02:04
Phenanthrene	ND		3.3	ug/Kg	1	25-Jun-2016 02:04
Pyrene	ND		3.3	ug/Kg	1	25-Jun-2016 02:04
<i>Surr: 2-Fluorobiphenyl</i>	70.8		43-125	%REC	1	25-Jun-2016 02:04
<i>Surr: 4-Terphenyl-d14</i>	90.9		32-125	%REC	1	25-Jun-2016 02:04
<i>Surr: Nitrobenzene-d5</i>	73.9		37-125	%REC	1	25-Jun-2016 02:04
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 22-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>2.53</b>		<b>0.454</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:01
<b>Barium</b>	<b>126</b>		<b>0.454</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:01
<b>Boron</b>	<b>3.11</b>		<b>2.27</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:01
Cadmium	ND		0.454	mg/Kg	1	27-Jun-2016 14:01
<b>Chromium</b>	<b>6.15</b>		<b>0.454</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:01
<b>Copper</b>	<b>5.16</b>		<b>0.182</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:01
<b>Lead</b>	<b>6.09</b>		<b>0.454</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:01
<b>Nickel</b>	<b>6.95</b>		<b>0.454</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:01
Selenium	ND		0.454	mg/Kg	1	27-Jun-2016 14:01
Silver	ND		0.454	mg/Kg	1	27-Jun-2016 14:01
<b>Zinc</b>	<b>19.1</b>		<b>0.454</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:01

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



Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-4-1-061016  
 Collection Date: 10-Jun-2016 08:05

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-20  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	18-Jun-2016 13:59
Ethylbenzene	ND		5.0	ug/Kg	1	18-Jun-2016 13:59
m,p-Xylene	ND		10	ug/Kg	1	18-Jun-2016 13:59
o-Xylene	ND		5.0	ug/Kg	1	18-Jun-2016 13:59
Toluene	ND		5.0	ug/Kg	1	18-Jun-2016 13:59
Xylenes, Total	ND		10	ug/Kg	1	18-Jun-2016 13:59
Surr: 1,2-Dichloroethane-d4	77.7		70-128	%REC	1	18-Jun-2016 13:59
Surr: 4-Bromofluorobenzene	81.2		73-126	%REC	1	18-Jun-2016 13:59
Surr: Dibromofluoromethane	89.6		71-128	%REC	1	18-Jun-2016 13:59
Surr: Toluene-d8	94.3		73-127	%REC	1	18-Jun-2016 13:59
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Calcium	36.7		4.99	mg/L	10	24-Jun-2016 13:27
Magnesium	5.21		4.99	mg/L	10	24-Jun-2016 13:27
Sodium	13.1		4.99	mg/L	10	24-Jun-2016 13:27
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		1.99	mg/kg	1	27-Jun-2016 19:11
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	6.15		5.00	mg/Kg	1	28-Jun-2016 18:01
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	0.564		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Electrical Conductivity, 1:1 aqueous	0.245		0.0100	mmhos/cm @25°C	1	24-Jun-2016 13:00
Saturation % as decimal	0.434		0	mmhos/cm @25°C	1	24-Jun-2016 13:00
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 04:26
Surr: 4-Bromofluorobenzene	87.7		70-130	%REC	1	17-Jun-2016 04:26
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	8.96		3.49	ug/Kg	1	24-Jun-2016 17:23
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	8.78	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.4	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.434		0.100	SP as fraction	1	23-Jun-2016 14:00
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 22-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	0.536		0.0100	meq/meq	1	28-Jun-2016 09:24

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-4-1-061016  
Collection Date: 10-Jun-2016 08:05

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-20  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	24-Jun-2016 04:43
Surr: 2-Fluorobiphenyl	72.7		60-135	%REC	1	24-Jun-2016 04:43

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-4-6-061016  
 Collection Date: 10-Jun-2016 08:15

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-21  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 22-Jun-2016		Analyst: ACN
Acenaphthene	ND		3.3	ug/Kg	1	25-Jun-2016 02:23
Acenaphthylene	ND		3.3	ug/Kg	1	25-Jun-2016 02:23
Anthracene	ND		3.3	ug/Kg	1	25-Jun-2016 02:23
Benz(a)anthracene	ND		3.3	ug/Kg	1	25-Jun-2016 02:23
Benzo(a)pyrene	ND		3.3	ug/Kg	1	25-Jun-2016 02:23
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	25-Jun-2016 02:23
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	25-Jun-2016 02:23
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	25-Jun-2016 02:23
Chrysene	ND		3.3	ug/Kg	1	25-Jun-2016 02:23
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	25-Jun-2016 02:23
Fluoranthene	ND		3.3	ug/Kg	1	25-Jun-2016 02:23
Fluorene	ND		3.3	ug/Kg	1	25-Jun-2016 02:23
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	25-Jun-2016 02:23
Naphthalene	ND		3.3	ug/Kg	1	25-Jun-2016 02:23
Phenanthrene	ND		3.3	ug/Kg	1	25-Jun-2016 02:23
Pyrene	ND		3.3	ug/Kg	1	25-Jun-2016 02:23
<i>Surr: 2-Fluorobiphenyl</i>	68.0		43-125	%REC	1	25-Jun-2016 02:23
<i>Surr: 4-Terphenyl-d14</i>	88.3		32-125	%REC	1	25-Jun-2016 02:23
<i>Surr: Nitrobenzene-d5</i>	81.3		37-125	%REC	1	25-Jun-2016 02:23
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 23-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>3.55</b>		<b>0.471</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:29
<b>Barium</b>	<b>52.0</b>		<b>0.471</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:29
<b>Boron</b>	<b>6.93</b>		<b>2.36</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:29
Cadmium	ND		0.471	mg/Kg	1	27-Jun-2016 14:29
<b>Chromium</b>	<b>5.87</b>		<b>0.471</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:29
<b>Copper</b>	<b>6.15</b>		<b>0.189</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:29
<b>Lead</b>	<b>6.42</b>		<b>0.471</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:29
<b>Nickel</b>	<b>10.6</b>		<b>0.471</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:29
Selenium	ND		0.471	mg/Kg	1	27-Jun-2016 14:29
Silver	ND		0.471	mg/Kg	1	27-Jun-2016 14:29
<b>Zinc</b>	<b>28.8</b>		<b>0.471</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:29

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-4-6-061016  
 Collection Date: 10-Jun-2016 08:15

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-21  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	18-Jun-2016 14:26
Ethylbenzene	ND		4.8	ug/Kg	1	18-Jun-2016 14:26
m,p-Xylene	ND		9.7	ug/Kg	1	18-Jun-2016 14:26
o-Xylene	ND		4.8	ug/Kg	1	18-Jun-2016 14:26
Toluene	ND		4.8	ug/Kg	1	18-Jun-2016 14:26
Xylenes, Total	ND		9.7	ug/Kg	1	18-Jun-2016 14:26
Surr: 1,2-Dichloroethane-d4	87.7		70-128	%REC	1	18-Jun-2016 14:26
Surr: 4-Bromofluorobenzene	86.8		73-126	%REC	1	18-Jun-2016 14:26
Surr: Dibromofluoromethane	93.6		71-128	%REC	1	18-Jun-2016 14:26
Surr: Toluene-d8	94.8		73-127	%REC	1	18-Jun-2016 14:26
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 23-Jun-2016 Analyst: RPM		
Calcium	404		4.99	mg/L	10	27-Jun-2016 11:30
Magnesium	213		4.99	mg/L	10	27-Jun-2016 11:30
Sodium	2,300		49.9	mg/L	100	27-Jun-2016 12:44
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		1.98	mg/kg	1	28-Jun-2016 17:06
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	5.87		5.00	mg/Kg	1	29-Jun-2016 10:56
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	26.5		0.0100	mmhos/cm @25°C	1	29-Jun-2016 14:44
Electrical Conductivity, 1:1 aqueous	18.2		0.0100	mmhos/cm @25°C	1	29-Jun-2016 14:44
Saturation % as decimal	0.684		0	mmhos/cm @25°C	1	29-Jun-2016 14:44
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 06:19
Surr: 4-Bromofluorobenzene	81.5		70-130	%REC	1	17-Jun-2016 06:19
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	6.31		3.57	ug/Kg	1	24-Jun-2016 15:47
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	8.04	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.2	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.684		0.100	SP as fraction	1	27-Jun-2016 14:30
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 23-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	23.0		0.0100	meq/meq	1	28-Jun-2016 09:34

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-4-6-061016  
Collection Date: 10-Jun-2016 08:15

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-21  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>TPH DRO/ORO BY SW8015C</b>		<b>Method:SW8015M</b>		Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	24-Jun-2016 05:07
Surr: 2-Fluorobiphenyl	66.1		60-135	%REC	1	24-Jun-2016 05:07

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-4-12-061016  
 Collection Date: 10-Jun-2016 08:25

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-22  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 22-Jun-2016		Analyst: ACN
Acenaphthene	ND		3.3	ug/Kg	1	27-Jun-2016 16:10
Acenaphthylene	ND		3.3	ug/Kg	1	27-Jun-2016 16:10
Anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 16:10
Benz(a)anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 16:10
Benzo(a)pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 16:10
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 16:10
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	27-Jun-2016 16:10
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 16:10
Chrysene	ND		3.3	ug/Kg	1	27-Jun-2016 16:10
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 16:10
Fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 16:10
Fluorene	ND		3.3	ug/Kg	1	27-Jun-2016 16:10
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 16:10
Naphthalene	ND		3.3	ug/Kg	1	27-Jun-2016 16:10
Phenanthrene	ND		3.3	ug/Kg	1	27-Jun-2016 16:10
Pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 16:10
<i>Surr: 2-Fluorobiphenyl</i>	60.5		43-125	%REC	1	27-Jun-2016 16:10
<i>Surr: 4-Terphenyl-d14</i>	82.0		32-125	%REC	1	27-Jun-2016 16:10
<i>Surr: Nitrobenzene-d5</i>	74.9		37-125	%REC	1	27-Jun-2016 16:10
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 23-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>4.48</b>		<b>0.479</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:34
<b>Barium</b>	<b>18.6</b>		<b>0.479</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:34
<b>Boron</b>	<b>5.56</b>		<b>2.39</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:34
Cadmium	ND		0.479	mg/Kg	1	27-Jun-2016 14:34
<b>Chromium</b>	<b>4.54</b>		<b>0.479</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:34
<b>Copper</b>	<b>7.38</b>		<b>0.191</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:34
<b>Lead</b>	<b>7.71</b>		<b>0.479</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:34
<b>Nickel</b>	<b>9.67</b>		<b>0.479</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:34
<b>Selenium</b>	<b>0.685</b>		<b>0.479</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:34
Silver	ND		0.479	mg/Kg	1	27-Jun-2016 14:34
<b>Zinc</b>	<b>29.1</b>		<b>0.479</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:34

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-4-12-061016  
 Collection Date: 10-Jun-2016 08:25

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-22  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	18-Jun-2016 14:55
Ethylbenzene	ND		5.0	ug/Kg	1	18-Jun-2016 14:55
m,p-Xylene	ND		10	ug/Kg	1	18-Jun-2016 14:55
o-Xylene	ND		5.0	ug/Kg	1	18-Jun-2016 14:55
Toluene	ND		5.0	ug/Kg	1	18-Jun-2016 14:55
Xylenes, Total	ND		10	ug/Kg	1	18-Jun-2016 14:55
Surr: 1,2-Dichloroethane-d4	75.8		70-128	%REC	1	18-Jun-2016 14:55
Surr: 4-Bromofluorobenzene	79.9		73-126	%REC	1	18-Jun-2016 14:55
Surr: Dibromofluoromethane	96.8		71-128	%REC	1	18-Jun-2016 14:55
Surr: Toluene-d8	96.0		73-127	%REC	1	18-Jun-2016 14:55
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 23-Jun-2016 Analyst: RPM		
Calcium	299		4.99	mg/L	10	27-Jun-2016 11:33
Magnesium	209		4.99	mg/L	10	27-Jun-2016 11:33
Sodium	498		4.99	mg/L	10	27-Jun-2016 11:33
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		2.00	mg/kg	1	28-Jun-2016 17:06
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	29-Jun-2016 10:56
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	9.50		0.0100	mmhos/cm @25°C	1	29-Jun-2016 14:44
Electrical Conductivity, 1:1 aqueous	6.82		0.0100	mmhos/cm @25°C	1	29-Jun-2016 14:44
Saturation % as decimal	0.718		0	mmhos/cm @25°C	1	29-Jun-2016 14:44
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 07:07
Surr: 4-Bromofluorobenzene	77.0		70-130	%REC	1	17-Jun-2016 07:07
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	15.5		3.44	ug/Kg	1	24-Jun-2016 15:48
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	7.97	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.4	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.718		0.100	SP as fraction	1	27-Jun-2016 14:30
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 23-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	5.41		0.0100	meq/meq	1	28-Jun-2016 09:34

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-4-12-061016  
Collection Date: 10-Jun-2016 08:25

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-22  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	24-Jun-2016 05:31
Surr: 2-Fluorobiphenyl	61.7		60-135	%REC	1	24-Jun-2016 05:31

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



Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-3-1-061016  
 Collection Date: 10-Jun-2016 08:45

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-23  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 22-Jun-2016		Analyst: ACN
Acenaphthene	ND		3.3	ug/Kg	1	27-Jun-2016 16:29
Acenaphthylene	ND		3.3	ug/Kg	1	27-Jun-2016 16:29
Anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 16:29
Benz(a)anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 16:29
Benzo(a)pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 16:29
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 16:29
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	27-Jun-2016 16:29
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 16:29
Chrysene	ND		3.3	ug/Kg	1	27-Jun-2016 16:29
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 16:29
Fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 16:29
Fluorene	ND		3.3	ug/Kg	1	27-Jun-2016 16:29
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 16:29
Naphthalene	ND		3.3	ug/Kg	1	27-Jun-2016 16:29
Phenanthrene	ND		3.3	ug/Kg	1	27-Jun-2016 16:29
Pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 16:29
<i>Surr: 2-Fluorobiphenyl</i>	57.2		43-125	%REC	1	27-Jun-2016 16:29
<i>Surr: 4-Terphenyl-d14</i>	82.9		32-125	%REC	1	27-Jun-2016 16:29
<i>Surr: Nitrobenzene-d5</i>	68.9		37-125	%REC	1	27-Jun-2016 16:29
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 23-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>2.61</b>		<b>0.484</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:38
<b>Barium</b>	<b>153</b>		<b>0.484</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:38
<b>Boron</b>	<b>4.23</b>		<b>2.42</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:38
Cadmium	ND		0.484	mg/Kg	1	27-Jun-2016 14:38
<b>Chromium</b>	<b>6.48</b>		<b>0.484</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:38
<b>Copper</b>	<b>5.57</b>		<b>0.193</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:38
<b>Lead</b>	<b>5.84</b>		<b>0.484</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:38
<b>Nickel</b>	<b>6.91</b>		<b>0.484</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:38
<b>Selenium</b>	<b>0.494</b>		<b>0.484</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:38
Silver	ND		0.484	mg/Kg	1	27-Jun-2016 14:38
<b>Zinc</b>	<b>20.7</b>		<b>0.484</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:38

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-3-1-061016  
 Collection Date: 10-Jun-2016 08:45

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-23  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	18-Jun-2016 15:23
Ethylbenzene	ND		4.8	ug/Kg	1	18-Jun-2016 15:23
m,p-Xylene	ND		9.7	ug/Kg	1	18-Jun-2016 15:23
o-Xylene	ND		4.8	ug/Kg	1	18-Jun-2016 15:23
Toluene	ND		4.8	ug/Kg	1	18-Jun-2016 15:23
Xylenes, Total	ND		9.7	ug/Kg	1	18-Jun-2016 15:23
Surr: 1,2-Dichloroethane-d4	84.1		70-128	%REC	1	18-Jun-2016 15:23
Surr: 4-Bromofluorobenzene	80.3		73-126	%REC	1	18-Jun-2016 15:23
Surr: Dibromofluoromethane	87.3		71-128	%REC	1	18-Jun-2016 15:23
Surr: Toluene-d8	97.0		73-127	%REC	1	18-Jun-2016 15:23
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 23-Jun-2016 Analyst: RPM		
Calcium	67.1		5.00	mg/L	10	27-Jun-2016 11:36
Magnesium	17.8		5.00	mg/L	10	27-Jun-2016 11:36
Sodium	34.8		5.00	mg/L	10	27-Jun-2016 11:36
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		1.98	mg/kg	1	28-Jun-2016 17:06
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	6.48		5.00	mg/Kg	1	29-Jun-2016 10:56
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	1.23		0.0100	mmhos/cm @25°C	1	29-Jun-2016 14:44
Electrical Conductivity, 1:1 aqueous	0.673		0.0100	mmhos/cm @25°C	1	29-Jun-2016 14:44
Saturation % as decimal	0.549		0	mmhos/cm @25°C	1	29-Jun-2016 14:44
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 07:24
Surr: 4-Bromofluorobenzene	80.0		70-130	%REC	1	17-Jun-2016 07:24
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	9.28		3.43	ug/Kg	1	24-Jun-2016 15:50
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	8.82	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.4	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.549		0.100	SP as fraction	1	27-Jun-2016 14:30
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 23-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	0.976		0.0100	meq/meq	1	28-Jun-2016 09:34

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-3-1-061016  
Collection Date: 10-Jun-2016 08:45

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-23  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>TPH DRO/ORO BY SW8015C</b>		<b>Method:SW8015M</b>		Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	24-Jun-2016 05:55
Surr: 2-Fluorobiphenyl	70.4		60-135	%REC	1	24-Jun-2016 05:55

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-3-5-061016  
 Collection Date: 10-Jun-2016 08:55

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-24  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 22-Jun-2016		Analyst: ACN
Acenaphthene	ND		3.3	ug/Kg	1	27-Jun-2016 16:48
Acenaphthylene	ND		3.3	ug/Kg	1	27-Jun-2016 16:48
Anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 16:48
Benz(a)anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 16:48
Benzo(a)pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 16:48
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 16:48
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	27-Jun-2016 16:48
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 16:48
Chrysene	ND		3.3	ug/Kg	1	27-Jun-2016 16:48
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 16:48
Fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 16:48
Fluorene	ND		3.3	ug/Kg	1	27-Jun-2016 16:48
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 16:48
<b>Naphthalene</b>	<b>3.7</b>		<b>3.3</b>	<b>ug/Kg</b>	1	27-Jun-2016 16:48
Phenanthrene	ND		3.3	ug/Kg	1	27-Jun-2016 16:48
Pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 16:48
<i>Surr: 2-Fluorobiphenyl</i>	<i>50.8</i>		<i>43-125</i>	<i>%REC</i>	<i>1</i>	<i>27-Jun-2016 16:48</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>80.9</i>		<i>32-125</i>	<i>%REC</i>	<i>1</i>	<i>27-Jun-2016 16:48</i>
<i>Surr: Nitrobenzene-d5</i>	<i>67.8</i>		<i>37-125</i>	<i>%REC</i>	<i>1</i>	<i>27-Jun-2016 16:48</i>
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 23-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>2.69</b>		<b>0.469</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:43
<b>Barium</b>	<b>137</b>		<b>0.469</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:43
<b>Boron</b>	<b>4.58</b>		<b>2.34</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:43
Cadmium	ND		0.469	mg/Kg	1	27-Jun-2016 14:43
<b>Chromium</b>	<b>6.40</b>		<b>0.469</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:43
<b>Copper</b>	<b>5.13</b>		<b>0.187</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:43
<b>Lead</b>	<b>5.89</b>		<b>0.469</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:43
<b>Nickel</b>	<b>6.80</b>		<b>0.469</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:43
Selenium	ND		0.469	mg/Kg	1	27-Jun-2016 14:43
Silver	ND		0.469	mg/Kg	1	27-Jun-2016 14:43
<b>Zinc</b>	<b>30.2</b>		<b>0.469</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:43

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-3-5-061016  
 Collection Date: 10-Jun-2016 08:55

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-24  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		5.0	ug/Kg	1	18-Jun-2016 15:51
Ethylbenzene	ND		5.0	ug/Kg	1	18-Jun-2016 15:51
m,p-Xylene	ND		9.9	ug/Kg	1	18-Jun-2016 15:51
o-Xylene	ND		5.0	ug/Kg	1	18-Jun-2016 15:51
Toluene	ND		5.0	ug/Kg	1	18-Jun-2016 15:51
Xylenes, Total	ND		9.9	ug/Kg	1	18-Jun-2016 15:51
Surr: 1,2-Dichloroethane-d4	84.3		70-128	%REC	1	18-Jun-2016 15:51
Surr: 4-Bromofluorobenzene	89.4		73-126	%REC	1	18-Jun-2016 15:51
Surr: Dibromofluoromethane	70.0	S	71-128	%REC	1	18-Jun-2016 15:51
Surr: Toluene-d8	92.3		73-127	%REC	1	18-Jun-2016 15:51
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 23-Jun-2016 Analyst: RPM		
Calcium	751		5.00	mg/L	10	27-Jun-2016 11:39
Magnesium	ND		5.00	mg/L	10	27-Jun-2016 11:39
Sodium	347		5.00	mg/L	10	27-Jun-2016 11:39
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		1.96	mg/kg	1	28-Jun-2016 17:06
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	6.40		5.00	mg/Kg	1	29-Jun-2016 10:56
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	9.43		0.0100	mmhos/cm @25°C	1	29-Jun-2016 14:44
Electrical Conductivity, 1:1 aqueous	5.05		0.0100	mmhos/cm @25°C	1	29-Jun-2016 14:44
Saturation % as decimal	0.535		0	mmhos/cm @25°C	1	29-Jun-2016 14:44
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 07:40
Surr: 4-Bromofluorobenzene	87.5		70-130	%REC	1	17-Jun-2016 07:40
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	8.82		3.55	ug/Kg	1	24-Jun-2016 15:52
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	10.3	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.3	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.535		0.100	SP as fraction	1	27-Jun-2016 14:30
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 23-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	3.49		0.0100	meq/meq	1	28-Jun-2016 09:34

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-3-5-061016  
Collection Date: 10-Jun-2016 08:55

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-24  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH DRO/ORO BY SW8015C	Method:SW8015M			Prep:SW3541 / 23-Jun-2016		Analyst: AAP
TPH (Diesel Range)	5.5		1.7	mg/Kg	1	24-Jun-2016 06:19
Surr: 2-Fluorobiphenyl	65.5		60-135	%REC	1	24-Jun-2016 06:19

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-3-12-061016  
 Collection Date: 10-Jun-2016 09:05

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-25  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 22-Jun-2016		Analyst: ACN
Acenaphthene	ND		3.3	ug/Kg	1	27-Jun-2016 17:07
Acenaphthylene	ND		3.3	ug/Kg	1	27-Jun-2016 17:07
Anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 17:07
Benz(a)anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 17:07
Benzo(a)pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 17:07
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 17:07
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	27-Jun-2016 17:07
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 17:07
Chrysene	ND		3.3	ug/Kg	1	27-Jun-2016 17:07
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 17:07
Fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 17:07
Fluorene	ND		3.3	ug/Kg	1	27-Jun-2016 17:07
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 17:07
Naphthalene	ND		3.3	ug/Kg	1	27-Jun-2016 17:07
Phenanthrene	ND		3.3	ug/Kg	1	27-Jun-2016 17:07
Pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 17:07
<i>Surr: 2-Fluorobiphenyl</i>	60.6		43-125	%REC	1	27-Jun-2016 17:07
<i>Surr: 4-Terphenyl-d14</i>	85.9		32-125	%REC	1	27-Jun-2016 17:07
<i>Surr: Nitrobenzene-d5</i>	73.7		37-125	%REC	1	27-Jun-2016 17:07
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 23-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>4.52</b>		<b>0.471</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:47
<b>Barium</b>	<b>44.8</b>		<b>0.471</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:47
<b>Boron</b>	<b>5.59</b>		<b>2.36</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:47
Cadmium	ND		0.471	mg/Kg	1	27-Jun-2016 14:47
<b>Chromium</b>	<b>5.13</b>		<b>0.471</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:47
<b>Copper</b>	<b>5.05</b>		<b>0.189</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:47
<b>Lead</b>	<b>8.45</b>		<b>0.471</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:47
<b>Nickel</b>	<b>7.26</b>		<b>0.471</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:47
<b>Selenium</b>	<b>0.611</b>		<b>0.471</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:47
Silver	ND		0.471	mg/Kg	1	27-Jun-2016 14:47
<b>Zinc</b>	<b>27.1</b>		<b>0.471</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:47

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-3-12-061016  
 Collection Date: 10-Jun-2016 09:05

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-25  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	18-Jun-2016 16:21
Ethylbenzene	ND		4.8	ug/Kg	1	18-Jun-2016 16:21
m,p-Xylene	ND		9.7	ug/Kg	1	18-Jun-2016 16:21
o-Xylene	ND		4.8	ug/Kg	1	18-Jun-2016 16:21
Toluene	ND		4.8	ug/Kg	1	18-Jun-2016 16:21
Xylenes, Total	ND		9.7	ug/Kg	1	18-Jun-2016 16:21
Surr: 1,2-Dichloroethane-d4	88.2		70-128	%REC	1	18-Jun-2016 16:21
Surr: 4-Bromofluorobenzene	84.9		73-126	%REC	1	18-Jun-2016 16:21
Surr: Dibromofluoromethane	103		71-128	%REC	1	18-Jun-2016 16:21
Surr: Toluene-d8	93.0		73-127	%REC	1	18-Jun-2016 16:21
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 23-Jun-2016 Analyst: RPM		
Calcium	505		4.99	mg/L	10	27-Jun-2016 11:42
Magnesium	167		4.99	mg/L	10	27-Jun-2016 11:42
Sodium	7,180		49.9	mg/L	100	27-Jun-2016 12:47
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		2.00	mg/kg	1	28-Jun-2016 17:06
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	5.13		5.00	mg/Kg	1	29-Jun-2016 10:56
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	56.1		0.0100	mmhos/cm @25°C	1	29-Jun-2016 14:44
Electrical Conductivity, 1:1 aqueous	48.1		0.0100	mmhos/cm @25°C	1	29-Jun-2016 14:44
Saturation % as decimal	0.857		0	mmhos/cm @25°C	1	29-Jun-2016 14:44
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 07:56
Surr: 4-Bromofluorobenzene	81.4		70-130	%REC	1	17-Jun-2016 07:56
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	10.2		3.50	ug/Kg	1	24-Jun-2016 15:54
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	8.46	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.2	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.857		0.100	SP as fraction	1	27-Jun-2016 14:30
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 23-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	70.8		0.0100	meq/meq	1	28-Jun-2016 09:34

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



Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-3-12-061016  
Collection Date: 10-Jun-2016 09:05

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-25  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH DRO/ORO BY SW8015C	Method:SW8015M			Prep:SW3541 / 23-Jun-2016	Analyst: AAP	
TPH (Diesel Range)	ND		5.0	mg/Kg	1	24-Jun-2016 07:31
Surr: 2-Fluorobiphenyl	66.5		60-135	%REC	1	24-Jun-2016 07:31

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-3-14-061016  
 Collection Date: 10-Jun-2016 09:10

