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03 May 2023

Michael Hannigan  
Kinder Morgan  
17801 Hwy 491  
Cortez, CO 81321  
RE: YB Cluster T501 Spill 2015

Enclosed are the results of analyses for samples received by the laboratory on 04/19/23 11:15. The data to follow was performed, in whole or in part, by Green Analytical Laboratories. Any data that was performed by a subcontract laboratory is included within the GAL report, or with an additional report attached.

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

Sincerely,

A handwritten signature in blue ink that reads 'Jeremy D. Allen'.

Jeremy D Allen  
Laboratory Director

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. TNI Certificate Number: T104704514-23-17

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. TNI Certificate Number: T104704398-23-16



Kinder Morgan  
17801 Hwy 491  
Cortez CO, 81321

Project: COGCC Table 915-1  
Project Name / Number: YB Cluster T501 Spill 2015  
Project Manager: Michael Hannigan

Reported:  
05/03/23 16:11

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
YB-501-SS-1	2304241-01	Solid	04/17/23 14:35	04/19/23 11:15	

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Jeremy D Allen, Laboratory Director

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Kinder Morgan 17801 Hwy 491 Cortez CO, 81321	Project: COGCC Table 915-1 Project Name / Number: YB Cluster T501 Spill 2015 Project Manager: Michael Hannigan	Reported: 05/03/23 16:11
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**YB-501-SS-1**

**2304241-01 (Soil)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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**General Chemistry**

Hexavalent Chromium	<0.250	0.250	