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-26  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL PAHS</b>		<b>Method:SW8270</b>		Prep:SW3541 / 22-Jun-2016		Analyst: ACN
Acenaphthene	ND		3.3	ug/Kg	1	27-Jun-2016 17:34
Acenaphthylene	ND		3.3	ug/Kg	1	27-Jun-2016 17:34
Anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 17:34
Benz(a)anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 17:34
Benzo(a)pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 17:34
Benzo(b)fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 17:34
Benzo(g,h,i)perylene	ND		3.3	ug/Kg	1	27-Jun-2016 17:34
Benzo(k)fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 17:34
Chrysene	ND		3.3	ug/Kg	1	27-Jun-2016 17:34
Dibenz(a,h)anthracene	ND		3.3	ug/Kg	1	27-Jun-2016 17:34
Fluoranthene	ND		3.3	ug/Kg	1	27-Jun-2016 17:34
Fluorene	ND		3.3	ug/Kg	1	27-Jun-2016 17:34
Indeno(1,2,3-cd)pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 17:34
Naphthalene	ND		3.3	ug/Kg	1	27-Jun-2016 17:34
Phenanthrene	ND		3.3	ug/Kg	1	27-Jun-2016 17:34
Pyrene	ND		3.3	ug/Kg	1	27-Jun-2016 17:34
<i>Surr: 2-Fluorobiphenyl</i>	47.9		43-125	%REC	1	27-Jun-2016 17:34
<i>Surr: 4-Terphenyl-d14</i>	83.2		32-125	%REC	1	27-Jun-2016 17:34
<i>Surr: Nitrobenzene-d5</i>	59.8		37-125	%REC	1	27-Jun-2016 17:34
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3050A / 23-Jun-2016		Analyst: JDE
<b>Arsenic</b>	<b>17.1</b>		<b>0.478</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:52
<b>Barium</b>	<b>40.5</b>		<b>0.478</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:52
<b>Boron</b>	<b>4.55</b>		<b>2.39</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:52
Cadmium	ND		0.478	mg/Kg	1	27-Jun-2016 14:52
<b>Chromium</b>	<b>3.99</b>		<b>0.478</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:52
<b>Copper</b>	<b>9.59</b>		<b>0.191</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:52
<b>Lead</b>	<b>11.0</b>		<b>0.478</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:52
<b>Nickel</b>	<b>12.3</b>		<b>0.478</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:52
<b>Selenium</b>	<b>0.812</b>		<b>0.478</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:52
Silver	ND		0.478	mg/Kg	1	27-Jun-2016 14:52
<b>Zinc</b>	<b>44.1</b>		<b>0.478</b>	<b>mg/Kg</b>	1	27-Jun-2016 14:52

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

Client: Kinder Morgan  
 Project: McElmo Dome + Doe Canyon  
 Sample ID: GP-19-3-14-061016  
 Collection Date: 10-Jun-2016 09:10

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
 Lab ID:HS16060846-26  
 Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: WLR		
Benzene	ND		4.8	ug/Kg	1	18-Jun-2016 16:49
Ethylbenzene	ND		4.8	ug/Kg	1	18-Jun-2016 16:49
m,p-Xylene	ND		9.7	ug/Kg	1	18-Jun-2016 16:49
o-Xylene	ND		4.8	ug/Kg	1	18-Jun-2016 16:49
Toluene	ND		4.8	ug/Kg	1	18-Jun-2016 16:49
Xylenes, Total	ND		9.7	ug/Kg	1	18-Jun-2016 16:49
Surr: 1,2-Dichloroethane-d4	76.2		70-128	%REC	1	18-Jun-2016 16:49
Surr: 4-Bromofluorobenzene	85.4		73-126	%REC	1	18-Jun-2016 16:49
Surr: Dibromofluoromethane	96.7		71-128	%REC	1	18-Jun-2016 16:49
Surr: Toluene-d8	96.4		73-127	%REC	1	18-Jun-2016 16:49
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>		<b>Method:La29B-6020</b>		Prep:La29B-6020 / 23-Jun-2016 Analyst: RPM		
Calcium	605		5.00	mg/L	10	27-Jun-2016 11:45
Magnesium	296		5.00	mg/L	10	27-Jun-2016 11:45
Sodium	1,250		5.00	mg/L	10	27-Jun-2016 11:45
<b>HEXAVALENT CHROMIUM BY SW7196A</b>		<b>Method:SW7196</b>		Prep:SW3060A / 27-Jun-2016 Analyst: JHD		
Chromium, Hexavalent	ND		2.00	mg/kg	1	28-Jun-2016 17:06
<b>TRIVALENT CHROMIUM</b>		<b>Method:Calculation</b>		Analyst: DQ		
Chromium, Trivalent	ND		5.00	mg/Kg	1	29-Jun-2016 10:56
<b>LA29B ELECTRICAL CONDUCTIVITY</b>		<b>Method:LaDNR-29B EC</b>		Analyst: KMU		
Electrical Conductivity @ saturation	21.9		0.0100	mmhos/cm @25°C	1	29-Jun-2016 14:44
Electrical Conductivity, 1:1 aqueous	14.1		0.0100	mmhos/cm @25°C	1	29-Jun-2016 14:44
Saturation % as decimal	0.642		0	mmhos/cm @25°C	1	29-Jun-2016 14:44
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: SFE		
Gasoline Range Organics	ND		0.050	mg/Kg	1	17-Jun-2016 09:01
Surr: 4-Bromofluorobenzene	78.9		70-130	%REC	1	17-Jun-2016 09:01
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471A</b>		Prep:SW7471A / 24-Jun-2016 Analyst: JCJ		
Mercury	22.1		3.44	ug/Kg	1	24-Jun-2016 15:55
<b>PH SOIL BY SW9045D</b>		<b>Method:SW9045B</b>		Analyst: OFO		
pH	8.05	H	0.100	pH Units	1	24-Jun-2016 14:31
Temp Deg C @pH	24.4	H	0	°C	1	24-Jun-2016 14:31
<b>LA29B SATURATION POINT (AS FRACTION)</b>		<b>Method:LaDNR-29B SP</b>		Analyst: KAH		
Saturation Point	0.642		0.100	SP as fraction	1	27-Jun-2016 14:30
<b>LA29B SODIUM ADSORPTION RATIO</b>		<b>Method:La29B SAR</b>		Prep:La29B-6020 / 23-Jun-2016 Analyst: RPM		
Sodium Adsorption Ratio	10.4		0.0100	meq/meq	1	28-Jun-2016 09:34

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

Client: Kinder Morgan  
Project: McElmo Dome + Doe Canyon  
Sample ID: GP-19-3-14-061016  
Collection Date: 10-Jun-2016 09:10

**ANALYTICAL REPORT**

WorkOrder:HS16060846  
Lab ID:HS16060846-26  
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH DRO/ORO BY SW8015C	Method:SW8015M			Prep:SW3541 / 23-Jun-2016	Analyst: AAP	
TPH (Diesel Range)	3.0		2.0	mg/Kg	1	24-Jun-2016 07:55
Surr: 2-Fluorobiphenyl	64.6		60-135	%REC	1	24-Jun-2016 07:55

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

## WEIGHT LOG

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**Batch ID:** 1055 **Method:** VOLATILES BY SW8260C

SamplID	Container	Sample Wt/Vol	Final Volume	Weight Factor	Container Type
HS16060846-01	1	4.995 (g)	5 (mL)	1	Bulk (5030B)
HS16060846-02	1	5.023 (g)	5 (mL)	1	Bulk (5030B)
HS16060846-03	1	5.281 (g)	5 (mL)	0.95	Bulk (5030B)
HS16060846-04	1	5.066 (g)	5 (mL)	0.99	Bulk (5030B)
HS16060846-05	1	5.17 (g)	5 (mL)	0.97	Bulk (5030B)
HS16060846-06	1	5.128 (g)	5 (mL)	0.98	Bulk (5030B)
HS16060846-07	1	5.199 (g)	5 (mL)	0.96	Bulk (5030B)
HS16060846-08	1	5.266 (g)	5 (mL)	0.95	Bulk (5030B)
HS16060846-09	1	5.16 (g)	5 (mL)	0.97	Bulk (5030B)
HS16060846-10	1	5.109 (g)	5 (mL)	0.98	Bulk (5030B)
HS16060846-11	1	5.201 (g)	5 (mL)	0.96	Bulk (5030B)
HS16060846-12	1	5.078 (g)	5 (mL)	0.98	Bulk (5030B)
HS16060846-13	1	5.168 (g)	5 (mL)	0.97	Bulk (5030B)
HS16060846-14	1	5.156 (g)	5 (mL)	0.97	Bulk (5030B)
HS16060846-15	1	5.177 (g)	5 (mL)	0.97	Bulk (5030B)
HS16060846-16	1	4.96 (g)	5 (mL)	1.01	Bulk (5030B)
HS16060846-17	1	5.009 (g)	5 (mL)	1	Bulk (5030B)
HS16060846-18	1	5.067 (g)	5 (mL)	0.99	Bulk (5030B)
HS16060846-19	1	5.118 (g)	5 (mL)	0.98	Bulk (5030B)
HS16060846-20	1	5.007 (g)	5 (mL)	1	Bulk (5030B)
HS16060846-21	1	5.141 (g)	5 (mL)	0.97	Bulk (5030B)
HS16060846-22	1	4.999 (g)	5 (mL)	1	Bulk (5030B)
HS16060846-23	1	5.147 (g)	5 (mL)	0.97	Bulk (5030B)
HS16060846-24	1	5.042 (g)	5 (mL)	0.99	Bulk (5030B)
HS16060846-25	1	5.135 (g)	5 (mL)	0.97	Bulk (5030B)
HS16060846-26	1	5.134 (g)	5 (mL)	0.97	Bulk (5030B)

**Batch ID:** 105543 **Method:** LOW-LEVEL PAHS **Prep:** 3541\_B\_LOW

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16060846-01	1	10.04	1 (mL)	0.0996
HS16060846-02	1	30.02	1 (mL)	0.03331
HS16060846-03	1	30.13	1 (mL)	0.03319
HS16060846-04	1	30.16	1 (mL)	0.03316
HS16060846-05	1	30.1	1 (mL)	0.03322
HS16060846-06	1	30.01	1 (mL)	0.03332
HS16060846-07	1	30.08	1 (mL)	0.03324
HS16060846-08	1	30.16	1 (mL)	0.03316
HS16060846-09	1	30.11	1 (mL)	0.03321
HS16060846-10	1	30.14	1 (mL)	0.03318
HS16060846-11	1	30.07	1 (mL)	0.03326
HS16060846-12	1	30.18	1 (mL)	0.03313
HS16060846-13	1	30.13	1 (mL)	0.03319

## WEIGHT LOG

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**Batch ID:** 105590      **Method:** LOW-LEVEL PAHS      **Prep:** 3541\_B\_LOW

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16060846-14	1	30.12	1 (mL)	0.0332
HS16060846-15	1	30.16	1 (mL)	0.03316
HS16060846-16	1	30.06	1 (mL)	0.03327
HS16060846-17	1	30.07	1 (mL)	0.03326
HS16060846-18	1	30.11	1 (mL)	0.03321
HS16060846-19	1	30.09	1 (mL)	0.03323
HS16060846-20	1	30.14	1 (mL)	0.03318
HS16060846-21	1	30.17	1 (mL)	0.03315
HS16060846-22	1	30.12	1 (mL)	0.0332
HS16060846-23	1	30.16	1 (mL)	0.03316
HS16060846-24	1	30.04	1 (mL)	0.03329
HS16060846-25	1	30.09	1 (mL)	0.03323
HS16060846-26	1	30.15	1 (mL)	0.03317

**Batch ID:** 105594      **Method:** LA 29B - 1:1 SOLUBLE CATIONS FOR SAR      **Prep:** LA29B SAR CATPR

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16060846-01	1	100.1691	100 (mL)	0.9983
HS16060846-02	1	100.1072	100 (mL)	0.9989
HS16060846-03	1	80.1446	80 (mL)	0.9982
HS16060846-04	1	60.1698	60 (mL)	0.9972
HS16060846-05	1	80.1811	80 (mL)	0.9977
HS16060846-06	1	100.1431	100 (mL)	0.9986
HS16060846-07	1	100.0326	100 (mL)	0.9997
HS16060846-08	1	100.1833	100 (mL)	0.9982
HS16060846-09	1	100.0632	100 (mL)	0.9994
HS16060846-10	1	100.1527	100 (mL)	0.9985
HS16060846-11	1	40.1347	40 (mL)	0.9966
HS16060846-12	1	60.1315	60 (mL)	0.9978
HS16060846-13	1	100.0052	100 (mL)	0.9999
HS16060846-14	1	100.2991	100 (mL)	0.997
HS16060846-15	1	100.1618	100 (mL)	0.9984
HS16060846-16	1	100.1577	100 (mL)	0.9984
HS16060846-17	1	70.0019	70 (mL)	1
HS16060846-18	1	90.1065	90 (mL)	0.9988
HS16060846-19	1	100.0192	100 (mL)	0.9998
HS16060846-20	1	100.1775	100 (mL)	0.9982

## WEIGHT LOG

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**Batch ID:** 105616      **Method:** METALS BY SW6020A      **Prep:** 3050\_I\_LOW

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16060846-01	1	0.5358	50 (mL)	93.32
HS16060846-02	1	0.5251	50 (mL)	95.22
HS16060846-03	1	0.5442	50 (mL)	91.88
HS16060846-04	1	0.5233	50 (mL)	95.55
HS16060846-05	1	0.5267	50 (mL)	94.93
HS16060846-06	1	0.5109	50 (mL)	97.87
HS16060846-07	1	0.5296	50 (mL)	94.41
HS16060846-08	1	0.542	50 (mL)	92.25
HS16060846-09	1	0.511	50 (mL)	97.85
HS16060846-10	1	0.5426	50 (mL)	92.15
HS16060846-11	1	0.5491	50 (mL)	91.06
HS16060846-12	1	0.5518	50 (mL)	90.61
HS16060846-13	1	0.5524	50 (mL)	90.51
HS16060846-14	1	0.5472	50 (mL)	91.37
HS16060846-15	1	0.5509	50 (mL)	90.76
HS16060846-16	1	0.5397	50 (mL)	92.64
HS16060846-17	1	0.5206	50 (mL)	96.04
HS16060846-18	1	0.5227	50 (mL)	95.66
HS16060846-19	1	0.5275	50 (mL)	94.79
HS16060846-20	1	0.5501	50 (mL)	90.89

**Batch ID:** 105629      **Method:** LA 29B - 1:1 SOLUBLE CATIONS FOR SAR      **Prep:** LA29B SAR CATPR

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16060846-21	1	90.1149	90 (mL)	0.9987
HS16060846-22	1	70.1763	70 (mL)	0.9975
HS16060846-23	1	90.0437	90 (mL)	0.9995
HS16060846-24	1	80.0234	80 (mL)	0.9997
HS16060846-25	1	70.1755	70 (mL)	0.9975
HS16060846-26	1	100.0317	100 (mL)	0.9997

## WEIGHT LOG

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**Batch ID:** 105640 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR\_LL

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16060846-01	1	10.12	1 (mL)	0.09881
HS16060846-02	1	30.09	1 (mL)	0.03323
HS16060846-03	1	25.14	1 (mL)	0.03978
HS16060846-04	1	30.12	1 (mL)	0.0332
HS16060846-05	1	30.08	1 (mL)	0.03324
HS16060846-06	1	30.14	1 (mL)	0.03318
HS16060846-07	1	30.13	1 (mL)	0.03319
HS16060846-08	1	30.04	1 (mL)	0.03329
HS16060846-09	1	15.14	1 (mL)	0.06605
HS16060846-10	1	30.1	1 (mL)	0.03322
HS16060846-11	1	30.17	1 (mL)	0.03315
HS16060846-12	1	20.11	1 (mL)	0.04973
HS16060846-13	1	30.08	1 (mL)	0.03324
HS16060846-14	1	30.06	1 (mL)	0.03327
HS16060846-15	1	30.14	1 (mL)	0.03318
HS16060846-16	1	30.13	1 (mL)	0.03319
HS16060846-17	1	15.19	1 (mL)	0.06583
HS16060846-18	1	3.07	1 (mL)	0.3257
HS16060846-19	1	30.18	1 (mL)	0.03313
HS16060846-20	1	30.16	1 (mL)	0.03316

**Batch ID:** 105662 **Method:** METALS BY SW6020A **Prep:** 3050\_I\_LOW

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16060846-21	1	0.5304	50 (mL)	94.27
HS16060846-22	1	0.5223	50 (mL)	95.73
HS16060846-23	1	0.5169	50 (mL)	96.73
HS16060846-24	1	0.5335	50 (mL)	93.72
HS16060846-25	1	0.5304	50 (mL)	94.27
HS16060846-26	1	0.5225	50 (mL)	95.69

**Batch ID:** 105663 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR\_LL

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16060846-21	1	30.13	1 (mL)	0.03319
HS16060846-22	1	30.19	1 (mL)	0.03312
HS16060846-23	1	30.17	1 (mL)	0.03315
HS16060846-24	1	30.16	1 (mL)	0.03316
HS16060846-25	1	10.1	1 (mL)	0.09901
HS16060846-26	1	25.15	1 (mL)	0.03976

**Batch ID:** 105679 **Method:** MERCURY BY SW7471B **Prep:** HG\_S\_LOWPR

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16060846-21	1	0.5582	40 (mL)	71.66
HS16060846-22	1	0.5806	40 (mL)	68.89
HS16060846-23	1	0.5816	40 (mL)	68.78
HS16060846-24	1	0.5623	40 (mL)	71.14
HS16060846-25	1	0.5701	40 (mL)	70.16
HS16060846-26	1	0.5799	40 (mL)	68.98



## WEIGHT LOG

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**Batch ID:** 105680      **Method:** MERCURY BY SW7471B      **Prep:** HG\_S\_LOWPR

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16060846-01	1	0.5851	40 (mL)	68.36
HS16060846-02	1	0.5501	40 (mL)	72.71
HS16060846-03	1	0.5581	40 (mL)	71.67
HS16060846-04	1	0.5764	40 (mL)	69.4
HS16060846-05	1	0.5587	40 (mL)	71.59
HS16060846-06	1	0.5585	40 (mL)	71.62
HS16060846-07	1	0.5676	40 (mL)	70.47
HS16060846-08	1	0.5761	40 (mL)	69.43
HS16060846-09	1	0.5669	40 (mL)	70.56
HS16060846-10	1	0.5571	40 (mL)	71.8
HS16060846-11	1	0.5665	40 (mL)	70.61
HS16060846-12	1	0.5613	40 (mL)	71.26
HS16060846-13	1	0.5719	40 (mL)	69.94
HS16060846-14	1	0.5647	40 (mL)	70.83
HS16060846-15	1	0.5746	40 (mL)	69.61
HS16060846-16	1	0.5584	40 (mL)	71.63
HS16060846-17	1	0.5686	40 (mL)	70.35
HS16060846-18	1	0.5671	40 (mL)	70.53
HS16060846-19	1	0.5621	40 (mL)	71.16
HS16060846-20	1	0.5716	40 (mL)	69.98

**Batch ID:** 105709      **Method:** HEXAVALENT CHROMIUM BY SW7196A      **Prep:** CR6\_S\_PR3060A

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16060846-01	1	2.5101	100 (mL)	39.84
HS16060846-02	1	2.5007	100 (mL)	39.99
HS16060846-03	1	2.5031	100 (mL)	39.95
HS16060846-04	1	2.5121	100 (mL)	39.81
HS16060846-05	1	2.5037	100 (mL)	39.94
HS16060846-06	1	2.5078	100 (mL)	39.88
HS16060846-07	1	2.5025	100 (mL)	39.96
HS16060846-08	1	2.5083	100 (mL)	39.87
HS16060846-09	1	2.5179	100 (mL)	39.72
HS16060846-10	1	2.5118	100 (mL)	39.81
HS16060846-11	1	2.5002	100 (mL)	40
HS16060846-12	1	2.5043	100 (mL)	39.93
HS16060846-13	1	2.5138	100 (mL)	39.78
HS16060846-14	1	2.5026	100 (mL)	39.96
HS16060846-15	1	2.5064	100 (mL)	39.9
HS16060846-16	1	2.5126	100 (mL)	39.8
HS16060846-17	1	2.5002	100 (mL)	40
HS16060846-18	1	2.514	100 (mL)	39.78
HS16060846-19	1	2.5037	100 (mL)	39.94
HS16060846-20	1	2.5111	100 (mL)	39.82

## WEIGHT LOG

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**Batch ID:** 105740      **Method:** HEXAVALENT CHROMIUM BY SW7196A      **Prep:** CR6\_S\_PR3060A

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS16060846-21	1	2.5274	100 (mL)	39.57
HS16060846-22	1	2.5	100 (mL)	40
HS16060846-23	1	2.5239	100 (mL)	39.62
HS16060846-24	1	2.5552	100 (mL)	39.14
HS16060846-25	1	2.5	100 (mL)	40
HS16060846-26	1	2.5	100 (mL)	40

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID</b> 105543	<b>Test Name : LOW-LEVEL PAHS</b>			<b>Matrix: Soil</b>		
HS16060846-01	GP-19-6-3-061316	13 Jun 2016 10:00		21 Jun 2016 10:23	23 Jun 2016 21:46	1
HS16060846-02	GP-19-6-5-061316	13 Jun 2016 10:05		21 Jun 2016 10:23	23 Jun 2016 22:05	1
HS16060846-03	GP-19-6-9-061316	13 Jun 2016 10:10		21 Jun 2016 10:23	23 Jun 2016 22:24	1
HS16060846-04	GP-19-6-14-061316	13 Jun 2016 10:20		21 Jun 2016 10:23	23 Jun 2016 22:44	1
HS16060846-05	GP-19-7-2-061316	13 Jun 2016 10:40		21 Jun 2016 10:23	24 Jun 2016 19:41	1
HS16060846-06	GP-19-7-8-061316	13 Jun 2016 10:50		21 Jun 2016 10:23	24 Jun 2016 20:00	1
HS16060846-07	GP-19-7-12-061316	13 Jun 2016 11:10		21 Jun 2016 10:23	24 Jun 2016 20:19	1
HS16060846-08	GP-19-8-3-061316	13 Jun 2016 11:15		21 Jun 2016 10:23	24 Jun 2016 20:38	1
HS16060846-09	GP-19-8-8-061316	13 Jun 2016 11:30		21 Jun 2016 10:23	24 Jun 2016 20:58	1
HS16060846-10	GP-19-8-10-061316	13 Jun 2016 11:45		21 Jun 2016 10:23	24 Jun 2016 21:17	1
HS16060846-11	GP-19-2-1-061016	10 Jun 2016 09:35		21 Jun 2016 10:23	24 Jun 2016 21:36	1
HS16060846-12	GP-19-2-12-061016	10 Jun 2016 09:55		21 Jun 2016 10:23	24 Jun 2016 21:55	1
HS16060846-13	GP-19-2-18-061016	10 Jun 2016 10:15		21 Jun 2016 10:23	24 Jun 2016 22:14	1
<b>Batch ID</b> 105590	<b>Test Name : LOW-LEVEL PAHS</b>			<b>Matrix: Soil</b>		
HS16060846-14	GP-19-1-1-061016	10 Jun 2016 10:35		22 Jun 2016 08:47	27 Jun 2016 15:31	1
HS16060846-15	GP-19-1-6-061016	10 Jun 2016 10:50		22 Jun 2016 08:47	27 Jun 2016 15:50	1
HS16060846-16	GP-19-1-20-061016	10 Jun 2016 11:50		22 Jun 2016 08:47	25 Jun 2016 01:07	1
HS16060846-17	GP-19-5-3-061016	10 Jun 2016 12:15		22 Jun 2016 08:47	24 Jun 2016 15:07	1
HS16060846-18	GP-19-5-9-061016	10 Jun 2016 12:25		22 Jun 2016 08:47	25 Jun 2016 01:26	1
HS16060846-19	GP-19-5-16-061016	10 Jun 2016 12:50		22 Jun 2016 08:47	25 Jun 2016 01:45	1
HS16060846-20	GP-19-4-1-061016	10 Jun 2016 08:05		22 Jun 2016 08:47	25 Jun 2016 02:04	1
HS16060846-21	GP-19-4-6-061016	10 Jun 2016 08:15		22 Jun 2016 08:47	25 Jun 2016 02:23	1
HS16060846-22	GP-19-4-12-061016	10 Jun 2016 08:25		22 Jun 2016 08:47	27 Jun 2016 16:10	1
HS16060846-23	GP-19-3-1-061016	10 Jun 2016 08:45		22 Jun 2016 08:47	27 Jun 2016 16:29	1
HS16060846-24	GP-19-3-5-061016	10 Jun 2016 08:55		22 Jun 2016 08:47	27 Jun 2016 16:48	1
HS16060846-25	GP-19-3-12-061016	10 Jun 2016 09:05		22 Jun 2016 08:47	27 Jun 2016 17:07	1
HS16060846-26	GP-19-3-14-061016	10 Jun 2016 09:10		22 Jun 2016 08:47	27 Jun 2016 17:34	1

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID</b> 105594	<b>Test Name : LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>			<b>Matrix: Soil</b>		
HS16060846-01	GP-19-6-3-061316	13 Jun 2016 10:00		22 Jun 2016 11:45	24 Jun 2016 12:17	10
HS16060846-02	GP-19-6-5-061316	13 Jun 2016 10:05		22 Jun 2016 11:45	24 Jun 2016 12:20	10
HS16060846-03	GP-19-6-9-061316	13 Jun 2016 10:10		22 Jun 2016 11:45	24 Jun 2016 12:23	10
HS16060846-04	GP-19-6-14-061316	13 Jun 2016 10:20		22 Jun 2016 11:45	24 Jun 2016 12:26	10
HS16060846-05	GP-19-7-2-061316	13 Jun 2016 10:40		22 Jun 2016 11:45	24 Jun 2016 12:29	10
HS16060846-06	GP-19-7-8-061316	13 Jun 2016 10:50		22 Jun 2016 11:45	24 Jun 2016 12:31	10
HS16060846-07	GP-19-7-12-061316	13 Jun 2016 11:10		22 Jun 2016 11:45	24 Jun 2016 12:37	10
HS16060846-08	GP-19-8-3-061316	13 Jun 2016 11:15		22 Jun 2016 11:45	24 Jun 2016 13:30	100
HS16060846-08	GP-19-8-3-061316	13 Jun 2016 11:15		22 Jun 2016 11:45	24 Jun 2016 12:40	10
HS16060846-09	GP-19-8-8-061316	13 Jun 2016 11:30		22 Jun 2016 11:45	24 Jun 2016 13:33	100
HS16060846-09	GP-19-8-8-061316	13 Jun 2016 11:30		22 Jun 2016 11:45	24 Jun 2016 12:49	10
HS16060846-10	GP-19-8-10-061316	13 Jun 2016 11:45		22 Jun 2016 11:45	24 Jun 2016 12:52	10
HS16060846-11	GP-19-2-1-061016	10 Jun 2016 09:35		22 Jun 2016 11:45	24 Jun 2016 12:55	10
HS16060846-12	GP-19-2-12-061016	10 Jun 2016 09:55		22 Jun 2016 11:45	24 Jun 2016 13:36	100
HS16060846-12	GP-19-2-12-061016	10 Jun 2016 09:55		22 Jun 2016 11:45	24 Jun 2016 12:58	10
HS16060846-13	GP-19-2-18-061016	10 Jun 2016 10:15		22 Jun 2016 11:45	24 Jun 2016 13:01	10
HS16060846-14	GP-19-1-1-061016	10 Jun 2016 10:35		22 Jun 2016 11:45	24 Jun 2016 13:04	10
HS16060846-15	GP-19-1-6-061016	10 Jun 2016 10:50		22 Jun 2016 11:45	24 Jun 2016 13:07	10
HS16060846-16	GP-19-1-20-061016	10 Jun 2016 11:50		22 Jun 2016 11:45	24 Jun 2016 13:10	10
HS16060846-17	GP-19-5-3-061016	10 Jun 2016 12:15		22 Jun 2016 11:45	24 Jun 2016 13:13	10
HS16060846-18	GP-19-5-9-061016	10 Jun 2016 12:25		22 Jun 2016 11:45	24 Jun 2016 15:26	1000
HS16060846-18	GP-19-5-9-061016	10 Jun 2016 12:25		22 Jun 2016 11:45	24 Jun 2016 13:16	10
HS16060846-19	GP-19-5-16-061016	10 Jun 2016 12:50		22 Jun 2016 11:45	24 Jun 2016 13:25	10
HS16060846-20	GP-19-4-1-061016	10 Jun 2016 08:05		22 Jun 2016 11:45	24 Jun 2016 13:27	10

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID</b> 105594A	<b>Test Name : LA29B SODIUM ADSORPTION RATIO</b>			<b>Matrix: Soil</b>		
HS16060846-01	GP-19-6-3-061316	13 Jun 2016 10:00		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-02	GP-19-6-5-061316	13 Jun 2016 10:05		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-03	GP-19-6-9-061316	13 Jun 2016 10:10		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-04	GP-19-6-14-061316	13 Jun 2016 10:20		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-05	GP-19-7-2-061316	13 Jun 2016 10:40		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-06	GP-19-7-8-061316	13 Jun 2016 10:50		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-07	GP-19-7-12-061316	13 Jun 2016 11:10		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-08	GP-19-8-3-061316	13 Jun 2016 11:15		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-09	GP-19-8-8-061316	13 Jun 2016 11:30		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-10	GP-19-8-10-061316	13 Jun 2016 11:45		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-11	GP-19-2-1-061016	10 Jun 2016 09:35		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-12	GP-19-2-12-061016	10 Jun 2016 09:55		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-13	GP-19-2-18-061016	10 Jun 2016 10:15		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-14	GP-19-1-1-061016	10 Jun 2016 10:35		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-15	GP-19-1-6-061016	10 Jun 2016 10:50		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-16	GP-19-1-20-061016	10 Jun 2016 11:50		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-17	GP-19-5-3-061016	10 Jun 2016 12:15		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-18	GP-19-5-9-061016	10 Jun 2016 12:25		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-19	GP-19-5-16-061016	10 Jun 2016 12:50		22 Jun 2016 11:45	28 Jun 2016 09:24	1
HS16060846-20	GP-19-4-1-061016	10 Jun 2016 08:05		22 Jun 2016 11:45	28 Jun 2016 09:24	1

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID</b> 105616	<b>Test Name : METALS BY SW6020A</b>			<b>Matrix: Soil</b>		
HS16060846-01	GP-19-6-3-061316	13 Jun 2016 10:00		22 Jun 2016 17:44	27 Jun 2016 11:50	1
HS16060846-02	GP-19-6-5-061316	13 Jun 2016 10:05		22 Jun 2016 17:44	27 Jun 2016 11:54	1
HS16060846-03	GP-19-6-9-061316	13 Jun 2016 10:10		22 Jun 2016 17:44	27 Jun 2016 12:33	1
HS16060846-04	GP-19-6-14-061316	13 Jun 2016 10:20		22 Jun 2016 17:44	27 Jun 2016 12:41	1
HS16060846-05	GP-19-7-2-061316	13 Jun 2016 10:40		22 Jun 2016 17:44	27 Jun 2016 12:46	1
HS16060846-06	GP-19-7-8-061316	13 Jun 2016 10:50		22 Jun 2016 17:44	27 Jun 2016 12:50	1
HS16060846-07	GP-19-7-12-061316	13 Jun 2016 11:10		22 Jun 2016 17:44	27 Jun 2016 12:54	1
HS16060846-08	GP-19-8-3-061316	13 Jun 2016 11:15		22 Jun 2016 17:44	27 Jun 2016 15:26	10
HS16060846-08	GP-19-8-3-061316	13 Jun 2016 11:15		22 Jun 2016 17:44	27 Jun 2016 12:59	1
HS16060846-09	GP-19-8-8-061316	13 Jun 2016 11:30		22 Jun 2016 17:44	27 Jun 2016 15:31	10
HS16060846-09	GP-19-8-8-061316	13 Jun 2016 11:30		22 Jun 2016 17:44	27 Jun 2016 13:03	1
HS16060846-10	GP-19-8-10-061316	13 Jun 2016 11:45		22 Jun 2016 17:44	27 Jun 2016 13:07	1
HS16060846-11	GP-19-2-1-061016	10 Jun 2016 09:35		22 Jun 2016 17:44	27 Jun 2016 13:12	1
HS16060846-12	GP-19-2-12-061016	10 Jun 2016 09:55		22 Jun 2016 17:44	27 Jun 2016 15:35	10
HS16060846-12	GP-19-2-12-061016	10 Jun 2016 09:55		22 Jun 2016 17:44	27 Jun 2016 13:26	1
HS16060846-13	GP-19-2-18-061016	10 Jun 2016 10:15		22 Jun 2016 17:44	27 Jun 2016 13:31	1
HS16060846-14	GP-19-1-1-061016	10 Jun 2016 10:35		22 Jun 2016 17:44	27 Jun 2016 13:35	1
HS16060846-15	GP-19-1-6-061016	10 Jun 2016 10:50		22 Jun 2016 17:44	27 Jun 2016 13:40	1
HS16060846-16	GP-19-1-20-061016	10 Jun 2016 11:50		22 Jun 2016 17:44	27 Jun 2016 13:44	1
HS16060846-17	GP-19-5-3-061016	10 Jun 2016 12:15		22 Jun 2016 17:44	27 Jun 2016 13:48	1
HS16060846-18	GP-19-5-9-061016	10 Jun 2016 12:25		22 Jun 2016 17:44	27 Jun 2016 15:40	10
HS16060846-18	GP-19-5-9-061016	10 Jun 2016 12:25		22 Jun 2016 17:44	27 Jun 2016 13:53	1
HS16060846-19	GP-19-5-16-061016	10 Jun 2016 12:50		22 Jun 2016 17:44	27 Jun 2016 13:57	1
HS16060846-20	GP-19-4-1-061016	10 Jun 2016 08:05		22 Jun 2016 17:44	27 Jun 2016 14:01	1
<b>Batch ID</b> 105629	<b>Test Name : LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>			<b>Matrix: Soil</b>		
HS16060846-21	GP-19-4-6-061016	10 Jun 2016 08:15		23 Jun 2016 11:56	27 Jun 2016 12:44	100
HS16060846-21	GP-19-4-6-061016	10 Jun 2016 08:15		23 Jun 2016 11:56	27 Jun 2016 11:30	10
HS16060846-22	GP-19-4-12-061016	10 Jun 2016 08:25		23 Jun 2016 11:56	27 Jun 2016 11:33	10
HS16060846-23	GP-19-3-1-061016	10 Jun 2016 08:45		23 Jun 2016 11:56	27 Jun 2016 11:36	10
HS16060846-24	GP-19-3-5-061016	10 Jun 2016 08:55		23 Jun 2016 11:56	27 Jun 2016 11:39	10
HS16060846-25	GP-19-3-12-061016	10 Jun 2016 09:05		23 Jun 2016 11:56	27 Jun 2016 12:47	100
HS16060846-25	GP-19-3-12-061016	10 Jun 2016 09:05		23 Jun 2016 11:56	27 Jun 2016 11:42	10
HS16060846-26	GP-19-3-14-061016	10 Jun 2016 09:10		23 Jun 2016 11:56	27 Jun 2016 11:45	10

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID 105629A Test Name : LA29B SODIUM ADSORPTION RATIO Matrix: Soil</b>						
HS16060846-21	GP-19-4-6-061016	10 Jun 2016 08:15		23 Jun 2016 11:56	28 Jun 2016 09:34	1
HS16060846-22	GP-19-4-12-061016	10 Jun 2016 08:25		23 Jun 2016 11:56	28 Jun 2016 09:34	1
HS16060846-23	GP-19-3-1-061016	10 Jun 2016 08:45		23 Jun 2016 11:56	28 Jun 2016 09:34	1
HS16060846-24	GP-19-3-5-061016	10 Jun 2016 08:55		23 Jun 2016 11:56	28 Jun 2016 09:34	1
HS16060846-25	GP-19-3-12-061016	10 Jun 2016 09:05		23 Jun 2016 11:56	28 Jun 2016 09:34	1
HS16060846-26	GP-19-3-14-061016	10 Jun 2016 09:10		23 Jun 2016 11:56	28 Jun 2016 09:34	1
<b>Batch ID 105640 Test Name : TPH DRO/ORO BY SW8015C Matrix: Soil</b>						
HS16060846-01	GP-19-6-3-061316	13 Jun 2016 10:00		23 Jun 2016 10:56	23 Jun 2016 19:28	1
HS16060846-02	GP-19-6-5-061316	13 Jun 2016 10:05		23 Jun 2016 10:56	28 Jun 2016 17:27	200
HS16060846-03	GP-19-6-9-061316	13 Jun 2016 10:10		23 Jun 2016 10:56	28 Jun 2016 17:03	5
HS16060846-04	GP-19-6-14-061316	13 Jun 2016 10:20		23 Jun 2016 10:56	23 Jun 2016 21:29	1
HS16060846-05	GP-19-7-2-061316	13 Jun 2016 10:40		23 Jun 2016 10:56	23 Jun 2016 21:53	1
HS16060846-06	GP-19-7-8-061316	13 Jun 2016 10:50		23 Jun 2016 10:56	23 Jun 2016 22:17	1
HS16060846-07	GP-19-7-12-061316	13 Jun 2016 11:10		23 Jun 2016 10:56	23 Jun 2016 22:41	1
HS16060846-08	GP-19-8-3-061316	13 Jun 2016 11:15		23 Jun 2016 10:56	23 Jun 2016 23:05	1
HS16060846-09	GP-19-8-8-061316	13 Jun 2016 11:30		23 Jun 2016 10:56	28 Jun 2016 16:14	1
HS16060846-09	GP-19-8-8-061316	13 Jun 2016 11:30		23 Jun 2016 10:56	28 Jun 2016 16:14	1
HS16060846-10	GP-19-8-10-061316	13 Jun 2016 11:45		23 Jun 2016 10:56	23 Jun 2016 23:53	1
HS16060846-11	GP-19-2-1-061016	10 Jun 2016 09:35		23 Jun 2016 10:56	24 Jun 2016 00:17	1
HS16060846-12	GP-19-2-12-061016	10 Jun 2016 09:55		23 Jun 2016 10:56	24 Jun 2016 00:41	1
HS16060846-13	GP-19-2-18-061016	10 Jun 2016 10:15		23 Jun 2016 10:56	24 Jun 2016 01:54	1
HS16060846-14	GP-19-1-1-061016	10 Jun 2016 10:35		23 Jun 2016 10:56	24 Jun 2016 02:18	1
HS16060846-15	GP-19-1-6-061016	10 Jun 2016 10:50		23 Jun 2016 10:56	24 Jun 2016 02:42	1
HS16060846-16	GP-19-1-20-061016	10 Jun 2016 11:50		23 Jun 2016 10:56	24 Jun 2016 03:06	1
HS16060846-17	GP-19-5-3-061016	10 Jun 2016 12:15		23 Jun 2016 10:56	24 Jun 2016 03:30	1
HS16060846-18	GP-19-5-9-061016	10 Jun 2016 12:25		23 Jun 2016 10:56	28 Jun 2016 16:38	1
HS16060846-18	GP-19-5-9-061016	10 Jun 2016 12:25		23 Jun 2016 10:56	24 Jun 2016 03:54	1
HS16060846-19	GP-19-5-16-061016	10 Jun 2016 12:50		23 Jun 2016 10:56	24 Jun 2016 04:18	1
HS16060846-20	GP-19-4-1-061016	10 Jun 2016 08:05		23 Jun 2016 10:56	24 Jun 2016 04:43	1
<b>Batch ID 105662 Test Name : METALS BY SW6020A Matrix: Soil</b>						
HS16060846-21	GP-19-4-6-061016	10 Jun 2016 08:15		23 Jun 2016 15:51	27 Jun 2016 14:29	1
HS16060846-22	GP-19-4-12-061016	10 Jun 2016 08:25		23 Jun 2016 15:51	27 Jun 2016 14:34	1
HS16060846-23	GP-19-3-1-061016	10 Jun 2016 08:45		23 Jun 2016 15:51	27 Jun 2016 14:38	1
HS16060846-24	GP-19-3-5-061016	10 Jun 2016 08:55		23 Jun 2016 15:51	27 Jun 2016 14:43	1
HS16060846-25	GP-19-3-12-061016	10 Jun 2016 09:05		23 Jun 2016 15:51	27 Jun 2016 14:47	1
HS16060846-26	GP-19-3-14-061016	10 Jun 2016 09:10		23 Jun 2016 15:51	27 Jun 2016 14:52	1

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID 105663 Test Name : TPH DRO/ORO BY SW8015C Matrix: Soil</b>						
HS16060846-21	GP-19-4-6-061016	10 Jun 2016 08:15		23 Jun 2016 14:56	24 Jun 2016 05:07	1
HS16060846-22	GP-19-4-12-061016	10 Jun 2016 08:25		23 Jun 2016 14:56	24 Jun 2016 05:31	1
HS16060846-23	GP-19-3-1-061016	10 Jun 2016 08:45		23 Jun 2016 14:56	24 Jun 2016 05:55	1
HS16060846-24	GP-19-3-5-061016	10 Jun 2016 08:55		23 Jun 2016 14:56	24 Jun 2016 06:19	1
HS16060846-25	GP-19-3-12-061016	10 Jun 2016 09:05		23 Jun 2016 14:56	24 Jun 2016 07:31	1
HS16060846-26	GP-19-3-14-061016	10 Jun 2016 09:10		23 Jun 2016 14:56	24 Jun 2016 07:55	1
<b>Batch ID 105679 Test Name : MERCURY BY SW7471B Matrix: Soil</b>						
HS16060846-21	GP-19-4-6-061016	10 Jun 2016 08:15		24 Jun 2016 09:33	24 Jun 2016 15:47	1
HS16060846-22	GP-19-4-12-061016	10 Jun 2016 08:25		24 Jun 2016 09:33	24 Jun 2016 15:48	1
HS16060846-23	GP-19-3-1-061016	10 Jun 2016 08:45		24 Jun 2016 09:33	24 Jun 2016 15:50	1
HS16060846-24	GP-19-3-5-061016	10 Jun 2016 08:55		24 Jun 2016 09:33	24 Jun 2016 15:52	1
HS16060846-25	GP-19-3-12-061016	10 Jun 2016 09:05		24 Jun 2016 09:33	24 Jun 2016 15:54	1
HS16060846-26	GP-19-3-14-061016	10 Jun 2016 09:10		24 Jun 2016 09:33	24 Jun 2016 15:55	1
<b>Batch ID 105680 Test Name : MERCURY BY SW7471B Matrix: Soil</b>						
HS16060846-01	GP-19-6-3-061316	13 Jun 2016 10:00		24 Jun 2016 07:37	24 Jun 2016 16:38	1
HS16060846-02	GP-19-6-5-061316	13 Jun 2016 10:05		24 Jun 2016 07:37	24 Jun 2016 16:40	1
HS16060846-03	GP-19-6-9-061316	13 Jun 2016 10:10		24 Jun 2016 07:37	24 Jun 2016 16:42	1
HS16060846-04	GP-19-6-14-061316	13 Jun 2016 10:20		24 Jun 2016 07:37	24 Jun 2016 16:47	1
HS16060846-05	GP-19-7-2-061316	13 Jun 2016 10:40		24 Jun 2016 07:37	24 Jun 2016 16:49	1
HS16060846-06	GP-19-7-8-061316	13 Jun 2016 10:50		24 Jun 2016 07:37	24 Jun 2016 16:50	1
HS16060846-07	GP-19-7-12-061316	13 Jun 2016 11:10		24 Jun 2016 07:37	24 Jun 2016 16:52	1
HS16060846-08	GP-19-8-3-061316	13 Jun 2016 11:15		24 Jun 2016 07:37	24 Jun 2016 16:54	1
HS16060846-09	GP-19-8-8-061316	13 Jun 2016 11:30		24 Jun 2016 07:37	24 Jun 2016 16:56	1
HS16060846-10	GP-19-8-10-061316	13 Jun 2016 11:45		24 Jun 2016 07:37	24 Jun 2016 16:57	1
HS16060846-11	GP-19-2-1-061016	10 Jun 2016 09:35		24 Jun 2016 07:37	24 Jun 2016 17:04	1
HS16060846-12	GP-19-2-12-061016	10 Jun 2016 09:55		24 Jun 2016 07:37	24 Jun 2016 17:06	1
HS16060846-13	GP-19-2-18-061016	10 Jun 2016 10:15		24 Jun 2016 07:37	24 Jun 2016 17:08	1
HS16060846-14	GP-19-1-1-061016	10 Jun 2016 10:35		24 Jun 2016 07:37	24 Jun 2016 17:13	1
HS16060846-15	GP-19-1-6-061016	10 Jun 2016 10:50		24 Jun 2016 07:37	24 Jun 2016 17:15	1
HS16060846-16	GP-19-1-20-061016	10 Jun 2016 11:50		24 Jun 2016 07:37	24 Jun 2016 17:16	1
HS16060846-17	GP-19-5-3-061016	10 Jun 2016 12:15		24 Jun 2016 07:37	24 Jun 2016 17:18	1
HS16060846-18	GP-19-5-9-061016	10 Jun 2016 12:25		24 Jun 2016 07:37	24 Jun 2016 17:20	1
HS16060846-19	GP-19-5-16-061016	10 Jun 2016 12:50		24 Jun 2016 07:37	24 Jun 2016 17:21	1
HS16060846-20	GP-19-4-1-061016	10 Jun 2016 08:05		24 Jun 2016 07:37	24 Jun 2016 17:23	1



**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID</b> 105709	<b>Test Name : HEXAVALENT CHROMIUM BY SW7196A</b>			<b>Matrix: Soil</b>		
HS16060846-01	GP-19-6-3-061316	13 Jun 2016 10:00		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-02	GP-19-6-5-061316	13 Jun 2016 10:05		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-03	GP-19-6-9-061316	13 Jun 2016 10:10		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-04	GP-19-6-14-061316	13 Jun 2016 10:20		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-05	GP-19-7-2-061316	13 Jun 2016 10:40		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-06	GP-19-7-8-061316	13 Jun 2016 10:50		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-07	GP-19-7-12-061316	13 Jun 2016 11:10		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-08	GP-19-8-3-061316	13 Jun 2016 11:15		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-09	GP-19-8-8-061316	13 Jun 2016 11:30		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-10	GP-19-8-10-061316	13 Jun 2016 11:45		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-11	GP-19-2-1-061016	10 Jun 2016 09:35		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-12	GP-19-2-12-061016	10 Jun 2016 09:55		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-13	GP-19-2-18-061016	10 Jun 2016 10:15		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-14	GP-19-1-1-061016	10 Jun 2016 10:35		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-15	GP-19-1-6-061016	10 Jun 2016 10:50		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-16	GP-19-1-20-061016	10 Jun 2016 11:50		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-17	GP-19-5-3-061016	10 Jun 2016 12:15		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-18	GP-19-5-9-061016	10 Jun 2016 12:25		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-19	GP-19-5-16-061016	10 Jun 2016 12:50		27 Jun 2016 16:30	27 Jun 2016 19:11	1
HS16060846-20	GP-19-4-1-061016	10 Jun 2016 08:05		27 Jun 2016 16:30	27 Jun 2016 19:11	1
<b>Batch ID</b> 105740	<b>Test Name : HEXAVALENT CHROMIUM BY SW7196A</b>			<b>Matrix: Soil</b>		
HS16060846-21	GP-19-4-6-061016	10 Jun 2016 08:15		27 Jun 2016 15:40	28 Jun 2016 17:06	1
HS16060846-22	GP-19-4-12-061016	10 Jun 2016 08:25		27 Jun 2016 15:40	28 Jun 2016 17:06	1
HS16060846-23	GP-19-3-1-061016	10 Jun 2016 08:45		27 Jun 2016 15:40	28 Jun 2016 17:06	1
HS16060846-24	GP-19-3-5-061016	10 Jun 2016 08:55		27 Jun 2016 15:40	28 Jun 2016 17:06	1
HS16060846-25	GP-19-3-12-061016	10 Jun 2016 09:05		27 Jun 2016 15:40	28 Jun 2016 17:06	1
HS16060846-26	GP-19-3-14-061016	10 Jun 2016 09:10		27 Jun 2016 15:40	28 Jun 2016 17:06	1

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID R276485 Test Name : VOLATILES BY SW8260C Matrix: Soil</b>						
HS16060846-01	GP-19-6-3-061316	13 Jun 2016 10:00			17 Jun 2016 00:25	1
HS16060846-02	GP-19-6-5-061316	13 Jun 2016 10:05			17 Jun 2016 00:48	1
HS16060846-03	GP-19-6-9-061316	13 Jun 2016 10:10			17 Jun 2016 01:12	1
HS16060846-04	GP-19-6-14-061316	13 Jun 2016 10:20			17 Jun 2016 01:35	1
HS16060846-05	GP-19-7-2-061316	13 Jun 2016 10:40			17 Jun 2016 01:58	1
HS16060846-06	GP-19-7-8-061316	13 Jun 2016 10:50			17 Jun 2016 05:05	1
HS16060846-07	GP-19-7-12-061316	13 Jun 2016 11:10			17 Jun 2016 05:29	1
HS16060846-08	GP-19-8-3-061316	13 Jun 2016 11:15			17 Jun 2016 02:22	1
HS16060846-09	GP-19-8-8-061316	13 Jun 2016 11:30			17 Jun 2016 05:52	1
HS16060846-10	GP-19-8-10-061316	13 Jun 2016 11:45			17 Jun 2016 06:15	1
HS16060846-11	GP-19-2-1-061016	10 Jun 2016 09:35			17 Jun 2016 06:39	1
HS16060846-12	GP-19-2-12-061016	10 Jun 2016 09:55			17 Jun 2016 07:02	1
HS16060846-13	GP-19-2-18-061016	10 Jun 2016 10:15			17 Jun 2016 07:49	1
HS16060846-14	GP-19-1-1-061016	10 Jun 2016 10:35			17 Jun 2016 08:12	1
HS16060846-15	GP-19-1-6-061016	10 Jun 2016 10:50			17 Jun 2016 08:36	1
HS16060846-16	GP-19-1-20-061016	10 Jun 2016 11:50			17 Jun 2016 08:59	1
<b>Batch ID R276509 Test Name : GASOLINE RANGE ORGANICS BY SW8015C Matrix: Soil</b>						
HS16060846-01	GP-19-6-3-061316	13 Jun 2016 10:00			16 Jun 2016 21:27	1
HS16060846-02	GP-19-6-5-061316	13 Jun 2016 10:05			16 Jun 2016 22:15	1
HS16060846-03	GP-19-6-9-061316	13 Jun 2016 10:10			16 Jun 2016 22:31	1
HS16060846-04	GP-19-6-14-061316	13 Jun 2016 10:20			16 Jun 2016 22:47	1
HS16060846-05	GP-19-7-2-061316	13 Jun 2016 10:40			16 Jun 2016 23:03	1
HS16060846-06	GP-19-7-8-061316	13 Jun 2016 10:50			16 Jun 2016 23:52	1
HS16060846-07	GP-19-7-12-061316	13 Jun 2016 11:10			17 Jun 2016 00:08	1
HS16060846-08	GP-19-8-3-061316	13 Jun 2016 11:15			17 Jun 2016 00:24	1
HS16060846-09	GP-19-8-8-061316	13 Jun 2016 11:30			17 Jun 2016 00:40	1
HS16060846-11	GP-19-2-1-061016	10 Jun 2016 09:35			17 Jun 2016 01:12	1
HS16060846-13	GP-19-2-18-061016	10 Jun 2016 10:15			17 Jun 2016 01:44	1
HS16060846-14	GP-19-1-1-061016	10 Jun 2016 10:35			17 Jun 2016 02:00	1
HS16060846-15	GP-19-1-6-061016	10 Jun 2016 10:50			17 Jun 2016 02:17	1
HS16060846-16	GP-19-1-20-061016	10 Jun 2016 11:50			17 Jun 2016 03:21	1
HS16060846-17	GP-19-5-3-061016	10 Jun 2016 12:15			17 Jun 2016 03:37	1
HS16060846-18	GP-19-5-9-061016	10 Jun 2016 12:25			17 Jun 2016 03:54	1
HS16060846-19	GP-19-5-16-061016	10 Jun 2016 12:50			17 Jun 2016 04:10	1
HS16060846-20	GP-19-4-1-061016	10 Jun 2016 08:05			17 Jun 2016 04:26	1

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID R276511 Test Name : GASOLINE RANGE ORGANICS BY SW8015C Matrix: Soil</b>						
HS16060846-21	GP-19-4-6-061016	10 Jun 2016 08:15			17 Jun 2016 06:19	1
HS16060846-22	GP-19-4-12-061016	10 Jun 2016 08:25			17 Jun 2016 07:07	1
HS16060846-23	GP-19-3-1-061016	10 Jun 2016 08:45			17 Jun 2016 07:24	1
HS16060846-24	GP-19-3-5-061016	10 Jun 2016 08:55			17 Jun 2016 07:40	1
HS16060846-25	GP-19-3-12-061016	10 Jun 2016 09:05			17 Jun 2016 07:56	1
HS16060846-26	GP-19-3-14-061016	10 Jun 2016 09:10			17 Jun 2016 09:01	1
<b>Batch ID R276560 Test Name : PH SOIL BY SW9045D Matrix: Soil</b>						
HS16060846-02	GP-19-6-5-061316	13 Jun 2016 10:05			17 Jun 2016 16:05	1
HS16060846-03	GP-19-6-9-061316	13 Jun 2016 10:10			17 Jun 2016 16:05	1
HS16060846-04	GP-19-6-14-061316	13 Jun 2016 10:20			17 Jun 2016 16:05	1
HS16060846-05	GP-19-7-2-061316	13 Jun 2016 10:40			17 Jun 2016 16:05	1
HS16060846-06	GP-19-7-8-061316	13 Jun 2016 10:50			17 Jun 2016 16:05	1
HS16060846-07	GP-19-7-12-061316	13 Jun 2016 11:10			17 Jun 2016 16:05	1
HS16060846-08	GP-19-8-3-061316	13 Jun 2016 11:15			17 Jun 2016 16:05	1
HS16060846-09	GP-19-8-8-061316	13 Jun 2016 11:30			17 Jun 2016 16:05	1
<b>Batch ID R276570 Test Name : VOLATILES BY SW8260C Matrix: Soil</b>						
HS16060846-17	GP-19-5-3-061016	10 Jun 2016 12:15			18 Jun 2016 10:40	1
HS16060846-18	GP-19-5-9-061016	10 Jun 2016 12:25			18 Jun 2016 11:08	1
HS16060846-19	GP-19-5-16-061016	10 Jun 2016 12:50			18 Jun 2016 11:37	1
HS16060846-20	GP-19-4-1-061016	10 Jun 2016 08:05			18 Jun 2016 13:59	1
HS16060846-21	GP-19-4-6-061016	10 Jun 2016 08:15			18 Jun 2016 14:26	1
HS16060846-22	GP-19-4-12-061016	10 Jun 2016 08:25			18 Jun 2016 14:55	1
HS16060846-23	GP-19-3-1-061016	10 Jun 2016 08:45			18 Jun 2016 15:23	1
HS16060846-24	GP-19-3-5-061016	10 Jun 2016 08:55			18 Jun 2016 15:51	1
HS16060846-25	GP-19-3-12-061016	10 Jun 2016 09:05			18 Jun 2016 16:21	1
HS16060846-26	GP-19-3-14-061016	10 Jun 2016 09:10			18 Jun 2016 16:49	1
<b>Batch ID R276584 Test Name : GASOLINE RANGE ORGANICS BY SW8015C Matrix: Soil</b>						
HS16060846-10	GP-19-8-10-061316	13 Jun 2016 11:45			17 Jun 2016 15:47	1
HS16060846-12	GP-19-2-12-061016	10 Jun 2016 09:55			17 Jun 2016 14:59	1

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID</b> R276962	<b>Test Name :</b> LA29B SATURATION POINT (AS FRACTION)			<b>Matrix:</b> Soil		
HS16060846-01	GP-19-6-3-061316	13 Jun 2016 10:00			23 Jun 2016 14:00	1
HS16060846-02	GP-19-6-5-061316	13 Jun 2016 10:05			23 Jun 2016 14:00	1
HS16060846-03	GP-19-6-9-061316	13 Jun 2016 10:10			23 Jun 2016 14:00	1
HS16060846-04	GP-19-6-14-061316	13 Jun 2016 10:20			23 Jun 2016 14:00	1
HS16060846-05	GP-19-7-2-061316	13 Jun 2016 10:40			23 Jun 2016 14:00	1
HS16060846-06	GP-19-7-8-061316	13 Jun 2016 10:50			23 Jun 2016 14:00	1
HS16060846-07	GP-19-7-12-061316	13 Jun 2016 11:10			23 Jun 2016 14:00	1
HS16060846-08	GP-19-8-3-061316	13 Jun 2016 11:15			23 Jun 2016 14:00	1
HS16060846-09	GP-19-8-8-061316	13 Jun 2016 11:30			23 Jun 2016 14:00	1
HS16060846-10	GP-19-8-10-061316	13 Jun 2016 11:45			23 Jun 2016 14:00	1
HS16060846-11	GP-19-2-1-061016	10 Jun 2016 09:35			23 Jun 2016 14:00	1
HS16060846-12	GP-19-2-12-061016	10 Jun 2016 09:55			23 Jun 2016 14:00	1
HS16060846-13	GP-19-2-18-061016	10 Jun 2016 10:15			23 Jun 2016 14:00	1
HS16060846-14	GP-19-1-1-061016	10 Jun 2016 10:35			23 Jun 2016 14:00	1
HS16060846-15	GP-19-1-6-061016	10 Jun 2016 10:50			23 Jun 2016 14:00	1
HS16060846-16	GP-19-1-20-061016	10 Jun 2016 11:50			23 Jun 2016 14:00	1
HS16060846-17	GP-19-5-3-061016	10 Jun 2016 12:15			23 Jun 2016 14:00	1
HS16060846-18	GP-19-5-9-061016	10 Jun 2016 12:25			23 Jun 2016 14:00	1
HS16060846-19	GP-19-5-16-061016	10 Jun 2016 12:50			23 Jun 2016 14:00	1
HS16060846-20	GP-19-4-1-061016	10 Jun 2016 08:05			23 Jun 2016 14:00	1
<b>Batch ID</b> R276984	<b>Test Name :</b> PH SOIL BY SW9045D			<b>Matrix:</b> Soil		
HS16060846-01	GP-19-6-3-061316	13 Jun 2016 10:00			24 Jun 2016 14:31	1
HS16060846-10	GP-19-8-10-061316	13 Jun 2016 11:45			24 Jun 2016 14:31	1
HS16060846-11	GP-19-2-1-061016	10 Jun 2016 09:35			24 Jun 2016 14:31	1
HS16060846-12	GP-19-2-12-061016	10 Jun 2016 09:55			24 Jun 2016 14:31	1
HS16060846-13	GP-19-2-18-061016	10 Jun 2016 10:15			24 Jun 2016 14:31	1
HS16060846-14	GP-19-1-1-061016	10 Jun 2016 10:35			24 Jun 2016 14:31	1
HS16060846-15	GP-19-1-6-061016	10 Jun 2016 10:50			24 Jun 2016 14:31	1
HS16060846-16	GP-19-1-20-061016	10 Jun 2016 11:50			24 Jun 2016 14:31	1
HS16060846-17	GP-19-5-3-061016	10 Jun 2016 12:15			24 Jun 2016 14:31	1
HS16060846-18	GP-19-5-9-061016	10 Jun 2016 12:25			24 Jun 2016 14:31	1
HS16060846-19	GP-19-5-16-061016	10 Jun 2016 12:50			24 Jun 2016 14:31	1
HS16060846-20	GP-19-4-1-061016	10 Jun 2016 08:05			24 Jun 2016 14:31	1
HS16060846-21	GP-19-4-6-061016	10 Jun 2016 08:15			24 Jun 2016 14:31	1
HS16060846-22	GP-19-4-12-061016	10 Jun 2016 08:25			24 Jun 2016 14:31	1
HS16060846-23	GP-19-3-1-061016	10 Jun 2016 08:45			24 Jun 2016 14:31	1
HS16060846-24	GP-19-3-5-061016	10 Jun 2016 08:55			24 Jun 2016 14:31	1
HS16060846-25	GP-19-3-12-061016	10 Jun 2016 09:05			24 Jun 2016 14:31	1
HS16060846-26	GP-19-3-14-061016	10 Jun 2016 09:10			24 Jun 2016 14:31	1

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID</b> R277018	<b>Test Name :</b> LA29B ELECTRICAL CONDUCTIVITY			<b>Matrix:</b> Soil		
HS16060846-01	GP-19-6-3-061316	13 Jun 2016 10:00			24 Jun 2016 13:00	1
HS16060846-02	GP-19-6-5-061316	13 Jun 2016 10:05			24 Jun 2016 13:00	1
HS16060846-03	GP-19-6-9-061316	13 Jun 2016 10:10			24 Jun 2016 13:00	1
HS16060846-04	GP-19-6-14-061316	13 Jun 2016 10:20			24 Jun 2016 13:00	1
HS16060846-05	GP-19-7-2-061316	13 Jun 2016 10:40			24 Jun 2016 13:00	1
HS16060846-06	GP-19-7-8-061316	13 Jun 2016 10:50			24 Jun 2016 13:00	1
HS16060846-07	GP-19-7-12-061316	13 Jun 2016 11:10			24 Jun 2016 13:00	1
HS16060846-08	GP-19-8-3-061316	13 Jun 2016 11:15			24 Jun 2016 13:00	1
HS16060846-09	GP-19-8-8-061316	13 Jun 2016 11:30			24 Jun 2016 13:00	1
HS16060846-10	GP-19-8-10-061316	13 Jun 2016 11:45			24 Jun 2016 13:00	1
HS16060846-11	GP-19-2-1-061016	10 Jun 2016 09:35			24 Jun 2016 13:00	1
HS16060846-12	GP-19-2-12-061016	10 Jun 2016 09:55			24 Jun 2016 13:00	1
HS16060846-13	GP-19-2-18-061016	10 Jun 2016 10:15			24 Jun 2016 13:00	1
HS16060846-14	GP-19-1-1-061016	10 Jun 2016 10:35			24 Jun 2016 13:00	1
HS16060846-15	GP-19-1-6-061016	10 Jun 2016 10:50			24 Jun 2016 13:00	1
HS16060846-16	GP-19-1-20-061016	10 Jun 2016 11:50			24 Jun 2016 13:00	1
HS16060846-17	GP-19-5-3-061016	10 Jun 2016 12:15			24 Jun 2016 13:00	1
HS16060846-18	GP-19-5-9-061016	10 Jun 2016 12:25			24 Jun 2016 13:00	1
HS16060846-19	GP-19-5-16-061016	10 Jun 2016 12:50			24 Jun 2016 13:00	1
HS16060846-20	GP-19-4-1-061016	10 Jun 2016 08:05			24 Jun 2016 13:00	1
<b>Batch ID</b> R277134	<b>Test Name :</b> LA29B SATURATION POINT (AS FRACTION)			<b>Matrix:</b> Soil		
HS16060846-21	GP-19-4-6-061016	10 Jun 2016 08:15			27 Jun 2016 14:30	1
HS16060846-22	GP-19-4-12-061016	10 Jun 2016 08:25			27 Jun 2016 14:30	1
HS16060846-23	GP-19-3-1-061016	10 Jun 2016 08:45			27 Jun 2016 14:30	1
HS16060846-24	GP-19-3-5-061016	10 Jun 2016 08:55			27 Jun 2016 14:30	1
HS16060846-25	GP-19-3-12-061016	10 Jun 2016 09:05			27 Jun 2016 14:30	1
HS16060846-26	GP-19-3-14-061016	10 Jun 2016 09:10			27 Jun 2016 14:30	1

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID</b> R277161	<b>Test Name :</b> TRIVALENT CHROMIUM		<b>Matrix:</b> Soil			
HS16060846-01	GP-19-6-3-061316	13 Jun 2016 10:00			28 Jun 2016 18:01	1
HS16060846-02	GP-19-6-5-061316	13 Jun 2016 10:05			28 Jun 2016 18:01	1
HS16060846-03	GP-19-6-9-061316	13 Jun 2016 10:10			28 Jun 2016 18:01	1
HS16060846-04	GP-19-6-14-061316	13 Jun 2016 10:20			28 Jun 2016 18:01	1
HS16060846-05	GP-19-7-2-061316	13 Jun 2016 10:40			28 Jun 2016 18:01	1
HS16060846-06	GP-19-7-8-061316	13 Jun 2016 10:50			28 Jun 2016 18:01	1
HS16060846-07	GP-19-7-12-061316	13 Jun 2016 11:10			28 Jun 2016 18:01	1
HS16060846-08	GP-19-8-3-061316	13 Jun 2016 11:15			28 Jun 2016 18:01	1
HS16060846-09	GP-19-8-8-061316	13 Jun 2016 11:30			28 Jun 2016 18:01	1
HS16060846-10	GP-19-8-10-061316	13 Jun 2016 11:45			28 Jun 2016 18:01	1
HS16060846-11	GP-19-2-1-061016	10 Jun 2016 09:35			28 Jun 2016 18:01	1
HS16060846-12	GP-19-2-12-061016	10 Jun 2016 09:55			28 Jun 2016 18:01	1
HS16060846-13	GP-19-2-18-061016	10 Jun 2016 10:15			28 Jun 2016 18:01	1
HS16060846-14	GP-19-1-1-061016	10 Jun 2016 10:35			28 Jun 2016 18:01	1
HS16060846-15	GP-19-1-6-061016	10 Jun 2016 10:50			28 Jun 2016 18:01	1
HS16060846-16	GP-19-1-20-061016	10 Jun 2016 11:50			28 Jun 2016 18:01	1
HS16060846-17	GP-19-5-3-061016	10 Jun 2016 12:15			28 Jun 2016 18:01	1
HS16060846-18	GP-19-5-9-061016	10 Jun 2016 12:25			28 Jun 2016 18:01	1
HS16060846-19	GP-19-5-16-061016	10 Jun 2016 12:50			28 Jun 2016 18:01	1
HS16060846-20	GP-19-4-1-061016	10 Jun 2016 08:05			28 Jun 2016 18:01	1
<b>Batch ID</b> R277188	<b>Test Name :</b> TRIVALENT CHROMIUM		<b>Matrix:</b> Soil			
HS16060846-21	GP-19-4-6-061016	10 Jun 2016 08:15			29 Jun 2016 10:56	1
HS16060846-22	GP-19-4-12-061016	10 Jun 2016 08:25			29 Jun 2016 10:56	1
HS16060846-23	GP-19-3-1-061016	10 Jun 2016 08:45			29 Jun 2016 10:56	1
HS16060846-24	GP-19-3-5-061016	10 Jun 2016 08:55			29 Jun 2016 10:56	1
HS16060846-25	GP-19-3-12-061016	10 Jun 2016 09:05			29 Jun 2016 10:56	1
HS16060846-26	GP-19-3-14-061016	10 Jun 2016 09:10			29 Jun 2016 10:56	1
<b>Batch ID</b> R277219	<b>Test Name :</b> LA29B ELECTRICAL CONDUCTIVITY		<b>Matrix:</b> Soil			
HS16060846-21	GP-19-4-6-061016	10 Jun 2016 08:15			29 Jun 2016 14:44	1
HS16060846-22	GP-19-4-12-061016	10 Jun 2016 08:25			29 Jun 2016 14:44	1
HS16060846-23	GP-19-3-1-061016	10 Jun 2016 08:45			29 Jun 2016 14:44	1
HS16060846-24	GP-19-3-5-061016	10 Jun 2016 08:55			29 Jun 2016 14:44	1
HS16060846-25	GP-19-3-12-061016	10 Jun 2016 09:05			29 Jun 2016 14:44	1
HS16060846-26	GP-19-3-14-061016	10 Jun 2016 09:10			29 Jun 2016 14:44	1

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105640		Instrument: FID-8		Method: SW8015M					
<b>MBLK</b>	Sample ID: <b>MBLK-105640</b>	Units: <b>mg/Kg</b>		Analysis Date: <b>23-Jun-2016 18:40</b>					
Client ID:	Run ID: <b>FID-8_277195</b>		SeqNo: <b>3742589</b>		PrepDate: <b>23-Jun-2016</b>		DF: <b>1</b>		
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	2.251	0.10	3.33	0	67.6	60 - 135			

<b>LCS</b>	Sample ID: <b>LCS-105640</b>	Units: <b>mg/Kg</b>		Analysis Date: <b>28-Jun-2016 15:02</b>					
Client ID:	Run ID: <b>FID-8_277195</b>		SeqNo: <b>3742635</b>		PrepDate: <b>23-Jun-2016</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

TPH (Diesel Range)	35.76	1.7	33.33	0	107	70 - 130			
Surr: 2-Fluorobiphenyl	3.696	0.10	3.33	0	111	60 - 135			

<b>MS</b>	Sample ID: <b>HS16060846-01MS</b>	Units: <b>mg/Kg</b>		Analysis Date: <b>23-Jun-2016 19:52</b>					
Client ID: <b>GP-19-6-3-061316</b>	Run ID: <b>FID-8_277195</b>		SeqNo: <b>3742591</b>		PrepDate: <b>23-Jun-2016</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

TPH (Diesel Range)	95.12	5.0	98.13	58.18	37.7	70 - 130			S
Surr: 2-Fluorobiphenyl	6.334	0.29	9.804	0	64.6	60 - 135			

<b>MSD</b>	Sample ID: <b>HS16060846-01MSD</b>	Units: <b>mg/Kg</b>		Analysis Date: <b>23-Jun-2016 20:16</b>					
Client ID: <b>GP-19-6-3-061316</b>	Run ID: <b>FID-8_277195</b>		SeqNo: <b>3742592</b>		PrepDate: <b>23-Jun-2016</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

TPH (Diesel Range)	114.2	5.0	98.32	58.18	56.9	70 - 130	95.12	18.2	30	S
Surr: 2-Fluorobiphenyl	7.34	0.29	9.823	0	74.7	60 - 135	6.334	14.7	30	

The following samples were analyzed in this batch:									
HS16060846-01	HS16060846-02	HS16060846-03	HS16060846-04						
HS16060846-05	HS16060846-06	HS16060846-07	HS16060846-08						
HS16060846-09	HS16060846-10	HS16060846-11	HS16060846-12						
HS16060846-13	HS16060846-14	HS16060846-15	HS16060846-16						
HS16060846-17	HS16060846-18	HS16060846-19	HS16060846-20						

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105663		Instrument: FID-8		Method: SW8015M					
MBLK	Sample ID: MBLK-105663	Units: mg/Kg		Analysis Date: 24-Jun-2016 16:37					
Client ID:	Run ID: FID-8_277206	SeqNo: 3742793		PrepDate: 23-Jun-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	2.429	0.10	3.33	0	72.9	60 - 135			
LCS	Sample ID: LCS-105663	Units: mg/Kg		Analysis Date: 28-Jun-2016 15:26					
Client ID:	Run ID: FID-8_277206	SeqNo: 3742792		PrepDate: 23-Jun-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)	35.71	1.7	33.33	0	107	70 - 130			
Surr: 2-Fluorobiphenyl	3.57	0.10	3.33	0	107	60 - 135			
MS	Sample ID: HS16061040-04MS	Units: mg/Kg		Analysis Date: 24-Jun-2016 09:56					
Client ID:	Run ID: FID-8_277206	SeqNo: 3742784		PrepDate: 23-Jun-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)	69.77	5.1	99.1	0	70.4	70 - 130			
Surr: 2-Fluorobiphenyl	6.058	0.30	9.901	0	61.2	60 - 135			
MSD	Sample ID: HS16061040-04MSD	Units: mg/Kg		Analysis Date: 24-Jun-2016 10:20					
Client ID:	Run ID: FID-8_277206	SeqNo: 3742785		PrepDate: 23-Jun-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)	70.63	5.1	99.29	0	71.1	70 - 130	69.77	1.22	30
Surr: 2-Fluorobiphenyl	6.496	0.30	9.921	0	65.5	60 - 135	6.058	6.99	30
The following samples were analyzed in this batch:									
HS16060846-21		HS16060846-22		HS16060846-23		HS16060846-24			
HS16060846-25		HS16060846-26							

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



**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: R276509		Instrument: FID-14		Method: SW8015						
MBLK	Sample ID: GBLKW-160616	Units: mg/Kg			Analysis Date: 16-Jun-2016 21:10					
Client ID:		Run ID: FID-14_276509	SeqNo: 3727917		PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	ND	0.050								
Surr: 4-Bromofluorobenzene	0.07464	0.0050	0.1	0	74.6	70 - 130				
LCS	Sample ID: GLCSW-160616	Units: mg/Kg			Analysis Date: 16-Jun-2016 20:38					
Client ID:		Run ID: FID-14_276509	SeqNo: 3727916		PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.042	0.050	1	0	104	70 - 130				
Surr: 4-Bromofluorobenzene	0.1002	0.0050	0.1	0	100	70 - 130				
MS	Sample ID: HS16060846-01MS	Units: mg/Kg			Analysis Date: 16-Jun-2016 21:42					
Client ID: GP-19-6-3-061316		Run ID: FID-14_276509	SeqNo: 3727919		PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.763	0.050	1	0.4038	35.9	70 - 130				S
Surr: 4-Bromofluorobenzene	0.07272	0.0050	0.1	0	72.7	70 - 130				
MSD	Sample ID: HS16060846-01MSD	Units: mg/Kg			Analysis Date: 16-Jun-2016 21:59					
Client ID: GP-19-6-3-061316		Run ID: FID-14_276509	SeqNo: 3727920		PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.7718	0.050	1	0.4038	36.8	70 - 130	0.763	1.14	30	S
Surr: 4-Bromofluorobenzene	0.0757	0.0050	0.1	0	75.7	70 - 130	0.07272	4.02	30	
The following samples were analyzed in this batch:										
	HS16060846-01		HS16060846-02		HS16060846-03		HS16060846-04			
	HS16060846-05		HS16060846-06		HS16060846-07		HS16060846-08			
	HS16060846-09		HS16060846-11		HS16060846-13		HS16060846-14			
	HS16060846-15		HS16060846-16		HS16060846-17		HS16060846-18			
	HS16060846-19		HS16060846-20							

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: R276511		Instrument: FID-14		Method: SW8015					
MBLK	Sample ID: GBLKW-160616	Units: mg/Kg		Analysis Date: 17-Jun-2016 06:03					
Client ID:	Run ID: FID-14_276511	SeqNo: 3727991		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Gasoline Range Organics	ND	0.050							
Surr: 4-Bromofluorobenzene	0.07737	0.0050	0.1	0	77.4	70 - 130			
LCS	Sample ID: GLCSW-160616	Units: mg/Kg		Analysis Date: 17-Jun-2016 05:30					
Client ID:	Run ID: FID-14_276511	SeqNo: 3727990		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Gasoline Range Organics	1.053	0.050	1	0	105	70 - 130			
Surr: 4-Bromofluorobenzene	0.1038	0.0050	0.1	0	104	70 - 130			
MS	Sample ID: HS16060846-21MS	Units: mg/Kg		Analysis Date: 17-Jun-2016 06:35					
Client ID: GP-19-4-6-061016	Run ID: FID-14_276511	SeqNo: 3727993		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Gasoline Range Organics	0.923	0.050	1	0	92.3	70 - 130			
Surr: 4-Bromofluorobenzene	0.0813	0.0050	0.1	0	81.3	70 - 130			
MSD	Sample ID: HS16060846-21MSD	Units: mg/Kg		Analysis Date: 17-Jun-2016 06:51					
Client ID: GP-19-4-6-061016	Run ID: FID-14_276511	SeqNo: 3727994		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Gasoline Range Organics	0.8744	0.050	0.99	0	88.3	70 - 130	0.923	5.4	30
Surr: 4-Bromofluorobenzene	0.07729	0.0050	0.099	0	78.1	70 - 130	0.0813	5.05	30
The following samples were analyzed in this batch:									
HS16060846-21		HS16060846-22		HS16060846-23		HS16060846-24			
HS16060846-25		HS16060846-26							

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: R276584		Instrument: FID-14		Method: SW8015					
<b>MBLK</b>	Sample ID: GBLK-160617	Units: mg/Kg		Analysis Date: 17-Jun-2016 14:30					
Client ID:	Run ID: FID-14_276584	SeqNo: 3729651		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Gasoline Range Organics	ND	0.050							
Surr: 4-Bromofluorobenzene	0.07733	0.0050	0.1	0	77.3	70 - 130			
<b>LCS</b>	Sample ID: GLCS-160617	Units: mg/Kg		Analysis Date: 17-Jun-2016 13:26					
Client ID:	Run ID: FID-14_276584	SeqNo: 3729650		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Gasoline Range Organics	1.04	0.050	1	0	104	70 - 130			
Surr: 4-Bromofluorobenzene	0.1028	0.0050	0.1	0	103	70 - 130			
<b>MS</b>	Sample ID: HS16060846-12MS	Units: mg/Kg		Analysis Date: 17-Jun-2016 15:15					
Client ID: GP-19-2-12-061016	Run ID: FID-14_276584	SeqNo: 3729653		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Gasoline Range Organics	0.9644	0.050	1	0	96.4	70 - 130			
Surr: 4-Bromofluorobenzene	0.09261	0.0050	0.1	0	92.6	70 - 130			
<b>MSD</b>	Sample ID: HS16060846-12MSD	Units: mg/Kg		Analysis Date: 17-Jun-2016 15:31					
Client ID: GP-19-2-12-061016	Run ID: FID-14_276584	SeqNo: 3729654		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Gasoline Range Organics	0.7759	0.050	1	0	77.6	70 - 130	0.9644	21.7	30
Surr: 4-Bromofluorobenzene	0.07521	0.0050	0.1	0	75.2	70 - 130	0.09261	20.7	30
The following samples were analyzed in this batch: HS16060846-10 HS16060846-12									

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105594											Instrument: ICPMS05		Method: La29B-6020			
MBLK		Sample ID: MBLK-105594			Units: mg/L			Analysis Date: 24-Jun-2016 12:14								
Client ID:		Run ID: ICPMS05_276901			SeqNo: 3737361		PrepDate: 22-Jun-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: HS16060846-06DUP	Units: mg/L			Analysis Date: 24-Jun-2016 12:34					
Client ID:	Run ID: ICPMS05_276901	SeqNo: 3737368			PrepDate: 22-Jun-2016		DF: 10			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	23.53	4.99					23.86	1.41	30	
Magnesium	10.12	4.99					10	1.22	30	
Sodium	65.21	4.99					63.67	2.39	30	

The following samples were analyzed in this batch:

HS16060846-01	HS16060846-02	HS16060846-03	HS16060846-04
HS16060846-05	HS16060846-06	HS16060846-07	HS16060846-08
HS16060846-09	HS16060846-10	HS16060846-11	HS16060846-12
HS16060846-13	HS16060846-14	HS16060846-15	HS16060846-16
HS16060846-17	HS16060846-18	HS16060846-19	HS16060846-20

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105594A		Instrument: MISC-Metals		Method: La29B SAR	
<b>DUP</b>	Sample ID: <b>HS16060846-06DUP</b>	Units: <b>meq/meq</b>		Analysis Date: <b>28-Jun-2016 09:24</b>	
Client ID:	Run ID: <b>MISC-Metals_277095</b>	SeqNo: <b>3740208</b>	PrepDate: <b>22-Jun-2016</b>	DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Sodium Adsorption Ratio	2.834	0.0100			2.76 2.65 30

The following samples were analyzed in this batch:

HS16060846-01	HS16060846-02	HS16060846-03	HS16060846-04
HS16060846-05	HS16060846-06	HS16060846-07	HS16060846-08
HS16060846-09	HS16060846-10	HS16060846-11	HS16060846-12
HS16060846-13	HS16060846-14	HS16060846-15	HS16060846-16
HS16060846-17	HS16060846-18	HS16060846-19	HS16060846-20

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105616		Instrument: ICPMS04		Method: SW6020						
MBLK	Sample ID: MBLK-105616	Units: mg/Kg			Analysis Date: 27-Jun-2016 11:41					
Client ID:	Run ID: ICPMS04_277027	SeqNo: 3738875		PrepDate: 22-Jun-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-105616	Units: mg/Kg			Analysis Date: 27-Jun-2016 11:46					
Client ID:	Run ID: ICPMS04_277027	SeqNo: 3738876		PrepDate: 22-Jun-2016		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	8.298	0.500	10	0	83.0	80 - 120				
Barium	8.51	0.500	10	0	85.1	80 - 120				
Boron	44.16	2.50	50	0	88.3	80 - 120				
Cadmium	8.525	0.500	10	0	85.3	80 - 120				
Chromium	8.236	0.500	10	0	82.4	80 - 120				
Copper	8.378	0.200	10	0	83.8	80 - 120				
Lead	8.518	0.500	10	0	85.2	80 - 120				
Nickel	8.331	0.500	10	0	83.3	80 - 120				
Selenium	8.271	0.500	10	0	82.7	80 - 120				
Silver	8.863	0.500	10	0	88.6	80 - 120				
Zinc	8.417	0.500	10	0	84.2	80 - 120				

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105616		Instrument: ICPMS04		Method: SW6020						
<b>MS</b>		Sample ID: HS16060846-02MS		Units: mg/Kg		Analysis Date: 27-Jun-2016 12:03				
Client ID: GP-19-6-5-061316		Run ID: ICPMS04_277027		SeqNo: 3738880		PrepDate: 23-Jun-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.49	0.479	9.582	3.025	77.9	75 - 125				
Barium	135.3	0.479	9.582	118	181	75 - 125				SO
Boron	57.99	2.40	47.91	10.08	100	75 - 125				
Cadmium	7.707	0.479	9.582	0.07884	79.6	75 - 125				
Chromium	18.2	0.479	9.582	7.838	108	75 - 125				
Copper	13.2	0.192	9.582	5.398	81.4	75 - 125				
Lead	12.74	0.479	9.582	5.041	80.3	75 - 125				
Nickel	13.09	0.479	9.582	4.749	87.0	75 - 125				
Selenium	7.732	0.479	9.582	0.3759	76.8	75 - 125				
Silver	7.844	0.479	9.582	0.03352	81.5	75 - 125				
Zinc	34.76	0.479	9.582	26	91.4	75 - 125				

<b>MSD</b>		Sample ID: HS16060846-02MSD		Units: mg/Kg		Analysis Date: 27-Jun-2016 12:07				
Client ID: GP-19-6-5-061316		Run ID: ICPMS04_277027		SeqNo: 3738881		PrepDate: 23-Jun-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.32	0.464	9.283	3.025	78.5	75 - 125	10.49	1.64	20	
Barium	163.6	0.464	9.283	118	492	75 - 125	135.3	18.9	20	SO
Boron	61.22	2.32	46.42	10.08	110	75 - 125	57.99	5.41	20	
Cadmium	7.495	0.464	9.283	0.07884	79.9	75 - 125	7.707	2.79	20	
Chromium	17.99	0.464	9.283	7.838	109	75 - 125	18.2	1.15	20	
Copper	13.13	0.186	9.283	5.398	83.3	75 - 125	13.2	0.505	20	
Lead	12.76	0.464	9.283	5.041	83.2	75 - 125	12.74	0.203	20	
Nickel	12.99	0.464	9.283	4.749	88.8	75 - 125	13.09	0.74	20	
Silver	7.534	0.464	9.283	0.03352	80.8	75 - 125	7.844	4.03	20	
Zinc	38.2	0.464	9.283	26	131	75 - 125	34.76	9.45	20	S

<b>MSD</b>		Sample ID: HS16060846-02MSD		Units: mg/Kg		Analysis Date: 28-Jun-2016 13:29				
Client ID: GP-19-6-5-061316		Run ID: ICPMS04_277115		SeqNo: 3741089		PrepDate: 23-Jun-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	8.597	0.464	9.283	0.3759	88.6	75 - 125	7.732	10.6	20	

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105616		Instrument: ICPMS04		Method: SW6020						
<b>PDS</b>		Sample ID: HS16060846-02BS		Units: mg/Kg		Analysis Date: 28-Jun-2016 13:33				
Client ID: GP-19-6-5-061316		Run ID: ICPMS04_277115		SeqNo: 3741090		PrepDate: 23-Jun-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	12.11	0.476	9.522	3.025	95.4	75 - 125				
Barium	143.2	0.476	9.522	118	265	75 - 125				SO
Boron	99.37	2.38	95.22	10.08	93.8	75 - 125				
Cadmium	8.552	0.476	9.522	0.07884	89.0	75 - 125				
Chromium	17.46	0.476	9.522	7.838	101	75 - 125				
Copper	14.12	0.190	9.522	5.398	91.6	75 - 125				
Lead	14.26	0.476	9.522	5.041	96.8	75 - 125				
Nickel	13.71	0.476	9.522	4.749	94.2	75 - 125				
Selenium	8.868	0.476	9.522	0.3759	89.2	75 - 125				
Silver	8.404	0.476	9.522	0	88.3	75 - 125				
Zinc	37.47	0.476	9.522	26	121	75 - 125				

<b>SD</b>		Sample ID: HS16060846-02 DIL SX		Units: mg/Kg		Analysis Date: 27-Jun-2016 11:58				
Client ID:		Run ID: ICPMS04_277027		SeqNo: 3738879		PrepDate: 23-Jun-2016		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Arsenic	2.973	2.38					3.025	1.72	10	
Barium	125.8	2.38					118	6.62	10	
Boron	13.52	11.9					10.08	0	10	
Cadmium	ND	2.38					0.07884	0	10	
Chromium	8.102	2.38					7.838	3.36	10	
Copper	5.923	0.952					5.398	9.73	10	
Lead	5.488	2.38					5.041	8.87	10	
Nickel	5.176	2.38					4.749	8.99	10	
Selenium	ND	2.38					0.3759	0	10	
Silver	ND	2.38					0.03352	0	10	
Zinc	28.51	2.38					26	9.68	10	

The following samples were analyzed in this batch:			
HS16060846-01	HS16060846-02	HS16060846-03	HS16060846-04
HS16060846-05	HS16060846-06	HS16060846-07	HS16060846-08
HS16060846-09	HS16060846-10	HS16060846-11	HS16060846-12
HS16060846-13	HS16060846-14	HS16060846-15	HS16060846-16
HS16060846-17	HS16060846-18	HS16060846-19	HS16060846-20

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



**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105629		Instrument: ICPMS05		Method: La29B-6020						
MBLK	Sample ID: MBLK-105629	Units: mg/L			Analysis Date: 27-Jun-2016 11:27					
Client ID:	Run ID: ICPMS05_276994	SeqNo: 3739027		PrepDate: 23-Jun-2016		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Calcium	ND	5.00								
Magnesium	ND	5.00								
Sodium	ND	5.00								
DUP	Sample ID: HS16060846-26DUP	Units: mg/L			Analysis Date: 27-Jun-2016 11:54					
Client ID:	Run ID: ICPMS05_276994	SeqNo: 3739036		PrepDate: 23-Jun-2016		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Calcium	619.8	5.00					605.3	2.36	30	
Magnesium	297.5	5.00					296.4	0.365	30	
Sodium	1252	5.00					1246	0.504	30	
The following samples were analyzed in this batch:		HS16060846-21 HS16060846-25		HS16060846-22 HS16060846-26		HS16060846-23		HS16060846-24		

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105629A		Instrument: MISC-Metals		Method: La29B SAR					
<b>DUP</b>	Sample ID: <b>HS16060846-26DUP</b>	Units: <b>meq/meq</b>		Analysis Date: <b>28-Jun-2016 09:34</b>					
Client ID:	Run ID: <b>MISC-Metals_277096</b>		SeqNo: <b>3740229</b>		PrepDate: <b>23-Jun-2016</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Sodium Adsorption Ratio	10.33	0.0100					10.41	0.829	30
The following samples were analyzed in this batch:									
HS16060846-21 HS16060846-22 HS16060846-23 HS16060846-24									
HS16060846-25 HS16060846-26									

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105662		Instrument: ICPMS04		Method: SW6020						
MBLK	Sample ID: MBLK-105662	Units: mg/Kg			Analysis Date: 27-Jun-2016 14:21					
Client ID:	Run ID: ICPMS04_277027	SeqNo: 3739374		PrepDate: 23-Jun-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-105662	Units: mg/Kg			Analysis Date: 28-Jun-2016 12:37					
Client ID:	Run ID: ICPMS04_277115	SeqNo: 3741051		PrepDate: 23-Jun-2016			DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.729	0.500	10	0	97.3	80 - 120				
Barium	9.662	0.500	10	0	96.6	80 - 120				
Boron	52.95	2.50	50	0	106	80 - 120				
Cadmium	9.529	0.500	10	0	95.3	80 - 120				
Chromium	9.777	0.500	10	0	97.8	80 - 120				
Copper	9.738	0.200	10	0	97.4	80 - 120				
Lead	9.76	0.500	10	0	97.6	80 - 120				
Nickel	9.815	0.500	10	0	98.2	80 - 120				
Selenium	9.588	0.500	10	0	95.9	80 - 120				
Silver	9.827	0.500	10	0	98.3	80 - 120				
Zinc	10.03	0.500	10	0	100	80 - 120				

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105662		Instrument: ICPMS04		Method: SW6020						
<b>MS</b>		Sample ID: HS16061221-01MS		Units: mg/Kg		Analysis Date: 28-Jun-2016 13:16				
Client ID:		Run ID: ICPMS04_277115		SeqNo: 3741086		PrepDate: 23-Jun-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.594	0.490	9.804	1.768	79.8	75 - 125				
Barium	64.71	0.490	9.804	91.97	-278	75 - 125				SO
Boron	41.32	2.45	49.02	2.495	79.2	75 - 125				
Cadmium	7.755	0.490	9.804	0.05509	78.5	75 - 125				
Chromium	9.324	0.490	9.804	1.599	78.8	75 - 125				
Copper	9.753	0.196	9.804	2.036	78.7	75 - 125				
Lead	13.45	0.490	9.804	6.825	67.6	75 - 125				S
Nickel	9.648	0.490	9.804	2.033	77.7	75 - 125				
Selenium	8.237	0.490	9.804	0.0476	83.5	75 - 125				
Silver	8.551	0.490	9.804	0.02029	87.0	75 - 125				
Zinc	14.14	0.490	9.804	6.272	80.2	75 - 125				

<b>MSD</b>		Sample ID: HS16061221-01MSD		Units: mg/Kg		Analysis Date: 28-Jun-2016 15:18				
Client ID:		Run ID: ICPMS04_277115		SeqNo: 3741363		PrepDate: 23-Jun-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.92	0.491	9.823	1.768	93.2	75 - 125	9.594	13	20	
Barium	78.27	0.491	9.823	91.97	-139	75 - 125	64.71	19	20	SO
Boron	46.9	2.46	49.12	2.495	90.4	75 - 125	41.32	12.6	20	
Cadmium	8.849	0.491	9.823	0.05509	89.5	75 - 125	7.755	13.2	20	
Chromium	10.82	0.491	9.823	1.599	93.9	75 - 125	9.324	14.9	20	
Copper	11.19	0.196	9.823	2.036	93.2	75 - 125	9.753	13.8	20	
Lead	15.45	0.491	9.823	6.825	87.8	75 - 125	13.45	13.8	20	
Nickel	11.1	0.491	9.823	2.033	92.3	75 - 125	9.648	14	20	
Selenium	9.168	0.491	9.823	0	93.3	75 - 125	8.237	10.7	20	
Silver	9.252	0.491	9.823	0	94.2	75 - 125	8.551	7.87	20	
Zinc	16.48	0.491	9.823	6.272	104	75 - 125	14.14	15.3	20	

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105662		Instrument: ICPMS04		Method: SW6020						
<b>PDS</b>		Sample ID: HS16061221-01BS		Units: mg/Kg		Analysis Date: 28-Jun-2016 13:24				
Client ID:		Run ID: ICPMS04_277115		SeqNo: 3741088		PrepDate: 23-Jun-2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.44	0.474	9.482	1.768	91.5	75 - 125				
Barium	100.7	0.474	9.482	91.97	92.3	75 - 125				O
Boron	92.23	2.37	94.82	2.495	94.6	75 - 125				
Cadmium	8.653	0.474	9.482	0.05509	90.7	75 - 125				
Chromium	10.2	0.474	9.482	1.599	90.7	75 - 125				
Copper	10.48	0.190	9.482	2.036	89.1	75 - 125				
Lead	15.44	0.474	9.482	6.825	90.9	75 - 125				
Nickel	10.65	0.474	9.482	2.033	90.9	75 - 125				
Selenium	8.688	0.474	9.482	0.0476	91.1	75 - 125				
Silver	8.778	0.474	9.482	0.02029	92.4	75 - 125				
Zinc	14.46	0.474	9.482	6.272	86.3	75 - 125				

<b>SD</b>		Sample ID: HS16061221-01 DIL SX		Units: mg/Kg		Analysis Date: 28-Jun-2016 13:12				
Client ID:		Run ID: ICPMS04_277115		SeqNo: 3741085		PrepDate: 23-Jun-2016		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Arsenic	1.473	2.37					1.768	0	10	J
Barium	90.63	2.37					91.97	1.46	10	
Boron	ND	11.9					2.495	0	10	
Cadmium	ND	2.37					0.05509	0	10	
Chromium	1.453	2.37					1.599	0	10	J
Copper	2.134	0.948					2.036	4.79	10	
Lead	6.814	2.37					6.825	0.154	10	
Nickel	2.116	2.37					2.033	0	10	J
Selenium	ND	2.37					0.0476	0	10	
Silver	ND	2.37					0.02029	0	10	
Zinc	6.229	2.37					6.272	0.676	10	

The following samples were analyzed in this batch: HS16060846-21 HS16060846-22 HS16060846-23 HS16060846-24  
 HS16060846-25 HS16060846-26

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105679		Instrument: HG03		Method: SW7471A					
MBLK	Sample ID: MBLK-105679	Units: ug/Kg		Analysis Date: 24-Jun-2016 15:43					
Client ID:	Run ID: HG03_276978	SeqNo: 3737768		PrepDate: 24-Jun-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-105679	Units: ug/Kg		Analysis Date: 24-Jun-2016 15:45					
Client ID:	Run ID: HG03_276978	SeqNo: 3737769		PrepDate: 24-Jun-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	325.2	3.39	340.2	0	95.6	85 - 115			
MS	Sample ID: HS16061160-02MS	Units: ug/Kg		Analysis Date: 24-Jun-2016 16:07					
Client ID:	Run ID: HG03_276978	SeqNo: 3737782		PrepDate: 24-Jun-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	330.1	3.43	343.8	5.576	94.4	85 - 115			
MSD	Sample ID: HS16061160-02MSD	Units: ug/Kg		Analysis Date: 24-Jun-2016 16:09					
Client ID:	Run ID: HG03_276978	SeqNo: 3737783		PrepDate: 24-Jun-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	334.8	3.46	346.6	5.576	95.0	85 - 115	330.1	1.42	20
The following samples were analyzed in this batch:									
HS16060846-21		HS16060846-22		HS16060846-23		HS16060846-24			
HS16060846-25		HS16060846-26							

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105680		Instrument: HG03		Method: SW7471A					
<b>MBLK</b>	Sample ID: <b>MBLK-105680</b>	Units: <b>ug/Kg</b>		Analysis Date: <b>24-Jun-2016 16:35</b>					
Client ID:	Run ID: <b>HG03_276978</b>	SeqNo: <b>3737860</b>		PrepDate: <b>24-Jun-2016</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	ND	3.37							
<b>LCS</b>	Sample ID: <b>LCS-105680</b>	Units: <b>ug/Kg</b>		Analysis Date: <b>24-Jun-2016 16:37</b>					
Client ID:	Run ID: <b>HG03_276978</b>	SeqNo: <b>3737861</b>		PrepDate: <b>24-Jun-2016</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	330.9	3.40	341.2	0	97.0	85 - 115			
<b>MS</b>	Sample ID: <b>HS16060846-20MS</b>	Units: <b>ug/Kg</b>		Analysis Date: <b>24-Jun-2016 17:25</b>					
Client ID: <b>GP-19-4-1-061016</b>	Run ID: <b>HG03_276978</b>	SeqNo: <b>3737886</b>		PrepDate: <b>24-Jun-2016</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	355.8	3.54	354.4	8.957	97.9	85 - 115			
<b>MSD</b>	Sample ID: <b>HS16060846-20MSD</b>	Units: <b>ug/Kg</b>		Analysis Date: <b>24-Jun-2016 17:27</b>					
Client ID: <b>GP-19-4-1-061016</b>	Run ID: <b>HG03_276978</b>	SeqNo: <b>3737887</b>		PrepDate: <b>24-Jun-2016</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	361.1	3.50	351.3	8.957	100	85 - 115	355.8	1.48	20
The following samples were analyzed in this batch:									
HS16060846-01		HS16060846-02		HS16060846-03		HS16060846-04			
HS16060846-05		HS16060846-06		HS16060846-07		HS16060846-08			
HS16060846-09		HS16060846-10		HS16060846-11		HS16060846-12			
HS16060846-13		HS16060846-14		HS16060846-15		HS16060846-16			
HS16060846-17		HS16060846-18		HS16060846-19		HS16060846-20			

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105543		Instrument: SV-6		Method: SW8270						
<b>MBLK</b>	Sample ID: <b>MBLK-105543</b>	Units: <b>ug/Kg</b>		Analysis Date: <b>23-Jun-2016 12:18</b>						
Client ID:	Run ID: <b>SV-6_276956</b>	SeqNo: <b>3737400</b>		PrepDate: <b>21-Jun-2016</b>		DF: <b>1</b>				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	3.3								
Acenaphthylene	ND	3.3								
Anthracene	ND	3.3								
Benz(a)anthracene	ND	3.3								
Benzo(a)pyrene	ND	3.3								
Benzo(b)fluoranthene	ND	3.3								
Benzo(g,h,i)perylene	ND	3.3								
Benzo(k)fluoranthene	ND	3.3								
Chrysene	ND	3.3								
Dibenz(a,h)anthracene	ND	3.3								
Fluoranthene	ND	3.3								
Fluorene	ND	3.3								
Indeno(1,2,3-cd)pyrene	ND	3.3								
Naphthalene	ND	3.3								
Phenanthrene	ND	3.3								
Pyrene	ND	3.3								
Surr: 2-Fluorobiphenyl	78.93	0	167	0	47.3	43 - 125				
Surr: 4-Terphenyl-d14	126.4	0	167	0	75.7	32 - 125				
Surr: Nitrobenzene-d5	109.1	0	167	0	65.3	37 - 125				

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



**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105543		Instrument: SV-6		Method: SW8270						
<b>LCS</b>		Sample ID: <b>LCS-105543</b>		Units: <b>ug/Kg</b>		Analysis Date: <b>23-Jun-2016 12:38</b>				
Client ID:		Run ID: <b>SV-6_276956</b>		SeqNo: <b>3737401</b>		PrepDate: <b>21-Jun-2016</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	157.5	3.3	167	0	94.3	50 - 120				
Acenaphthylene	158.2	3.3	167	0	94.7	50 - 120				
Anthracene	139.2	3.3	167	0	83.4	50 - 123				
Benz(a)anthracene	160.3	3.3	167	0	96.0	50 - 131				
Benzo(a)pyrene	174.2	3.3	167	0	104	50 - 130				
Benzo(b)fluoranthene	167.7	3.3	167	0	100	50 - 137				
Benzo(g,h,i)perylene	174.5	3.3	167	0	104	50 - 130				
Benzo(k)fluoranthene	187.5	3.3	167	0	112	50 - 143				
Chrysene	171.2	3.3	167	0	103	50 - 130				
Dibenz(a,h)anthracene	175.2	3.3	167	0	105	50 - 130				
Fluoranthene	117.9	3.3	167	0	70.6	50 - 131				
Fluorene	156	3.3	167	0	93.4	50 - 125				
Indeno(1,2,3-cd)pyrene	150.9	3.3	167	0	90.3	45 - 139				
Naphthalene	154.4	3.3	167	0	92.5	50 - 125				
Phenanthrene	151.8	3.3	167	0	90.9	50 - 125				
Pyrene	152.6	3.3	167	0	91.4	45 - 130				
Surr: 2-Fluorobiphenyl	149.3	0	167	0	89.4	43 - 125				
Surr: 4-Terphenyl-d14	152.4	0	167	0	91.3	32 - 125				
Surr: Nitrobenzene-d5	138.5	0	167	0	82.9	37 - 125				

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105543		Instrument: SV-6		Method: SW8270						
<b>MS</b>		Sample ID: <b>HS16060831-01MS</b>		Units: <b>ug/Kg</b>		Analysis Date: <b>24-Jun-2016 14:27</b>				
Client ID:		Run ID: <b>SV-6_276956</b>		SeqNo: <b>3737616</b>		PrepDate: <b>21-Jun-2016</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	120.9	3.3	166.5	0	72.6	50 - 120				
Acenaphthylene	123.7	3.3	166.5	0	74.3	50 - 120				
Anthracene	150.1	3.3	166.5	0	90.1	50 - 123				
Benz(a)anthracene	149.4	3.3	166.5	0	89.7	50 - 131				
Benzo(a)pyrene	160	3.3	166.5	0	96.1	50 - 130				
Benzo(b)fluoranthene	167.1	3.3	166.5	0	100	50 - 137				
Benzo(g,h,i)perylene	167.2	3.3	166.5	0	100	50 - 130				
Benzo(k)fluoranthene	179.4	3.3	166.5	0	108	50 - 143				
Chrysene	166.7	3.3	166.5	0	100	50 - 130				
Dibenz(a,h)anthracene	160.3	3.3	166.5	0	96.3	50 - 130				
Fluoranthene	150.8	3.3	166.5	0	90.6	50 - 131				
Fluorene	132.4	3.3	166.5	0	79.5	50 - 125				
Indeno(1,2,3-cd)pyrene	148.5	3.3	166.5	0	89.2	45 - 139				
Naphthalene	143.1	3.3	166.5	0	85.9	50 - 125				
Phenanthrene	146.3	3.3	166.5	0	87.9	50 - 125				
Pyrene	154.9	3.3	166.5	0	93.0	45 - 130				
Surr: 2-Fluorobiphenyl	112.4	0	166.5	0	67.5	43 - 125				
Surr: 4-Terphenyl-d14	139.2	0	166.5	0	83.6	32 - 125				
Surr: Nitrobenzene-d5	149.6	0	166.5	0	89.8	37 - 125				

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105543		Instrument: SV-6		Method: SW8270					
MSD		Sample ID: HS16060831-01MSD		Units: ug/Kg		Analysis Date: 24-Jun-2016 14:46			
Client ID:		Run ID: SV-6_276956		SeqNo: 3737617		PrepDate: 21-Jun-2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Acenaphthene	124.7	3.3	166.6	0	74.9	50 - 120	120.9	3.1	30
Acenaphthylene	127.9	3.3	166.6	0	76.8	50 - 120	123.7	3.35	30
Anthracene	150.2	3.3	166.6	0	90.2	50 - 123	150.1	0.101	30
Benz(a)anthracene	147	3.3	166.6	0	88.3	50 - 131	149.4	1.57	30
Benzo(a)pyrene	171.2	3.3	166.6	0	103	50 - 130	160	6.77	30
Benzo(b)fluoranthene	180.8	3.3	166.6	0	109	50 - 137	167.1	7.86	30
Benzo(g,h,i)perylene	179	3.3	166.6	0	107	50 - 130	167.2	6.81	30
Benzo(k)fluoranthene	210.8	3.3	166.6	0	127	50 - 143	179.4	16.1	30
Chrysene	144.5	3.3	166.6	0	86.7	50 - 130	166.7	14.3	30
Dibenz(a,h)anthracene	189.8	3.3	166.6	0	114	50 - 130	160.3	16.9	30
Fluoranthene	154.8	3.3	166.6	0	92.9	50 - 131	150.8	2.57	30
Fluorene	131.6	3.3	166.6	0	79.0	50 - 125	132.4	0.567	30
Indeno(1,2,3-cd)pyrene	157.1	3.3	166.6	0	94.3	45 - 139	148.5	5.68	30
Naphthalene	137.8	3.3	166.6	0	82.7	50 - 125	143.1	3.78	30
Phenanthrene	143.4	3.3	166.6	0	86.1	50 - 125	146.3	2	30
Pyrene	154.6	3.3	166.6	0	92.8	45 - 130	154.9	0.187	30
Surr: 2-Fluorobiphenyl	117	0	166.6	0	70.2	43 - 125	112.4	4.02	30
Surr: 4-Terphenyl-d14	141.8	0	166.6	0	85.1	32 - 125	139.2	1.89	30
Surr: Nitrobenzene-d5	145	0	166.6	0	87.0	37 - 125	149.6	3.1	30
The following samples were analyzed in this batch:									
HS16060846-01		HS16060846-02		HS16060846-03		HS16060846-04			
HS16060846-05		HS16060846-06		HS16060846-07		HS16060846-08			
HS16060846-09		HS16060846-10		HS16060846-11		HS16060846-12			
HS16060846-13									

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105590		Instrument: SV-7		Method: SW8270					
<b>MBLK</b>	Sample ID: <b>MBLK-105590</b>	Units: <b>ug/Kg</b>		Analysis Date: <b>24-Jun-2016 13:29</b>					
Client ID:	Run ID: <b>SV-7_277049</b>	SeqNo: <b>3739003</b>		PrepDate: <b>22-Jun-2016</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Acenaphthene	ND	3.3							
Acenaphthylene	ND	3.3							
Anthracene	ND	3.3							
Benz(a)anthracene	ND	3.3							
Benzo(a)pyrene	ND	3.3							
Benzo(b)fluoranthene	ND	3.3							
Benzo(g,h,i)perylene	ND	3.3							
Benzo(k)fluoranthene	ND	3.3							
Chrysene	ND	3.3							
Dibenz(a,h)anthracene	ND	3.3							
Fluoranthene	ND	3.3							
Fluorene	ND	3.3							
Indeno(1,2,3-cd)pyrene	ND	3.3							
Naphthalene	ND	3.3							
Phenanthrene	ND	3.3							
Pyrene	ND	3.3							
Surr: 2-Fluorobiphenyl	89.45	0	167	0	53.6	43 - 125			
Surr: 4-Terphenyl-d14	129.9	0	167	0	77.8	32 - 125			
Surr: Nitrobenzene-d5	104.7	0	167	0	62.7	37 - 125			

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105590		Instrument: SV-7		Method: SW8270						
<b>LCS</b>		Sample ID: <b>LCS-105590</b>		Units: <b>ug/Kg</b>		Analysis Date: <b>24-Jun-2016 13:49</b>				
Client ID:		Run ID: <b>SV-7_277049</b>		SeqNo: <b>3739004</b>		PrepDate: <b>22-Jun-2016</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	126.6	3.3	167	0	75.8	50 - 120				
Acenaphthylene	129.7	3.3	167	0	77.6	50 - 120				
Anthracene	149.7	3.3	167	0	89.6	50 - 123				
Benz(a)anthracene	156.6	3.3	167	0	93.8	50 - 131				
Benzo(a)pyrene	172.5	3.3	167	0	103	50 - 130				
Benzo(b)fluoranthene	172.8	3.3	167	0	103	50 - 137				
Benzo(g,h,i)perylene	166.6	3.3	167	0	99.7	50 - 130				
Benzo(k)fluoranthene	166.4	3.3	167	0	99.6	50 - 143				
Chrysene	168.9	3.3	167	0	101	50 - 130				
Dibenz(a,h)anthracene	183.1	3.3	167	0	110	50 - 130				
Fluoranthene	157	3.3	167	0	94.0	50 - 131				
Fluorene	134.9	3.3	167	0	80.8	50 - 125				
Indeno(1,2,3-cd)pyrene	160.4	3.3	167	0	96.1	45 - 139				
Naphthalene	143.5	3.3	167	0	85.9	50 - 125				
Phenanthrene	146.1	3.3	167	0	87.5	50 - 125				
Pyrene	158	3.3	167	0	94.6	45 - 130				
Surr: 2-Fluorobiphenyl	118.5	0	167	0	71.0	43 - 125				
Surr: 4-Terphenyl-d14	143.4	0	167	0	85.9	32 - 125				
Surr: Nitrobenzene-d5	145.6	0	167	0	87.2	37 - 125				

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105590		Instrument: SV-7		Method: SW8270					
<b>MS</b>		Sample ID: <b>HS16060846-17MS</b>		Units: <b>ug/Kg</b>		Analysis Date: <b>24-Jun-2016 15:26</b>			
Client ID: <b>GP-19-5-3-061016</b>		Run ID: <b>SV-7_277049</b>		SeqNo: <b>3739006</b>		PrepDate: <b>22-Jun-2016</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Acenaphthene	128.1	3.3	166.8	0	76.8	50 - 120			
Acenaphthylene	128.3	3.3	166.8	0	76.9	50 - 120			
Anthracene	153	3.3	166.8	0	91.7	50 - 123			
Benz(a)anthracene	145.5	3.3	166.8	0	87.2	50 - 131			
Benzo(a)pyrene	166.9	3.3	166.8	0	100	50 - 130			
Benzo(b)fluoranthene	162.5	3.3	166.8	0	97.4	50 - 137			
Benzo(g,h,i)perylene	164.2	3.3	166.8	0	98.4	50 - 130			
Benzo(k)fluoranthene	163	3.3	166.8	0	97.7	50 - 143			
Chrysene	166.8	3.3	166.8	0	100.0	50 - 130			
Dibenz(a,h)anthracene	167.7	3.3	166.8	0	100	50 - 130			
Fluoranthene	156.1	3.3	166.8	0	93.6	50 - 131			
Fluorene	133.2	3.3	166.8	0	79.8	50 - 125			
Indeno(1,2,3-cd)pyrene	157.6	3.3	166.8	0	94.5	45 - 139			
Naphthalene	143.1	3.3	166.8	0	85.8	50 - 125			
Phenanthrene	147.4	3.3	166.8	0	88.3	50 - 125			
Pyrene	156.2	3.3	166.8	0	93.6	45 - 130			
Surr: 2-Fluorobiphenyl	117.7	0	166.8	0	70.5	43 - 125			
Surr: 4-Terphenyl-d14	141.9	0	166.8	0	85.1	32 - 125			
Surr: Nitrobenzene-d5	147.7	0	166.8	0	88.5	37 - 125			

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105590		Instrument: SV-7		Method: SW8270					
MSD		Sample ID: HS16060846-17MSD		Units: ug/Kg		Analysis Date: 24-Jun-2016 15:46			
Client ID: GP-19-5-3-061016		Run ID: SV-7_277049		SeqNo: 3739007		PrepDate: 22-Jun-2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Acenaphthene	123.8	3.3	166.9	0	74.2	50 - 120	128.1	3.38	30
Acenaphthylene	121.9	3.3	166.9	0	73.0	50 - 120	128.3	5.15	30
Anthracene	138.8	3.3	166.9	0	83.2	50 - 123	153	9.72	30
Benz(a)anthracene	131.8	3.3	166.9	0	78.9	50 - 131	145.5	9.92	30
Benzo(a)pyrene	143.3	3.3	166.9	0	85.8	50 - 130	166.9	15.2	30
Benzo(b)fluoranthene	148.6	3.3	166.9	0	89.1	50 - 137	162.5	8.87	30
Benzo(g,h,i)perylene	151.6	3.3	166.9	0	90.9	50 - 130	164.2	7.94	30
Benzo(k)fluoranthene	171	3.3	166.9	0	102	50 - 143	163	4.81	30
Chrysene	154.3	3.3	166.9	0	92.5	50 - 130	166.8	7.8	30
Dibenz(a,h)anthracene	130.2	3.3	166.9	0	78.0	50 - 130	167.7	25.2	30
Fluoranthene	142	3.3	166.9	0	85.1	50 - 131	156.1	9.44	30
Fluorene	127.3	3.3	166.9	0	76.3	50 - 125	133.2	4.51	30
Indeno(1,2,3-cd)pyrene	127.1	3.3	166.9	0	76.1	45 - 139	157.6	21.4	30
Naphthalene	145.9	3.3	166.9	0	87.4	50 - 125	143.1	1.96	30
Phenanthrene	140.1	3.3	166.9	0	84.0	50 - 125	147.4	5.05	30
Pyrene	145	3.3	166.9	0	86.9	45 - 130	156.2	7.42	30
Surr: 2-Fluorobiphenyl	117.1	0	166.9	0	70.2	43 - 125	117.7	0.472	30
Surr: 4-Terphenyl-d14	127.4	0	166.9	0	76.3	32 - 125	141.9	10.8	30
Surr: Nitrobenzene-d5	142.1	0	166.9	0	85.1	37 - 125	147.7	3.86	30
The following samples were analyzed in this batch:									
		HS16060846-14		HS16060846-15		HS16060846-16		HS16060846-17	
		HS16060846-18		HS16060846-19		HS16060846-20		HS16060846-21	
		HS16060846-22		HS16060846-23		HS16060846-24		HS16060846-25	
		HS16060846-26							

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: R276485		Instrument: VOA5		Method: SW8260					
<b>MBLK</b>	Sample ID: VBLKS2-061616	Units: ug/Kg		Analysis Date: 17-Jun-2016 00:02					
Client ID:	Run ID: VOA5_276485	SeqNo: 3727455		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	10							
Surr: 1,2-Dichloroethane-d4	47.43	0	50	0	94.9	70 - 128			
Surr: 4-Bromofluorobenzene	49.22	0	50	0	98.4	73 - 126			
Surr: Dibromofluoromethane	51.61	0	50	0	103	71 - 128			
Surr: Toluene-d8	49.44	0	50	0	98.9	73 - 127			

<b>LCS</b>	Sample ID: VLCSS2-061616	Units: ug/Kg		Analysis Date: 17-Jun-2016 07:25					
Client ID:	Run ID: VOA5_276485	SeqNo: 3727474		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	55.41	5.0	50	0	111	79 - 122			
Ethylbenzene	51.32	5.0	50	0	103	80 - 122			
m,p-Xylene	106.5	10	100	0	107	79 - 122			
o-Xylene	52.71	5.0	50	0	105	80 - 123			
Toluene	51.19	5.0	50	0	102	79 - 120			
Xylenes, Total	159.2	10	150	0	106	80 - 120			
Surr: 1,2-Dichloroethane-d4	51.52	0	50	0	103	70 - 128			
Surr: 4-Bromofluorobenzene	51.28	0	50	0	103	73 - 126			
Surr: Dibromofluoromethane	54.27	0	50	0	109	71 - 128			
Surr: Toluene-d8	49.45	0	50	0	98.9	73 - 127			

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



**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: R276485		Instrument: VOA5		Method: SW8260						
<b>MS</b>		Sample ID: HS16060846-04MS		Units: ug/Kg		Analysis Date: 17-Jun-2016 02:45				
Client ID: GP-19-6-14-061316		Run ID: VOA5_276485		SeqNo: 3727462		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	39.37	4.9	49	0	80.4	79 - 122				
Ethylbenzene	36.65	4.9	49	0	74.8	80 - 122				S
m,p-Xylene	75.39	9.8	98	0	76.9	79 - 122				S
o-Xylene	37.46	4.9	49	0	76.4	80 - 123				S
Toluene	36.88	4.9	49	0	75.3	79 - 120				S
Xylenes, Total	112.8	9.8	147	0	76.8	80 - 120				S
Surr: 1,2-Dichloroethane-d4	51.07	0	49	0	104	70 - 128				
Surr: 4-Bromofluorobenzene	51.44	0	49	0	105	73 - 126				
Surr: Dibromofluoromethane	52.83	0	49	0	108	71 - 128				
Surr: Toluene-d8	48.67	0	49	0	99.3	73 - 127				

<b>MSD</b>		Sample ID: HS16060846-04MSD		Units: ug/Kg		Analysis Date: 17-Jun-2016 03:09				
Client ID: GP-19-6-14-061316		Run ID: VOA5_276485		SeqNo: 3727463		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	38.17	5.0	50.5	0	75.6	79 - 122	39.37	3.11	30	S
Ethylbenzene	35.23	5.0	50.5	0	69.8	80 - 122	36.65	3.96	30	S
m,p-Xylene	71.61	10	101	0	70.9	79 - 122	75.39	5.14	30	S
o-Xylene	35.34	5.0	50.5	0	70.0	80 - 123	37.46	5.8	30	S
Toluene	34.86	5.0	50.5	0	69.0	79 - 120	36.88	5.63	30	S
Xylenes, Total	107	10	151.5	0	70.6	80 - 120	112.8	5.36	30	S
Surr: 1,2-Dichloroethane-d4	53.87	0	50.5	0	107	70 - 128	51.07	5.32	30	
Surr: 4-Bromofluorobenzene	51.07	0	50.5	0	101	73 - 126	51.44	0.72	30	
Surr: Dibromofluoromethane	55.7	0	50.5	0	110	71 - 128	52.83	5.29	30	
Surr: Toluene-d8	49.15	0	50.5	0	97.3	73 - 127	48.67	0.975	30	

The following samples were analyzed in this batch:				HS16060846-01	HS16060846-02	HS16060846-03	HS16060846-04
				HS16060846-05	HS16060846-06	HS16060846-07	HS16060846-08
				HS16060846-09	HS16060846-10	HS16060846-11	HS16060846-12
				HS16060846-13	HS16060846-14	HS16060846-15	HS16060846-16

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: R276570		Instrument: VOA8		Method: SW8260					
<b>MBLK</b>	Sample ID: VBLKS1-061816	Units: ug/Kg		Analysis Date: 18-Jun-2016 10:12					
Client ID:	Run ID: VOA8_276570	SeqNo: 3729178		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	10							
Surr: 1,2-Dichloroethane-d4	42.06	0	50	0	84.1	70 - 128			
Surr: 4-Bromofluorobenzene	42.86	0	50	0	85.7	73 - 126			
Surr: Dibromofluoromethane	47.67	0	50	0	95.3	71 - 128			
Surr: Toluene-d8	46.99	0	50	0	94.0	73 - 127			

<b>LCS</b>	Sample ID: VLCSS1-061816	Units: ug/Kg		Analysis Date: 18-Jun-2016 09:43					
Client ID:	Run ID: VOA8_276570	SeqNo: 3729177		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	43.04	5.0	50	0	86.1	79 - 122			
Ethylbenzene	50.1	5.0	50	0	100	80 - 122			
m,p-Xylene	100.9	10	100	0	101	79 - 122			
o-Xylene	49.62	5.0	50	0	99.2	80 - 123			
Toluene	45.44	5.0	50	0	90.9	79 - 120			
Xylenes, Total	150.6	10	150	0	100	80 - 120			
Surr: 1,2-Dichloroethane-d4	45.82	0	50	0	91.6	70 - 128			
Surr: 4-Bromofluorobenzene	49.53	0	50	0	99.1	73 - 126			
Surr: Dibromofluoromethane	47.37	0	50	0	94.7	71 - 128			
Surr: Toluene-d8	46.84	0	50	0	93.7	73 - 127			

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: R276570		Instrument: VOA8		Method: SW8260					
<b>MS</b>		Sample ID: HS16060846-17MS		Units: ug/Kg		Analysis Date: 18-Jun-2016 13:01			
Client ID: GP-19-5-3-061016		Run ID: VOA8_276570		SeqNo: 3729184		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Benzene	38.74	4.8	48.5	0	79.9	79 - 122			
Ethylbenzene	42.97	4.8	48.5	0	88.6	80 - 122			
m,p-Xylene	85.65	9.7	97	0	88.3	79 - 122			
o-Xylene	42.23	4.8	48.5	0	87.1	80 - 123			
Toluene	39.6	4.8	48.5	0	81.7	79 - 120			
Xylenes, Total	127.9	9.7	145.5	0	87.9	80 - 120			
Surr: 1,2-Dichloroethane-d4	45.52	0	48.5	0	93.9	70 - 128			
Surr: 4-Bromofluorobenzene	47.03	0	48.5	0	97.0	73 - 126			
Surr: Dibromofluoromethane	45.8	0	48.5	0	94.4	71 - 128			
Surr: Toluene-d8	46.01	0	48.5	0	94.9	73 - 127			

<b>MSD</b>		Sample ID: HS16060846-17MSD		Units: ug/Kg		Analysis Date: 18-Jun-2016 13:30			
Client ID: GP-19-5-3-061016		Run ID: VOA8_276570		SeqNo: 3729185		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Benzene	42.39	4.9	49	0	86.5	79 - 122	38.74	9	30
Ethylbenzene	49.03	4.9	49	0	100	80 - 122	42.97	13.2	30
m,p-Xylene	97.94	9.8	98	0	99.9	79 - 122	85.65	13.4	30
o-Xylene	48.7	4.9	49	0	99.4	80 - 123	42.23	14.2	30
Toluene	44.86	4.9	49	0	91.5	79 - 120	39.6	12.4	30
Xylenes, Total	146.6	9.8	147	0	99.8	80 - 120	127.9	13.7	30
Surr: 1,2-Dichloroethane-d4	45.78	0	49	0	93.4	70 - 128	45.52	0.566	30
Surr: 4-Bromofluorobenzene	48.35	0	49	0	98.7	73 - 126	47.03	2.77	30
Surr: Dibromofluoromethane	47.23	0	49	0	96.4	71 - 128	45.8	3.08	30
Surr: Toluene-d8	46.17	0	49	0	94.2	73 - 127	46.01	0.341	30

The following samples were analyzed in this batch:				HS16060846-17	HS16060846-18	HS16060846-19	HS16060846-20
				HS16060846-21	HS16060846-22	HS16060846-23	HS16060846-24
				HS16060846-25	HS16060846-26		

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105709		Instrument: UV-2450		Method: SW7196						
MBLK	Sample ID: MBLK-105709	Units: mg/kg			Analysis Date: 27-Jun-2016 19:11					
Client ID:		Run ID: UV-2450_277104	SeqNo: 3740466		PrepDate: 27-Jun-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-105709	Units: mg/kg			Analysis Date: 27-Jun-2016 19:11					
Client ID:		Run ID: UV-2450_277104	SeqNo: 3740465		PrepDate: 27-Jun-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	10.2	2.00	10	0	102	80 - 120				
MS	Sample ID: HS16060846-01MS	Units: mg/kg			Analysis Date: 27-Jun-2016 19:11					
Client ID: GP-19-6-3-061316		Run ID: UV-2450_277104	SeqNo: 3740463		PrepDate: 27-Jun-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	8.358	2.00	9.997	0.1594	82.0	75 - 125				
MSD	Sample ID: HS16060846-01MSD	Units: mg/kg			Analysis Date: 27-Jun-2016 19:11					
Client ID: GP-19-6-3-061316		Run ID: UV-2450_277104	SeqNo: 3740464		PrepDate: 27-Jun-2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	7.866	2.00	9.982	0.1594	77.2	75 - 125	8.358	6.06	20	
The following samples were analyzed in this batch:										
		HS16060846-01	HS16060846-02	HS16060846-03		HS16060846-04				
		HS16060846-05	HS16060846-06	HS16060846-07		HS16060846-08				
		HS16060846-09	HS16060846-10	HS16060846-11		HS16060846-12				
		HS16060846-13	HS16060846-14	HS16060846-15		HS16060846-16				
		HS16060846-17	HS16060846-18	HS16060846-19		HS16060846-20				

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: 105740		Instrument: UV-2450		Method: SW7196						
MBLK	Sample ID: MBLK-105740	Units: mg/kg			Analysis Date: 28-Jun-2016 17:06					
Client ID:	Run ID: UV-2450_277176	SeqNo: 3742173		PrepDate: 27-Jun-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-105740	Units: mg/kg			Analysis Date: 28-Jun-2016 17:06					
Client ID:	Run ID: UV-2450_277176	SeqNo: 3742172		PrepDate: 27-Jun-2016		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	10.16	2.00	10	0	102	80 - 120				

MS	Sample ID: HS16061367-04MS	Units: mg/kg			Analysis Date: 28-Jun-2016 17:06					
Client ID:	Run ID: UV-2450_277176	SeqNo: 3742170		PrepDate: 27-Jun-2016		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	8.336	1.96	9.784	0.1594	83.6	75 - 125				

MSD	Sample ID: HS16061367-04MSD	Units: mg/kg			Analysis Date: 28-Jun-2016 17:06					
Client ID:	Run ID: UV-2450_277176	SeqNo: 3742171		PrepDate: 27-Jun-2016		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	8.952	1.96	9.816	0.1594	89.6	75 - 125	8.336	7.12	20	

The following samples were analyzed in this batch:			HS16060846-21	HS16060846-22	HS16060846-23	HS16060846-24
			HS16060846-25	HS16060846-26		

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: R276560		Instrument: WetChem_HS		Method: SW9045B	
<b>DUP</b>	Sample ID: HS16060925-01DUP	Units: pH Units		Analysis Date: 17-Jun-2016 16:05	
Client ID:	Run ID: WetChem_HS_276560	SeqNo: 3728975		PrepDate:	DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC Control Limit RPD Ref Value %RPD RPD Limit Qual
pH	7.97	0.100			7.96 0.126 10
Temp Deg C @pH	24.9	0			24.8 0.402 10
The following samples were analyzed in this batch:					
HS16060846-02 HS16060846-03 HS16060846-04 HS16060846-05					
HS16060846-06 HS16060846-07 HS16060846-08 HS16060846-09					

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: R276962		Instrument: Balance1		Method: LaDNR-29B SP					
<b>DUP</b>	Sample ID: HS16060846-06DUP	Units: SP as fraction		Analysis Date: 23-Jun-2016 14:00					
Client ID:	Run ID: Balance1_276962	SeqNo: 3737506		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Saturation Point	0.547	0.100					0.552	0.91	30

The following samples were analyzed in this batch:

HS16060846-01	HS16060846-02	HS16060846-03	HS16060846-04
HS16060846-05	HS16060846-06	HS16060846-07	HS16060846-08
HS16060846-09	HS16060846-10	HS16060846-11	HS16060846-12
HS16060846-13	HS16060846-14	HS16060846-15	HS16060846-16
HS16060846-17	HS16060846-18	HS16060846-19	HS16060846-20

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: R276984		Instrument: WetChem_HS		Method: SW9045B	
<b>DUP</b>	Sample ID: HS16060846-10DUP	Units: pH Units		Analysis Date: 24-Jun-2016 14:31	
Client ID:	Run ID: WetChem_HS_276984	SeqNo: 3737855		PrepDate:	DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC Control Limit RPD Ref Value %RPD RPD Limit Qual
pH	7.76	0.100			7.75 0.129 10
Temp Deg C @pH	23.9	0			23.8 0.419 10

The following samples were analyzed in this batch:

HS16060846-01	HS16060846-10	HS16060846-11	HS16060846-12
HS16060846-13	HS16060846-14	HS16060846-15	HS16060846-16
HS16060846-17	HS16060846-18	HS16060846-19	HS16060846-20
HS16060846-21	HS16060846-22	HS16060846-23	HS16060846-24
HS16060846-25	HS16060846-26		

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



**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: R277018		Instrument: WetChem_HS		Method: LaDNR-29B EC					
DUP	Sample ID: HS16060846-06DUP	Units: mmhos/cm @25°C		Analysis Date: 24-Jun-2016 13:00					
Client ID:		Run ID: WetChem_HS_277018		SeqNo: 3738523		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Electrical Conductivity @ saturation	1.086	0.0100					1.072	1.3	20
Electrical Conductivity, 1:1 aqueous	0.594	0.0100					0.592	0.337	20
Saturation % as decimal	0.547	0					0.552	0.91	20
The following samples were analyzed in this batch:									
		HS16060846-01		HS16060846-02		HS16060846-03		HS16060846-04	
		HS16060846-05		HS16060846-06		HS16060846-07		HS16060846-08	
		HS16060846-09		HS16060846-10		HS16060846-11		HS16060846-12	
		HS16060846-13		HS16060846-14		HS16060846-15		HS16060846-16	
		HS16060846-17		HS16060846-18		HS16060846-19		HS16060846-20	

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: R277134		Instrument: Balance1		Method: LaDNR-29B SP					
<b>DUP</b>	Sample ID: HS16060846-26DUP	Units: SP as fraction		Analysis Date: 27-Jun-2016 14:30					
Client ID:	Run ID: Balance1_277134	SeqNo: 3741130		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Saturation Point	0.635	0.100					0.642	1.1	30
The following samples were analyzed in this batch:									
HS16060846-21 HS16060846-22 HS16060846-23 HS16060846-24									
HS16060846-25 HS16060846-26									

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QC BATCH REPORT**

Batch ID: R277219		Instrument: WetChem_HS		Method: LaDNR-29B EC						
DUP	Sample ID: HS16060846-26DUP	Units: mmhos/cm @25°C		Analysis Date: 29-Jun-2016 14:44						
Client ID:		Run ID: WetChem_HS_277219		SeqNo: 3743032		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ saturation	22.14	0.0100					21.94	0.921	20	
Electrical Conductivity, 1:1 aqueous	14.06	0.0100					14.08	0.142	20	
Saturation % as decimal	0.635	0					0.642	1.1	20	
The following samples were analyzed in this batch:										
		HS16060846-21	HS16060846-22	HS16060846-23		HS16060846-24				
		HS16060846-25	HS16060846-26							

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**WorkOrder:** HS16060846

**QUALIFIERS,  
ACRONYMS, UNITS**

<b>Qualifier</b>	<b>Description</b>
*	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

<b>Acronym</b>	<b>Description</b>
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

<b>Unit Reported</b>	<b>Description</b>
mg/L	Milligrams per Liter

---

**CERTIFICATIONS,ACCREDITATIONS & LICENSES**

---

<b>Agency</b>	<b>Number</b>	<b>Expire Date</b>
Arkansas	16-022-0	27-Mar-2017
California	2919	31-Jul-2016
Kansas	E-10352 2014-2015	31-Jul-2016
Kentucky	96 2016-2017	30-Apr-2017
Louisiana	03087 2015/2016	30-Jun-2016
North Carolina	624 - 2016	31-Dec-2016
North Dakota	R193 2016-2017	30-Apr-2017
Oklahoma	2015-047	31-Aug-2016
Texas	TX104704231-16-17	30-Apr-2017

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**Work Order:** HS16060846

**SAMPLE TRACKING**

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS16060846-01	GP-19-6-3-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-01	GP-19-6-3-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-02	GP-19-6-5-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-02	GP-19-6-5-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-03	GP-19-6-9-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-03	GP-19-6-9-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-04	GP-19-6-14-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-04	GP-19-6-14-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-05	GP-19-7-2-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-05	GP-19-7-2-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-06	GP-19-7-8-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-06	GP-19-7-8-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-07	GP-19-7-12-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-07	GP-19-7-12-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-08	GP-19-8-3-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-08	GP-19-8-3-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-09	GP-19-8-8-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-09	GP-19-8-8-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-10	GP-19-8-10-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-10	GP-19-8-10-061316	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-11	GP-19-2-1-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-11	GP-19-2-1-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-12	GP-19-2-12-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-12	GP-19-2-12-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-13	GP-19-2-18-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-13	GP-19-2-18-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-14	GP-19-1-1-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-14	GP-19-1-1-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-15	GP-19-1-6-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-15	GP-19-1-6-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-16	GP-19-1-20-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-16	GP-19-1-20-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-17	GP-19-5-3-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-17	GP-19-5-3-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-18	GP-19-5-9-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-18	GP-19-5-9-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-19	GP-19-5-16-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-19	GP-19-5-16-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-20	GP-19-4-1-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-20	GP-19-4-1-061016	Login	6/15/2016 4:34:09 PM	CGG	4D

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**Work Order:** HS16060846

**SAMPLE TRACKING**

HS16060846-21	GP-19-4-6-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-21	GP-19-4-6-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-22	GP-19-4-12-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-22	GP-19-4-12-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-23	GP-19-3-1-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-23	GP-19-3-1-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-24	GP-19-3-5-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-24	GP-19-3-5-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-25	GP-19-3-12-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-25	GP-19-3-12-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-26	GP-19-3-14-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-26	GP-19-3-14-061016	Login	6/15/2016 4:34:09 PM	CGG	4D
HS16060846-21	GP-19-4-6-061016	Out	6/24/2016 7:36:24 AM	JCJ	METPREP
HS16060846-22	GP-19-4-12-061016	Out	6/24/2016 7:36:24 AM	JCJ	METPREP
HS16060846-23	GP-19-3-1-061016	Out	6/24/2016 7:36:24 AM	JCJ	METPREP
HS16060846-24	GP-19-3-5-061016	Out	6/24/2016 7:36:24 AM	JCJ	METPREP
HS16060846-25	GP-19-3-12-061016	Out	6/24/2016 7:36:24 AM	JCJ	METPREP
HS16060846-26	GP-19-3-14-061016	Out	6/24/2016 7:36:24 AM	JCJ	METPREP
HS16060846-21	GP-19-4-6-061016	Return	6/24/2016 7:36:44 AM	JCJ	4D
HS16060846-22	GP-19-4-12-061016	Return	6/24/2016 7:36:44 AM	JCJ	4D
HS16060846-23	GP-19-3-1-061016	Return	6/24/2016 7:36:44 AM	JCJ	4D
HS16060846-24	GP-19-3-5-061016	Return	6/24/2016 7:36:44 AM	JCJ	4D
HS16060846-25	GP-19-3-12-061016	Return	6/24/2016 7:36:44 AM	JCJ	4D
HS16060846-26	GP-19-3-14-061016	Return	6/24/2016 7:36:44 AM	JCJ	4D
HS16060846-01	GP-19-6-3-061316	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-02	GP-19-6-5-061316	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-03	GP-19-6-9-061316	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-04	GP-19-6-14-061316	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-05	GP-19-7-2-061316	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-06	GP-19-7-8-061316	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-07	GP-19-7-12-061316	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-08	GP-19-8-3-061316	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-09	GP-19-8-8-061316	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-10	GP-19-8-10-061316	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-11	GP-19-2-1-061016	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-12	GP-19-2-12-061016	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-13	GP-19-2-18-061016	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-14	GP-19-1-1-061016	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-15	GP-19-1-6-061016	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-16	GP-19-1-20-061016	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-17	GP-19-5-3-061016	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-18	GP-19-5-9-061016	Out	6/24/2016 7:38:59 AM	JCJ	METPREP

**Client:** Kinder Morgan  
**Project:** McElmo Dome + Doe Canyon  
**Work Order:** HS16060846

**SAMPLE TRACKING**

HS16060846-19	GP-19-5-16-061016	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-20	GP-19-4-1-061016	Out	6/24/2016 7:38:59 AM	JCJ	METPREP
HS16060846-01	GP-19-6-3-061316	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-02	GP-19-6-5-061316	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-03	GP-19-6-9-061316	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-04	GP-19-6-14-061316	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-05	GP-19-7-2-061316	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-06	GP-19-7-8-061316	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-07	GP-19-7-12-061316	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-08	GP-19-8-3-061316	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-09	GP-19-8-8-061316	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-10	GP-19-8-10-061316	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-11	GP-19-2-1-061016	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-12	GP-19-2-12-061016	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-13	GP-19-2-18-061016	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-14	GP-19-1-1-061016	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-15	GP-19-1-6-061016	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-16	GP-19-1-20-061016	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-17	GP-19-5-3-061016	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-18	GP-19-5-9-061016	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-19	GP-19-5-16-061016	Return	6/24/2016 7:39:19 AM	JCJ	4D
HS16060846-20	GP-19-4-1-061016	Return	6/24/2016 7:39:19 AM	JCJ	4D



## Sample Receipt Checklist

Client Name: Kinder Morgan  
Work Order: HS16060846

Date/Time Received: **15-Jun-2016 09:05**  
Received by: **JRM**

Checklist completed by: Corey Grandits 15-Jun-2016  
eSignature Date

Reviewed by: Bernadette A. Fini 16-Jun-2016  
eSignature Date

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

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input 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): 3.0c/3.7c , 3.4c/4.1c , 3.5c/4.2c uc/c IR#4

Cooler(s)/Kit(s): 24532 , 25320 , 25284

Date/Time sample(s) sent to storage: 06/15/2016 16:45

Water - VOA vials have zero headspace? Yes ☒ No ☐ No VOA vials submitted ☐

Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☒

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:



**Environmental**

Cincinnati, OH  
+1 513 733 5336

Everett, WA  
+1 425 356 2600

Fort Collins, CO  
+1 970 490 1511

Holland, MI  
+1 616 399 6070

# Chain of Custody Form

Page \_\_\_\_ of \_\_\_\_

COC ID: 142434

HS16060846

Kinder Morgan

McElmo Dome + Doe Canyon



Customer Information		Project Information		ALS Project Manager:	
Purchase Order		Project Name	McElmo Dome + Doe Canyon	A	BTEX 8260
Work Order		Project Number		B	TPH GRO 8015
Company Name	Kinder Morgan	Bill To Company	Kinder Morgan	C	TPH DRO 8015
Send Report To	Aaron Hale	Invoice Attn		D	PAH 8270
Address	1001 Louisiana Street Suite 740D	Address	1001 Louisiana Street Suite 740D	E	SAR & EC
City/State/Zip	Houston	City/State/Zip	Houston	F	pH
Phone		Phone	(713) 369-9193	G	Metals 6020 & Mercury 7471
Fax		Fax	(713) 495-2835	H	Cr+6 & Cr+3
e-Mail Address	aaron_hale@kindermorgan.com	e-Mail Address		I	Moisture
				J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	GP-19-6-3-06/3/16	06/03/16	1000	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
2	GP-19-6-5-06/3/16	06/03/16	1005	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
3	GP-19-6-9-06/3/16	06/03/16	1010	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
4	GP-19-6-14-06/3/16	06/03/16	1020	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
5	GP-19-7-2-06/3/16	06/03/16	1040	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
6	GP-19-7-8-06/3/16	06/03/16	1050	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
7	GP-19-7-12-06/3/16	06/03/16	1100	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
8	GP-19-8-3-06/3/16	06/03/16	1115	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
9	GP-19-8-8-06/3/16	06/03/16	1130	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
10	GP-19-8-10-06/3/16	06/03/16	1145	Soil	N/A	4	X	X	X	X	X	X	X	X	X		

Sampler(s) Please Print & Sign <i>A. Stoller</i>		Shipment Method		Required Turnaround Time: (Check Box) <input checked="" type="checkbox"/> Std 10 WK days <input type="checkbox"/> 5 WK Days <input type="checkbox"/> 2 WK Days <input type="checkbox"/> 24 Hour		Results Due Date:	
Relinquished by:	Date:	Time:	Received by:	Notes: Soil Samples			
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	24532	3.0	<input checked="" type="checkbox"/> Level 2 Std QC <input type="checkbox"/> Level 3 Std QC/Row da <input type="checkbox"/> TRRP Level 4 <input type="checkbox"/> Level 4 SW846/CLP <input type="checkbox"/> Other/EDD	
Preservative Key: 1-HCl 2-HNO <sub>3</sub> 3-H <sub>2</sub> SO <sub>4</sub> 4-NaOH 5-Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 6-NaHSO <sub>4</sub> 7-Other 8-4°C 9-5035				24532 3.0 1R4 CFA.7			

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

Copyright 2011 by ALS Environmental.



Environmental

Cincinnati, OH  
+1 513 733 5336

Everett, WA  
+1 425 356 2600

Fort Collins, CO  
+1 970 490 1511

Holland, MI  
+1 616 399 6070

# Chain of Custody Form

Page \_\_\_\_ of \_\_\_\_

COC ID: 142438

HS16060846

Kinder Morgan

McElmo Dome + Doe Canyon



Customer Information				Project Information				ALS Project Manager:											
Purchase Order		Project Name	McElmo Dome + Doe Canyon	A	BTEX 9260														
Work Order		Project Number		B	TPH GRO 8015														
Company Name	Kinder Morgan	Bill To Company	Kinder Morgan	C	TPH DRO 8015														
Send Report To	Aaron Hale	Invoice Attn		D	PAH 8270														
Address	1001 Louisiana Street Suite 740D	Address	1001 Louisiana Street Suite 740D	E	SAR & EC														
City/State/Zip	Houston	City/State/Zip	Houston	F	pH														
Phone		Phone	(713) 369-9193	G	Metals 6020 & Mercury 7471														
Fax		Fax	(713) 495-2835	H	Cr+6 & Cr+3														
e-Mail Address	aaron_hale@kindermorgan.com	e-Mail Address		I	Moisture														
				J															

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	GP-19-2-1-06/01/16	06/01/16	0935	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
2	GP-19-2-12-06/01/16	06/01/16	0955	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
3	GP-19-2-18-06/01/16	06/01/16	1015	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
4	GP-19-1-1-06/01/16	06/01/16	1035	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
5	GP-19-1-6-06/01/16	06/01/16	1050	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
6	GP-19-1-20-06/01/16	06/01/16	1150	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
7	GP-19-5-3-06/01/16	06/01/16	1215	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
8	GP-19-5-9-06/01/16	06/01/16	1225	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
9	GP-19-5-16-06/01/16	06/01/16	1250	Soil	N/A	4	X	X	X	X	X	X	X	X	X		
10																	

Sampler(s) Please Print & Sign <i>H. Stalder</i>		Shipment Method		Required Turnaround Time: (Check Box) <input checked="" type="checkbox"/> Std 10 WK days <input type="checkbox"/> 5 WK Days <input type="checkbox"/> 2 WK Days <input type="checkbox"/> 24 Hour				Results Due Date:	
Relinquished by:	Date:	Time:	Received by:	Notes: Soil Samples					
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID					
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	Cooler Temp.					
Preservative Key: 1-HCl 2-HNO <sub>3</sub> 3-H <sub>2</sub> SO <sub>4</sub> 4-NaOH 5-Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 6-NaHSO <sub>4</sub> 7-Other 8-4°C 9-5035				QC Package: (Check One Box Below) <input checked="" type="checkbox"/> Level 2 Std QC <input type="checkbox"/> Level 3 Std QC/Row da <input type="checkbox"/> Level 4 SW846/CLP <input type="checkbox"/> Other/EDD					

- Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.  
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.  
 3. The Chain of Custody is a legal document. All information must be completed accurately.



Environmental

Cincinnati, OH  
+1 513 733 5336

Everett, WA  
+1 425 356 2600

Fort Collins, CO  
+1 970 490 1511

Holland, MI  
+1 616 399 6070

# Chain of Custody Form

Page \_\_\_\_ of \_\_\_\_

COC ID: 142439

HS16060846

Kinder Morgan

McElmo Dome + Doe Canyon




Customer Information		Project Information		ALS Project Manager:	
Purchase Order		Project Name	McElmo Dome + Doe Canyon		
Work Order		Project Number			
Company Name	Kinder Morgan	Bill To Company	Kinder Morgan		
Send Report To	Aaron Hale	Invoice Attn			
Address	1001 Louisiana Street Suite 740D	Address	1001 Louisiana Street Suite 740D		
City/State/Zip	Houston	City/State/Zip	Houston		
Phone		Phone	(713) 369-9193		
Fax		Fax	(713) 495-2835		
e-Mail Address	aaron_hale@kindermorgan.com	e-Mail Address			

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	GP-19-4-1-061016	061016	0805	soil	N/A	4	X	X	X	X	X	X	X	X	X		
2	GP-19-4-6-061016	061016	0815	soil	N/A	4	X	X	X	X	X	X	X	X	X		
3	GP-19-4-12-061016	061016	0825	soil	N/A	4	X	X	X	X	X	X	X	X	X		
4	GP-19-3-1-061016	061016	0845	soil	N/A	4	X	X	X	X	X	X	X	X	X		
5	GP-19-3-5-061016	061016	0855	soil	N/A	4	X	X	X	X	X	X	X	X	X		
6	GP-19-3-12-061016	061016	0905	soil	N/A	4	X	X	X	X	X	X	X	X	X		
7	GP-19-3-14-061016	061016	0910	soil	N/A	4	X	X	X	X	X	X	X	X	X		
8																	
9																	
10																	


Sampler(s) Please Print & Sign <i>H. Stoller</i>		Shipment Method		Required Turnaround Time: (Check Box) <input checked="" type="checkbox"/> Std 10 WK days <input type="checkbox"/> 5 WK Days <input type="checkbox"/> 2 WK Days <input type="checkbox"/> 24 Hour		Results Due Date:	
Relinquished by:	Date:	Time:	Received by:	Notes/Soil Samples			
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	25284	3.5	<input type="checkbox"/> Level 2 Std QC <input type="checkbox"/> TRRP ChkList <input type="checkbox"/> Level 3 Std QC/Row da <input type="checkbox"/> TRRP Level 4 <input type="checkbox"/> Level 4 SW846/CLP <input type="checkbox"/> Other/EDD	
Preservative Key: 1-HCl 2-HNO <sub>3</sub> 3-H <sub>2</sub> SO <sub>4</sub> 4-NaOH 5-Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 6-NaHSO <sub>4</sub> 7-Other 8-4°C 9-5035				25284 3.5 11.4 CFC-7			

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


Copyright 2011 by ALS Environmental.

 <b>ALS Environmental</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	<b>CUSTODY SEAL</b>		Sent Broken By: <b>CG</b> Date: <b>6/15</b>
	Date:	Time:	
	Name:		
	Company:		

<b>FedEx</b> TRK# 6786 7198 2052 0221	WED - 15 JUN 10:30A PRIORITY OVERNIGHT 25284 77099 TX-US IAH
<b>XH SGRA</b>	

 <b>ALS Environmental</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	<b>CUSTODY SEAL</b>		Sent Broken By: <b>CG</b> Date: <b>6/15</b>
	Date:	Time:	
	Name:		
	Company:		

<b>FedEx</b> TRK# 6786 7198 1847 0221	WED - 15 JUN 10:30A PRIORITY OVERNIGHT 25320 77099 TX-US IAH
<b>XH SGRA</b>	

 <b>ALS Environmental</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	<b>CUSTODY SEAL</b>		Sent Broken By: <b>CG</b> Date: <b>6/15</b>
	Date:	Time:	
	Name:		
	Company:		

<b>FedEx</b> TRK# 6786 7198 1972 0221	WED - 15 JUN 10:30A PRIORITY OVERNIGHT 24532 77099 TX-US IAH
<b>XH SGRA</b>	



---

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

June 28, 2016

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

Work Order: **HS16061079**

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

Dear Aaron,

ALS Environmental received 2 sample(s) on Jun 18, 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 cursive script that reads "Sonia West".

Generated By: Jumoke.Lawal  
Sonia West  
Project Manager

**Client:** Kinder Morgan  
**Project:** McElmo Dome & Doe Canyon  
**Work Order:** HS16061079

**SAMPLE SUMMARY**

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS16061079-01	GP-17-50-061616	Groundwater		16-Jun-2016 10:30	18-Jun-2016 09:20	<input type="checkbox"/>
HS16061079-02	GP-19-50-061616	Groundwater		16-Jun-2016 12:30	18-Jun-2016 09:20	<input type="checkbox"/>

---

**Client:** Kinder Morgan  
**Project:** McElmo Dome & Doe Canyon  
**Work Order:** HS16061079

---

**CASE NARRATIVE**

---

**GCMS Volatiles by Method SW8260**

**Batch ID: R277094**

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

---

**WetChemistry by Method M2540C**

**Batch ID: R276983**

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

---

**WetChemistry by Method E300**

**Batch ID: R276739**

Sample ID: **HS16061140-01MS**

- MS and MSD are for an unrelated sample
-



Client: Kinder Morgan  
 Project: McElmo Dome & Doe Canyon  
 Sample ID: GP-17-50-061616  
 Collection Date: 16-Jun-2016 10:30

**ANALYTICAL REPORT**

WorkOrder:HS16061079  
 Lab ID:HS16061079-01  
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW LEVEL VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: AKP		
Benzene	ND		1.0	ug/L	1	27-Jun-2016 17:16
Ethylbenzene	ND		1.0	ug/L	1	27-Jun-2016 17:16
m,p-Xylene	ND		2.0	ug/L	1	27-Jun-2016 17:16
o-Xylene	ND		1.0	ug/L	1	27-Jun-2016 17:16
Toluene	ND		1.0	ug/L	1	27-Jun-2016 17:16
Xylenes, Total	ND		3.0	ug/L	1	27-Jun-2016 17:16
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>114</i>		<i>71-125</i>	<i>%REC</i>	<i>1</i>	<i>27-Jun-2016 17:16</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>95.4</i>		<i>70-125</i>	<i>%REC</i>	<i>1</i>	<i>27-Jun-2016 17:16</i>
<i>Surr: Dibromofluoromethane</i>	<i>116</i>		<i>74-125</i>	<i>%REC</i>	<i>1</i>	<i>27-Jun-2016 17:16</i>
<i>Surr: Toluene-d8</i>	<i>114</i>		<i>75-125</i>	<i>%REC</i>	<i>1</i>	<i>27-Jun-2016 17:16</i>
<b>TOTAL DISSOLVED SOLIDS BY SM2540C</b>		<b>Method:M2540C</b>		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	1,270		10.0	mg/L	1	23-Jun-2016 17:45
<b>ANIONS BY E300.0</b>		<b>Method:E300</b>		Analyst: JBA		
Chloride	31.8		0.500	mg/L	1	21-Jun-2016 13:50
Sulfate	418		10.0	mg/L	20	21-Jun-2016 14:05

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

Client: Kinder Morgan  
 Project: McElmo Dome & Doe Canyon  
 Sample ID: GP-19-50-061616  
 Collection Date: 16-Jun-2016 12:30

**ANALYTICAL REPORT**

WorkOrder:HS16061079  
 Lab ID:HS16061079-02  
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW LEVEL VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: AKP		
Benzene	ND		1.0	ug/L	1	27-Jun-2016 17:42
Ethylbenzene	ND		1.0	ug/L	1	27-Jun-2016 17:42
m,p-Xylene	ND		2.0	ug/L	1	27-Jun-2016 17:42
o-Xylene	ND		1.0	ug/L	1	27-Jun-2016 17:42
Toluene	ND		1.0	ug/L	1	27-Jun-2016 17:42
Xylenes, Total	ND		3.0	ug/L	1	27-Jun-2016 17:42
<i>Surr: 1,2-Dichloroethane-d4</i>	112		71-125	%REC	1	27-Jun-2016 17:42
<i>Surr: 4-Bromofluorobenzene</i>	92.7		70-125	%REC	1	27-Jun-2016 17:42
<i>Surr: Dibromofluoromethane</i>	111		74-125	%REC	1	27-Jun-2016 17:42
<i>Surr: Toluene-d8</i>	107		75-125	%REC	1	27-Jun-2016 17:42
<b>TOTAL DISSOLVED SOLIDS BY SM2540C</b>		<b>Method:M2540C</b>		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	860		10.0	mg/L	1	23-Jun-2016 17:45
<b>ANIONS BY E300.0</b>		<b>Method:E300</b>		Analyst: JBA		
Chloride	57.4		0.500	mg/L	1	21-Jun-2016 14:19
Sulfate	102		10.0	mg/L	20	21-Jun-2016 14:34

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome & Doe Canyon  
**WorkOrder:** HS16061079

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID</b> R276739	<b>Test Name :</b> ANIONS BY E300.0			<b>Matrix:</b> Groundwater		
HS16061079-01	GP-17-50-061616	16 Jun 2016 10:30			21 Jun 2016 14:05	20
HS16061079-01	GP-17-50-061616	16 Jun 2016 10:30			21 Jun 2016 13:50	1
HS16061079-02	GP-19-50-061616	16 Jun 2016 12:30			21 Jun 2016 14:34	20
HS16061079-02	GP-19-50-061616	16 Jun 2016 12:30			21 Jun 2016 14:19	1
<b>Batch ID</b> R276983	<b>Test Name :</b> TOTAL DISSOLVED SOLIDS BY SM2540C			<b>Matrix:</b> Groundwater		
HS16061079-01	GP-17-50-061616	16 Jun 2016 10:30			23 Jun 2016 17:45	1
HS16061079-02	GP-19-50-061616	16 Jun 2016 12:30			23 Jun 2016 17:45	1
<b>Batch ID</b> R277094	<b>Test Name :</b> LOW LEVEL VOLATILES BY SW8260C			<b>Matrix:</b> Groundwater		
HS16061079-01	GP-17-50-061616	16 Jun 2016 10:30			27 Jun 2016 17:16	1
HS16061079-02	GP-19-50-061616	16 Jun 2016 12:30			27 Jun 2016 17:42	1

Client: Kinder Morgan  
 Project: McElmo Dome & Doe Canyon  
 WorkOrder: HS16061079

## QC BATCH REPORT

Batch ID: R277094		Instrument: VOA4		Method: SW8260					
<b>MBLK</b>	Sample ID: VBLKW-160627	Units: ug/L		Analysis Date: 27-Jun-2016 11:31					
Client ID:	Run ID: VOA4_277094	SeqNo: 3740164		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	3.0							
Surr: 1,2-Dichloroethane-d4	56.26	1.0	50	0	113	71 - 125			
Surr: 4-Bromofluorobenzene	48.18	1.0	50	0	96.4	70 - 125			
Surr: Dibromofluoromethane	58.31	1.0	50	0	117	74 - 125			
Surr: Toluene-d8	55.4	1.0	50	0	111	75 - 125			

<b>LCS</b>	Sample ID: VLCSW-160627	Units: ug/L		Analysis Date: 27-Jun-2016 10:14					
Client ID:	Run ID: VOA4_277094	SeqNo: 3740162		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	52.26	1.0	50	0	105	75 - 122			
Ethylbenzene	50.11	1.0	50	0	100	80 - 120			
m,p-Xylene	102	2.0	100	0	102	80 - 120			
o-Xylene	50.56	1.0	50	0	101	80 - 120			
Toluene	50.14	1.0	50	0	100	75 - 121			
Xylenes, Total	152.6	3.0	150	0	102	79 - 124			
Surr: 1,2-Dichloroethane-d4	56.58	1.0	50	0	113	71 - 125			
Surr: 4-Bromofluorobenzene	53.62	1.0	50	0	107	70 - 125			
Surr: Dibromofluoromethane	56.43	1.0	50	0	113	74 - 125			
Surr: Toluene-d8	53.19	1.0	50	0	106	75 - 125			

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome & Doe Canyon  
**WorkOrder:** HS16061079

**QC BATCH REPORT**

Batch ID: R277094		Instrument: VOA4		Method: SW8260					
<b>LCSD</b>		Sample ID: <b>VLCSDW-160627</b>		Units: <b>ug/L</b>		Analysis Date: <b>27-Jun-2016 10:39</b>			
Client ID:		Run ID: <b>VOA4_277094</b>		SeqNo: <b>3740163</b>		PrepDate:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	52	1.0	50	0	104	75 - 122	52.26	0.505	20
Ethylbenzene	49.35	1.0	50	0	98.7	80 - 120	50.11	1.52	20
m,p-Xylene	100.8	2.0	100	0	101	80 - 120	102	1.18	20
o-Xylene	48.34	1.0	50	0	96.7	80 - 120	50.56	4.5	20
Toluene	49.19	1.0	50	0	98.4	75 - 121	50.14	1.9	20
Xylenes, Total	149.1	3.0	150	0	99.4	80 - 124	152.6	2.27	20
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>56.3</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>113</i>	<i>71 - 125</i>	<i>56.58</i>	<i>0.499</i>	<i>20</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>55.67</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>111</i>	<i>70 - 125</i>	<i>53.62</i>	<i>3.74</i>	<i>20</i>
<i>Surr: Dibromofluoromethane</i>	<i>58.55</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>117</i>	<i>74 - 125</i>	<i>56.43</i>	<i>3.69</i>	<i>20</i>
<i>Surr: Toluene-d8</i>	<i>54.58</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>109</i>	<i>75 - 125</i>	<i>53.19</i>	<i>2.59</i>	<i>20</i>

<b>MS</b>		Sample ID: <b>HS16061156-02MS</b>		Units: <b>ug/L</b>		Analysis Date: <b>27-Jun-2016 12:24</b>			
Client ID:		Run ID: <b>VOA4_277094</b>		SeqNo: <b>3740166</b>		PrepDate:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	51.92	1.0	50	0	104	75 - 122			
Ethylbenzene	47.6	1.0	50	0	95.2	80 - 120			
m,p-Xylene	97.03	2.0	100	0	97.0	80 - 120			
o-Xylene	48.6	1.0	50	0	97.2	80 - 120			
Toluene	49.89	1.0	50	0	99.8	75 - 121			
Xylenes, Total	145.6	3.0	150	0	97.1	80 - 124			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>56.45</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>113</i>	<i>71 - 125</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>53.52</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>107</i>	<i>70 - 125</i>			
<i>Surr: Dibromofluoromethane</i>	<i>56.8</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>114</i>	<i>74 - 125</i>			
<i>Surr: Toluene-d8</i>	<i>54.06</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>108</i>	<i>75 - 125</i>			

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome & Doe Canyon  
**WorkOrder:** HS16061079

**QC BATCH REPORT**

Batch ID: R277094		Instrument: VOA4		Method: SW8260						
MSD	Sample ID: HS16061156-02MSD	Units: ug/L			Analysis Date: 27-Jun-2016 12:50					
Client ID:	Run ID: VOA4_277094	SeqNo: 3740167		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Benzene	51.38	1.0	50	0	103	75 - 122	51.92	1.05	20	
Ethylbenzene	46.03	1.0	50	0	92.1	80 - 120	47.6	3.36	20	
m,p-Xylene	92.91	2.0	100	0	92.9	80 - 120	97.03	4.34	20	
o-Xylene	46.97	1.0	50	0	93.9	80 - 120	48.6	3.41	20	
Toluene	46.97	1.0	50	0	93.9	75 - 121	49.89	6.02	20	
Xylenes, Total	139.9	3.0	150	0	93.3	80 - 124	145.6	4.03	20	
Surr: 1,2-Dichloroethane-d4	56.68	1.0	50	0	113	71 - 125	56.45	0.401	20	
Surr: 4-Bromofluorobenzene	51.89	1.0	50	0	104	70 - 125	53.52	3.1	20	
Surr: Dibromofluoromethane	56.09	1.0	50	0	112	74 - 125	56.8	1.27	20	
Surr: Toluene-d8	52.04	1.0	50	0	104	75 - 125	54.06	3.81	20	
The following samples were analyzed in this batch:		HS16061079-01		HS16061079-02						

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome & Doe Canyon  
**WorkOrder:** HS16061079

**QC BATCH REPORT**

Batch ID: R276739		Instrument: ICS2100		Method: E300						
<b>MBLK</b>	Sample ID: WBLKW1-062116	Units: mg/L		Analysis Date: 21-Jun-2016 13:07						
Client ID:	Run ID: ICS2100_276739	SeqNo: 3733111		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.500								
Sulfate	ND	0.500								

<b>LCS</b>	Sample ID: WLCSW1-062116	Units: mg/L		Analysis Date: 21-Jun-2016 13:21						
Client ID:	Run ID: ICS2100_276739	SeqNo: 3733112		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.71	0.500	20	0	104	90 - 110				
Sulfate	20.67	0.500	20	0	103	90 - 110				

<b>LCSD</b>	Sample ID: WLCSDKW1-062116	Units: mg/L		Analysis Date: 21-Jun-2016 13:36						
Client ID:	Run ID: ICS2100_276739	SeqNo: 3733113		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.3	0.500	20	0	101	90 - 110	20.71	2.02	20	
Sulfate	20.2	0.500	20	0	101	90 - 110	20.67	2.29	20	

<b>MS</b>	Sample ID: HS16061140-01MS	Units: mg/L		Analysis Date: 21-Jun-2016 19:49						
Client ID:	Run ID: ICS2100_276739	SeqNo: 3733133		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	18.46	0.500	10	8.789	96.7	80 - 120				
Sulfate	56.4	0.500	10	48.53	78.7	80 - 120				SO

<b>MS</b>	Sample ID: HS16061007-01MS	Units: mg/L		Analysis Date: 21-Jun-2016 15:56						
Client ID:	Run ID: ICS2100_276739	SeqNo: 3733120		PrepDate:		DF: 1000				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	36520	500	10000	27230	92.9	80 - 120				
Sulfate	10290	500	10000	828.4	94.6	80 - 120				

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome & Doe Canyon  
**WorkOrder:** HS16061079

**QC BATCH REPORT**

Batch ID: R276739		Instrument: ICS2100		Method: E300						
MSD	Sample ID: HS16061140-01MSD	Units: mg/L			Analysis Date: 21-Jun-2016 20:03					
Client ID:	Run ID: ICS2100_276739			SeqNo: 3733134		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Chloride	18.33	0.500	10	8.789	95.4	80 - 120	18.46	0.701	20	
Sulfate	56.2	0.500	10	48.53	76.7	80 - 120	56.4	0.359	20	SO

MSD	Sample ID: HS16061007-01MSD	Units: mg/L			Analysis Date: 21-Jun-2016 16:40					
Client ID:	Run ID: ICS2100_276739			SeqNo: 3733123		PrepDate:		DF: 1000		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Chloride	37570	500	10000	27230	103	80 - 120	36520	2.83	20	
Sulfate	10700	500	10000	828.4	98.7	80 - 120	10290	3.87	20	

The following samples were analyzed in this batch: HS16061079-01HS16061079-02

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



**Client:** Kinder Morgan  
**Project:** McElmo Dome & Doe Canyon  
**WorkOrder:** HS16061079

**QC BATCH REPORT**

Batch ID: R276983		Instrument: Balance1		Method: M2540C						
MBLK	Sample ID: WBLK-062316	Units: mg/L		Analysis Date: 23-Jun-2016 17:45						
Client ID:	Run ID: Balance1_276983	SeqNo: 3737833		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)		ND	10.0							
LCS	Sample ID: WLCS-062316	Units: mg/L		Analysis Date: 23-Jun-2016 17:45						
Client ID:	Run ID: Balance1_276983	SeqNo: 3737834		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)		1002	10.0	1000	0	100	85 - 115			
DUP	Sample ID: HS16061225-01DUP	Units: mg/L		Analysis Date: 23-Jun-2016 17:45						
Client ID:	Run ID: Balance1_276983	SeqNo: 3737830		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)		88	10.0				86	2.3	5	
The following samples were analyzed in this batch:		HS16061079-01		HS16061079-02						

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

**Client:** Kinder Morgan  
**Project:** McElmo Dome & Doe Canyon  
**WorkOrder:** HS16061079

**QUALIFIERS,  
ACRONYMS, UNITS**

<b>Qualifier</b>	<b>Description</b>
*	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

<b>Acronym</b>	<b>Description</b>
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

---

**CERTIFICATIONS,ACCREDITATIONS & LICENSES**

---

<b>Agency</b>	<b>Number</b>	<b>Expire Date</b>
Arkansas	16-022-0	27-Mar-2017
California	2919	31-Jul-2016
Kansas	E-10352 2014-2015	31-Jul-2016
Kentucky	96 2016-2017	30-Apr-2017
Louisiana	03087 2015/2016	30-Jun-2016
North Carolina	624 - 2016	31-Dec-2016
North Dakota	R193 2016-2017	30-Apr-2017
Oklahoma	2015-047	31-Aug-2016
Texas	TX104704231-16-17	30-Apr-2017

**Client:** Kinder Morgan  
**Project:** McElmo Dome & Doe Canyon  
**Work Order:** HS16061079

**SAMPLE TRACKING**

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS16061079-01	GP-17-50-061616	Login	6/20/2016 12:00:08 PM	CGG	7A
HS16061079-01	GP-17-50-061616	Login	6/20/2016 12:00:08 PM	CGG	VW-3
HS16061079-02	GP-19-50-061616	Login	6/20/2016 12:00:08 PM	CGG	7A
HS16061079-02	GP-19-50-061616	Login	6/20/2016 12:00:08 PM	CGG	VW-3

## Sample Receipt Checklist

Client Name: Kinder Morgan  
Work Order: HS16061079

Date/Time Received: **18-Jun-2016 09:20**  
Received by: **PMG**

Checklist completed by: Corey Grandits 20-Jun-2016  
eSignature Date

Reviewed by: Bernadette A. Fini 21-Jun-2016  
eSignature Date

Matrices: **Water**Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input 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): 3.2c/3.8c uc/c IR#5

Cooler(s)/Kit(s): 24665

Date/Time sample(s) sent to storage: 06/20/2016 12:05

Water - VOA vials have zero headspace? Yes ☒ No ☐ No VOA vials submitted ☐Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☒pH adjusted? Yes ☐ No ☐ N/A ☒pH adjusted by: 

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments: Corrective Action:



Environmental

Cincinnati, OH  
+1 513 733 5336

Everett, WA  
+1 425 356 2600

Fort Collins, CO  
+1 970 490 1511

Holland, MI  
+1 616 399 6070

# Chain of Custody Form

Page \_\_\_\_ of \_\_\_\_

COC ID: 142429

HS16061079

Kinder Morgan  
McElmo Dome & Doe Canyon



Customer Information		Project Information		ALS Project Manager:	
Purchase Order		Project Name	McElmo Dome + Doe Canyon	A	BTEX 8260
Work Order		Project Number		B	TDS
Company Name	Kinder Morgan	Bill To Company	Kinder Morgan	C	Chloride, Sulfate 300
Send Report To	Aaron Hale	Invoice Attn		D	
Address	1001 Louisiana Street Suite 740D	Address	1001 Louisiana Street Suite 740D	E	
City/State/Zip	Houston	City/State/Zip	Houston	F	
Phone		Phone	(713) 369-9193	G	
Fax		Fax	(713) 495-2835	H	
e-Mail Address	aaron_hale@kindermorgan.com	e-Mail Address		I	
				J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	DEGP-17-50-061616	6/16/16	1030	GW	HCL	4	X	X	X								
2	GP-19-50-061616	6/16/16	1230	GW	HCL	4	X	X	X								
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>A. Spiller</i>		Shipment Method		Required Turnaround Time: (Check Box) <input checked="" type="checkbox"/> Std 10 WK days <input type="checkbox"/> 5 WK Days <input type="checkbox"/> 2 WK Days <input type="checkbox"/> 24 Hour		Results Due Date:	
Relinquished by:	Date:	Time:	Received by:	Notes/Water Samples			
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	24665	3.20	<input type="checkbox"/> Level 3 Std QC/Row da <input type="checkbox"/> TRRP Checklist <input type="checkbox"/> Level 4 SW846/CLP <input type="checkbox"/> TRRP Level 4 <input type="checkbox"/> Other/EDD	
Preservative Key: 1-HCl 2-HNO <sub>3</sub> 3-H <sub>2</sub> SO <sub>4</sub> 4-NaOH 5-Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 6-NaHSO <sub>4</sub> 7-Other 8-4°C 9-5035							

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

FedEx

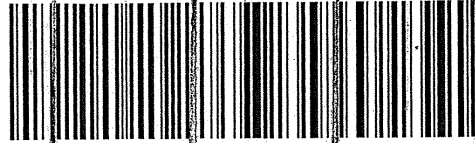
TRK# 6786 7198 1961  
0221

SATURDAY 12:00P  
PRIORITY OVERNIGHT

X0 SGRA

24665

77099  
TX-OS  
IAH



FID 501263 17JUN16 DROA 5390/3080/6A00



ALS Environmental

10450 Standliff Rd., Suite 210

Houston, Texas 77099

Tel. +1 281 530 5656

Fax. +1 281 530 5887

24665

Date:  
Name:  
Company:

CUSTODY SEAL

Time:

Seal Broken By:

JM

Date:

06/18/16

# 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>.

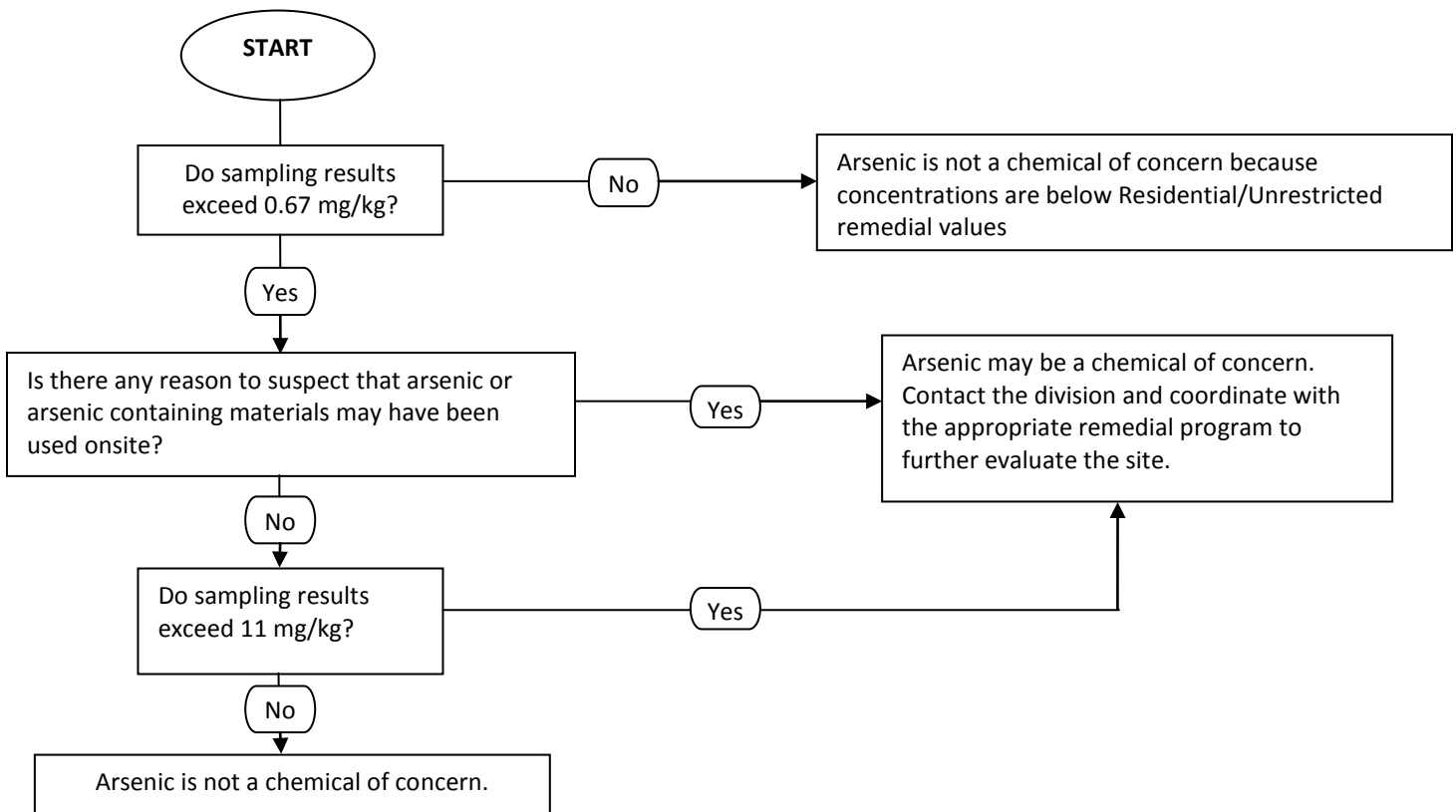
**Region 8 U.S. EPA 95% UCLM Background Soil Arsenic Concentrations in Colorado**

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

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

# ATTACHMENT G

Laboratory Report from Green Analytical Laboratories





75 Suttle Street  
Durango, CO 81303  
970.247.4220 Phone  
970.247.4227 Fax  
[www.greenanalytical.com](http://www.greenanalytical.com)

06 July 2015

Ryan Unterreiner  
Ecosphere Environmental Services  
776. E. 2nd Avenue  
Durango, CO 81301  
RE: Rule 609 Subsequent Sampling

Enclosed are the results of analyses for samples received by the laboratory on 06/17/15 13:28. The data to follow was performed, in whole or in part, by a subcontract laboratory with an additional report attached.

If you any any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads 'Debbie Zufelt'. The script is cursive and fluid, with the first name 'Debbie' and last name 'Zufelt' clearly legible.

Debbie Zufelt  
Reports Manager

All accredited analytes contained in this report are denoted by an asterisk (\*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. All of our certifications can be viewed at <http://greenanalytical.com/certifications/>

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8.



[dzufelt@greenanalytical.com](mailto:dzufelt@greenanalytical.com) p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

[www.GreenAnalytical.com](http://www.GreenAnalytical.com)

Ecosphere Environmental Services  
776. E. 2nd Avenue  
Durango CO, 81301

Project: Rule 609 Subsequent Sampling  
Project Name / Number: [none]  
Project Manager: Ryan Unterreiner

**Reported:**  
07/06/15 13:08

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GP-16 Stock	1506163-01	Water	06/17/15 09:45	06/17/15 13:28

Green Analytical Laboratories

A handwritten signature in black ink that reads 'Debbie Zufelt'.

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Ecosphere Environmental Services  
776. E. 2nd Avenue  
Durango CO, 81301

Project: Rule 609 Subsequent Sampling  
Project Name / Number: [none]  
Project Manager: Ryan Unterreiner

Reported:  
07/06/15 13:08

**GP-16 Stock****1506163-01 (Water)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

**General Chemistry**

Alkalinity, Bicarbonate*	520	10.0		mg/L	5	06/23/15	2320 B		LLG
Alkalinity, Carbonate*	<10.0	10.0		mg/L	1	06/23/15	2320 B		LLG
Alkalinity, Hydroxide*	<10.0	10.0		mg/L	1	06/23/15	2320 B		LLG
Alkalinity, Total*	520	10.0		mg/L	5	06/23/15	2320 B		LLG
Bromide	<0.100	0.100	0.0730	mg/L	1	06/24/15	4500-Br- B		ABP
Chloride*	113	10.0	5.00	mg/L	1	06/26/15	4500-Cl- C		LLG
Fluoride*	0.413	0.250	0.0550	mg/L	1	06/26/15	4500-F- C		ABP
TDS*	2900	10.0		mg/L	1	06/22/15	EPA160.1		ABP
Sulfate	1680	500	84.0	mg/L	50	07/01/15	4500-SO42- E		ABP

**Total Recoverable Metals by ICP (E200.7)**

Calcium*	366	0.200	0.028	mg/L	10	06/19/15	EPA200.7		JGS
Magnesium*	229	1.00	0.324	mg/L	10	06/19/15	EPA200.7		JGS
Potassium*	15.7	10.0	3.35	mg/L	10	06/19/15	EPA200.7		JGS
Sodium*	215	10.0	3.05	mg/L	10	06/19/15	EPA200.7		JGS

**Subcontracted -- Cardinal Laboratories****Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.001	0.001	0.0001	mg/L	1	06/23/15	8021B		MS
Toluene*	<0.001	0.001	0.0002	mg/L	1	06/23/15	8021B		MS
Ethylbenzene*	<0.001	0.001	0.0002	mg/L	1	06/23/15	8021B		MS
Total Xylenes*	<0.003	0.003	0.0005	mg/L	1	06/23/15	8021B		MS
Total BTEX	<0.006	0.006		mg/L	1	06/23/15	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID) 120 % 66.2-142 06/23/15 8021B MS

**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	<1.00	1.00	0.136	mg/L	0.1	06/23/15	8015B		MS
DRO >C10-C28	<1.00	1.00	0.295	mg/L	0.1	06/23/15	8015B		MS
EXT DRO >C28-C35	<1.00	1.00	0.295	mg/L	0.1	06/23/15	8015B		MS

Surrogate: 1-Chlorooctane 93.4 % 36.1-161 06/23/15 8015B MS

Surrogate: 1-Chlorooctadecane 122 % 36-171 06/23/15 8015B MS

Cation/Anion Balance .16

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Ecosphere Environmental Services  
776. E. 2nd Avenue  
Durango CO, 81301

Project: Rule 609 Subsequent Sampling  
Project Name / Number: [none]  
Project Manager: Ryan Unterreiner

Reported:  
07/06/15 13:08

### General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

#### Batch B506227 - General Prep - Wet Chem

##### Blank (B506227-BLK1)

Prepared & Analyzed: 06/23/15

Alkalinity, Total	ND	10.0	mg/L
-------------------	----	------	------

##### LCS (B506227-BS1)

Prepared & Analyzed: 06/23/15

Alkalinity, Total	98.0	10.0	mg/L	100	98.0	85-115
-------------------	------	------	------	-----	------	--------

##### LCS Dup (B506227-BSD1)

Prepared & Analyzed: 06/23/15

Alkalinity, Total	105	10.0	mg/L	100	105	85-115	6.90	20
-------------------	-----	------	------	-----	-----	--------	------	----

#### Batch B506245 - General Prep - Wet Chem

##### Blank (B506245-BLK1)

Prepared & Analyzed: 06/24/15

Bromide	ND	0.100	mg/L
---------	----	-------	------

##### LCS (B506245-BS1)

Prepared & Analyzed: 06/24/15

Bromide	0.584	0.100	mg/L	0.600	97.4	85-115
---------	-------	-------	------	-------	------	--------

##### LCS Dup (B506245-BSD1)

Prepared & Analyzed: 06/24/15

Bromide	0.656	0.100	mg/L	0.600	109	85-115	11.5	20
---------	-------	-------	------	-------	-----	--------	------	----

#### Batch B506248 - General Prep - Wet Chem

##### Blank (B506248-BLK1)

Prepared & Analyzed: 06/26/15

Chloride	ND	10.0	mg/L
----------	----	------	------

##### LCS (B506248-BS1)

Prepared & Analyzed: 06/26/15

Chloride	99.0	10.0	mg/L	100	99.0	85-115
----------	------	------	------	-----	------	--------

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Ecosphere Environmental Services  
776. E. 2nd Avenue  
Durango CO, 81301

Project: Rule 609 Subsequent Sampling  
Project Name / Number: [none]  
Project Manager: Ryan Unterreiner

Reported:  
07/06/15 13:08

### General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

#### Batch B506248 - General Prep - Wet Chem

##### LCS Dup (B506248-BSD1)

Prepared &amp; Analyzed: 06/26/15

Chloride	98.0	10.0	mg/L	100		98.0	85-115	1.02	20	
----------	------	------	------	-----	--	------	--------	------	----	--

#### Batch B506269 - General Prep - Wet Chem

##### Blank (B506269-BLK1)

Prepared &amp; Analyzed: 06/26/15

Fluoride	ND	0.250	mg/L							
----------	----	-------	------	--	--	--	--	--	--	--

##### LCS (B506269-BS1)

Prepared &amp; Analyzed: 06/26/15

Fluoride	0.987	0.250	mg/L	1.00		98.7	85-115			
----------	-------	-------	------	------	--	------	--------	--	--	--

##### LCS Dup (B506269-BSD1)

Prepared &amp; Analyzed: 06/26/15

Fluoride	0.996	0.250	mg/L	1.00		99.6	85-115	0.908	20	
----------	-------	-------	------	------	--	------	--------	-------	----	--

#### Batch B506271 - General Prep - Wet Chem

##### Blank (B506271-BLK1)

Prepared &amp; Analyzed: 06/22/15

TDS	ND	10.0	mg/L							
-----	----	------	------	--	--	--	--	--	--	--

##### Duplicate (B506271-DUP2)

Source: 1506146-01

Prepared &amp; Analyzed: 06/22/15

TDS	7170	10.0	mg/L		7160			0.140	20	
-----	------	------	------	--	------	--	--	-------	----	--

##### Reference (B506271-SRM1)

Prepared &amp; Analyzed: 06/22/15

TDS	570	10.0	mg/L	590		96.6	85-115			
-----	-----	------	------	-----	--	------	--------	--	--	--

#### Batch B507007 - General Prep - Wet Chem

##### Blank (B507007-BLK1)

Prepared &amp; Analyzed: 07/01/15

Sulfate	ND	10.0	mg/L							
---------	----	------	------	--	--	--	--	--	--	--

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.





Ecosphere Environmental Services  
776. E. 2nd Avenue  
Durango CO, 81301

Project: Rule 609 Subsequent Sampling  
Project Name / Number: [none]  
Project Manager: Ryan Unterreiner

Reported:  
07/06/15 13:08

### General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

#### Batch B507007 - General Prep - Wet Chem

##### LCS (B507007-BS1)

Prepared & Analyzed: 07/01/15

Sulfate	46.0	10.0	mg/L	50.0		92.0	85-115			
---------	------	------	------	------	--	------	--------	--	--	--

##### LCS Dup (B507007-BSD1)

Prepared & Analyzed: 07/01/15

Sulfate	53.9	10.0	mg/L	50.0		108	85-115	15.8	20	
---------	------	------	------	------	--	-----	--------	------	----	--

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Ecosphere Environmental Services  
776. E. 2nd Avenue  
Durango CO, 81301

Project: Rule 609 Subsequent Sampling  
Project Name / Number: [none]  
Project Manager: Ryan Unterreiner

Reported:  
07/06/15 13:08

### Total Recoverable Metals by ICP (E200.7) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

#### Batch B506190 - EPA 200.2

##### Blank (B506190-BLK1)

Prepared: 06/18/15 Analyzed: 06/19/15

Calcium	ND	0.020	mg/L
Magnesium	ND	0.100	mg/L
Potassium	ND	1.00	mg/L
Sodium	ND	1.00	mg/L

##### LCS (B506190-BS1)

Prepared: 06/18/15 Analyzed: 06/19/15

Calcium	3.85	0.020	mg/L	4.00	96.2	85-115
Magnesium	20.4	0.100	mg/L	20.0	102	85-115
Potassium	7.85	1.00	mg/L	8.00	98.1	85-115
Sodium	6.35	1.00	mg/L	6.48	98.0	85-115

##### LCS Dup (B506190-BSD1)

Prepared: 06/18/15 Analyzed: 06/19/15

Calcium	3.80	0.020	mg/L	4.00	94.9	85-115	1.36	20
Magnesium	20.1	0.100	mg/L	20.0	101	85-115	1.56	20
Potassium	7.96	1.00	mg/L	8.00	99.5	85-115	1.43	20
Sodium	6.27	1.00	mg/L	6.48	96.8	85-115	1.18	20

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Ecosphere Environmental Services  
776. E. 2nd Avenue  
Durango CO, 81301

Project: Rule 609 Subsequent Sampling  
Project Name / Number: [none]  
Project Manager: Ryan Unterreiner

Reported:  
07/06/15 13:08

### Volatile Organic Compounds by EPA Method 8021 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

#### Batch 5062211 - Volatiles

##### Blank (5062211-BLK1)

Prepared: 06/22/15 Analyzed: 06/23/15

Benzene	ND	0.001	mg/L							
Ethylbenzene	ND	0.001	mg/L							
Toluene	ND	0.001	mg/L							
Total BTEX	ND	0.006	mg/L							
Total Xylenes	ND	0.003	mg/L							
Surrogate: 4-Bromofluorobenzene (PID)	0.0606		mg/L	0.0500		121	66.2-142			

##### LCS (5062211-BS1)

Prepared: 06/22/15 Analyzed: 06/23/15

Benzene	0.020	0.001	mg/L	0.0200		98.7	82.6-128			
Ethylbenzene	0.021	0.001	mg/L	0.0200		103	80.2-131			
Toluene	0.020	0.001	mg/L	0.0200		101	84.2-128			
Total Xylenes	0.053	0.003	mg/L	0.0600		88.9	81.8-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0580		mg/L	0.0500		116	66.2-142			

##### LCS Dup (5062211-BSD1)

Prepared: 06/22/15 Analyzed: 06/23/15

Benzene	0.019	0.001	mg/L	0.0200		96.1	82.6-128	2.68	18.6	
Ethylbenzene	0.020	0.001	mg/L	0.0200		97.6	80.2-131	5.41	12.6	
Toluene	0.019	0.001	mg/L	0.0200		96.3	84.2-128	4.77	12.3	
Total Xylenes	0.050	0.003	mg/L	0.0600		83.4	81.8-128	6.41	12.8	
Surrogate: 4-Bromofluorobenzene (PID)	0.0572		mg/L	0.0500		114	66.2-142			

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Ecosphere Environmental Services  
776. E. 2nd Avenue  
Durango CO, 81301

Project: Rule 609 Subsequent Sampling  
Project Name / Number: [none]  
Project Manager: Ryan Unterreiner

Reported:  
07/06/15 13:08

### Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

#### Batch 5062212 - General Prep - Organics

##### Blank (5062212-BLK1)

Prepared & Analyzed: 06/23/15

DRO >C10-C28	ND	1.00	mg/L							
EXT DRO >C28-C35	ND	1.00	mg/L							
GRO C6-C10	ND	1.00	mg/L							
Surrogate: 1-Chlorooctadecane	6.16		mg/L	5.00		123	36-171			
Surrogate: 1-Chlorooctane	5.07		mg/L	5.00		101	36.1-161			

##### LCS (5062212-BS1)

Prepared & Analyzed: 06/23/15

DRO >C10-C28	49.2	1.00	mg/L	50.0		98.4	74.9-129			
EXT DRO >C28-C35	ND	1.00	mg/L	0.00			0-0			
GRO C6-C10	45.9	1.00	mg/L	50.0		91.9	75.5-112			
Surrogate: 1-Chlorooctadecane	6.52		mg/L	5.00		130	36-171			
Surrogate: 1-Chlorooctane	5.48		mg/L	5.00		110	36.1-161			

##### LCS Dup (5062212-BSD1)

Prepared & Analyzed: 06/23/15

DRO >C10-C28	47.5	1.00	mg/L	50.0		95.1	74.9-129	3.39	22.6	
EXT DRO >C28-C35	ND	1.00	mg/L	0.00			0-0		0	
GRO C6-C10	44.4	1.00	mg/L	50.0		88.7	75.5-112	3.46	17.3	
Surrogate: 1-Chlorooctadecane	6.46		mg/L	5.00		129	36-171			
Surrogate: 1-Chlorooctane	5.29		mg/L	5.00		106	36.1-161			

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Ecosphere Environmental Services  
776. E. 2nd Avenue  
Durango CO, 81301

Project: Rule 609 Subsequent Sampling  
Project Name / Number: [none]  
Project Manager: Ryan Unterreiner

Reported:  
07/06/15 13:08

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
\*Results reported on as received basis unless designated as dry.  
RPD Relative Percent Difference  
LCS Laboratory Control Sample (Blank Spike)  
RL Report Limit  
MDL Method Detection Limit

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



(970) 247-4220  
Fax: (970) 247-4227

service@greenanalytical.com or dzufelt@greenanalytical.com  
75 Suttle St Durango, CO 81303

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <b>Ecosphere Environmental Services</b>		P.O. #: <b>GP-16</b>		Bill to (if different):	
Project Manager: <b>Ryan Unterwiesing</b>		Company:			
Address: <b>776 E. 2nd Ave</b>		Attn:			
City: <b>Durango, CO</b>		Address:			
Phone #: <b>970-382-7256</b>		City:			
Additional Report To:		State:		Zip:	
Project Name:		Phone #:			
Project Number:		Fax or Email:			
Sampler Name (Print):		Matrix (check one)		# of containers	
FOR LAB USE ONLY		<input type="checkbox"/> GROUNDWATER <input type="checkbox"/> SURFACEWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> PRODUCEDWATER <input type="checkbox"/> SOIL <input type="checkbox"/> OTHER :		<input type="checkbox"/> No preservation (general) <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> HCl <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> Other: <input type="checkbox"/> Other: <input type="checkbox"/> Other:	
Lab I.D.	Sample Name or Location	Date	Time	ANALYSIS REQUEST	
<del>GP-16 Stock</del>					
1506-163-01 -02	GP-16 Stock TB	6/17/15	09:45	X	COGCC Rule 609 Subsequent Sample
PLEASE NOTE: GAL's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by GAL within 30 days after completion. In no event shall GAL be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by GAL, regardless of whether such claim is based upon any of the above stated reasons or otherwise.		Report to State? (Circle) Yes No			
Relinquished By:	Date: <b>6/17/15</b>	Received By:	ADDITIONAL REMARKS:		
Relinquished By:	Time: <b>15:28</b>	Received By:	COCCE edd		
Relinquished By:	Date:	Received By:			
Relinquished By:	Time:	Received By:			
Relinquished By:	Date:	Received By:			
Relinquished By:	Time:	Received By:			
Delivered By: (Circle One)	Temperature at receipt: <b>8.70C on ice</b>	CHECKED BY: <b>DS</b>			
Sampler - UPS - FedEx - Kangaroo - Other:					

\* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.



25712 Commercentre Drive  
Lake Forest, California 92630  
949.297.5020 Phone  
949.297.5027 Fax

25 June 2015

Debbie Zufelt  
Green Analytical  
75 Suttle Street  
Durango, CO 81303  
RE: Ecosphere Enviro.

Enclosed are the results of analyses for samples received by the laboratory on 06/19/15 11:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Katherine RunningCrane  
Project Manager



25712 Commercentre Drive  
Lake Forest, California 92630  
949.297.5020 Phone  
949.297.5027 Fax

Green Analytical  
75 Suttle Street  
Durango CO, 81303

Project: Ecosphere Enviro.  
Project Number: GA15-228  
Project Manager: Debbie Zufelt

**Reported:**  
06/25/15 16:58

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GP-16-Stock	T151451-01	Water	06/17/15 09:45	06/19/15 11:15

SunStar Laboratories, Inc.

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

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





25712 Commercentre Drive  
Lake Forest, California 92630  
949.297.5020 Phone  
949.297.5027 Fax

Green Analytical  
75 Suttle Street  
Durango CO, 81303

Project: Ecosphere Enviro.  
Project Number: GA15-228  
Project Manager: Debbie Zufelt

**Reported:**  
06/25/15 16:58

#### DETECTIONS SUMMARY

**Sample ID:** GP-16-Stock

**Laboratory ID:** T151451-01

**No Results Detected**

SunStar Laboratories, Inc.

Katherine RunningCrane, Project Manager

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



25712 Commercentre Drive  
Lake Forest, California 92630  
949.297.5020 Phone  
949.297.5027 Fax

Green Analytical  
75 Suttle Street  
Durango CO, 81303

Project: Ecosphere Enviro.  
Project Number: GA15-228  
Project Manager: Debbie Zufelt

**Reported:**  
06/25/15 16:58

**GP-16-Stock**  
**T151451-01 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**RSK-175**

Methane	ND	1.00	ug/l	1	5061915	06/19/15	06/20/15	RSK-175
Ethane	ND	1.00	"	"	"	"	"	"
Propane	ND	10.0	"	"	"	"	"	"

SunStar Laboratories, Inc.

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

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



25712 Commercentre Drive  
Lake Forest, California 92630  
949.297.5020 Phone  
949.297.5027 Fax

Green Analytical  
75 Suttle Street  
Durango CO, 81303

Project: Ecosphere Enviro.  
Project Number: GA15-228  
Project Manager: Debbie Zufelt

Reported:  
06/25/15 16:58

**RSK-175 - Quality Control**  
**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

**Batch 5061915 - EPA 3810m Headspace**

**Blank (5061915-BLK1)**

Prepared: 06/19/15 Analyzed: 06/20/15

Methane	ND	1.00	ug/l
Ethane	ND	1.00	"
Propane	ND	10.0	"

**Duplicate (5061915-DUP1)**

Source: T151451-01

Prepared: 06/19/15 Analyzed: 06/20/15

Methane	ND	1.00	ug/l	ND	20
Ethane	ND	1.00	"	ND	20
Propane	ND	10.0	"	0.00	200

SunStar Laboratories, Inc.

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

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



25712 Commercentre Drive  
Lake Forest, California 92630  
949.297.5020 Phone  
949.297.5027 Fax

Green Analytical  
75 Suttle Street  
Durango CO, 81303

Project: Ecosphere Enviro.  
Project Number: GA15-228  
Project Manager: Debbie Zufelt

**Reported:**  
06/25/15 16:58

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference

SunStar Laboratories, Inc.

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

Katherine RunningCrane, Project Manager



SUM Star

5.4

# CHAIN OF CUSTODY RECORD

Page \_\_\_\_ of \_\_\_\_

Client: GREEN ANALYTICAL

Contact: DEBBIE ZUFFELT

Address: 75 SUTLE ST

DURANGO, CO 81303

Phone Number: 970-247-4220

FAX Number: 970-247-4227

## NOTES:

1) Ensure proper container packaging.

2) Ship samples promptly following collection.

3) Designate Sample Reject Disposition.

PO# GA15-228

Project Name: Ecophore Basins

Samples Signature: \_\_\_\_\_

PLEASE CALL WITH ANY QUESTIONS

Table 1. - Matrix Type

1 = Surface Water, 2 = Ground Water  
3 = Soil/Sediment, 4 = Rinseate, 5 = Oil  
6 = Waste, 7 = Other (Specify) \_\_\_\_\_

FOR GAL USE ONLY

GAL JOB # \_\_\_\_\_

Lab Name: Green Analytical Laboratories

(970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303

Sample ID	Date	Time	Collected by: (Init.)	Miscellaneous			Preservative(s)				Analyses Required	Comments	
				Matrix Type From Table 1	No. of Containers	Sample Filtered ? Y/N	Unpreserved (Ice Only)	HNO3	HCL	H2SO4			NAOH
1. GP-16 Stock	6-17-15	09:45		2	3		X						1506-163-01
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													
Relinquished by: <u>Michael Valentine</u>	Date: <u>6-18-15</u>	Time: <u>1600</u>	Received by: <u>Felecia</u>	Date: <u>6-18-15</u>	Time: <u>11:15</u>								
Relinquished by: <u>Felecia</u>	Date: <u>6-19-15</u>	Time: <u>11:15</u>	Received by: <u>Sharon</u>	Date: <u>6-19-15</u>	Time: <u>11:15</u>								



## SAMPLE RECEIVING REVIEW SHEET

BATCH # T151451

Client Name: GREEN ANALYTICAL

Project: ESOSPHERE ENVIR

Received by: BRIAN

Date/Time Received: 6-19-15 11:15

Delivered by: ☐ Client ☐ SunStar Courier ☐ GSO ☒ FedEx ☐ Other \_\_\_\_\_

Total number of coolers received 1

Temp criteria = 6°C > 0°C (no frozen containers)

Temperature: cooler #1 5.6 °C +/- the CF (- 0.2°C) = 5.4 °C corrected temperature

cooler #2 \_\_\_\_\_ °C +/- the CF (- 0.2°C) = \_\_\_\_\_ °C corrected temperature

cooler #3 \_\_\_\_\_ °C +/- the CF (- 0.2°C) = \_\_\_\_\_ °C corrected temperature

Samples outside temp. but received on ice, w/in 6 hours of final sampling. ☒ Yes ☐ No\* ☐ N/A

Custody Seals Intact on Cooler/Sample ☐ Yes ☐ No\* ☒ N/A

Sample Containers Intact ☒ Yes ☐ No\*

Sample labels match COC ID's ☒ Yes ☐ No\*

Total number of containers received match COC ☒ Yes ☐ No\*

Proper containers received for analyses requested on COC ☒ Yes ☐ No\*

Proper preservative indicated on COC/containers for analyses requested ☐ Yes ☐ No\* ☒ N/A

Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times. ☒ Yes ☐ No\*

\* Complete Non-Conformance Receiving Sheet if checked

Cooler/Sample Review - Initials and date BC 6-19-15

Comments:

---

---

---

---

**WORK ORDER**

**T151451**

**Client:** Green Analytical  
**Project:** Ecosphere Enviro.

**Project Manager:** Katherine RunningCrane  
**Project Number:** GA15-228

**Report To:**

Green Analytical  
Debbie Zufelt  
75 Suttle Street  
Durango, CO 81303

**Date Due:** 06/26/15 15:00 (5 day TAT)

**Received By:** Brian Charon

**Date Received:** 06/19/15 11:15

**Logged In By:** Brian Charon

**Date Logged In:** 06/19/15 11:33

**Samples Received at:** 5.4°C  
**Custody Seals** No Received On Ice Yes  
**Containers Intact** Yes  
**COC/Labels Agree** Yes  
**Preservation Confirmed** No

Analysis	Due	TAT	Expires	Comments
----------	-----	-----	---------	----------

**T151451-01 GP-16-Stock [Water] Sampled 06/17/15 09:45 (GMT-08:00) Pacific Time (US &**

RSK-175	06/26/15 15:00	5	07/15/15 09:45	Methane, Ethane & Propane only
---------	----------------	---	----------------	--------------------------------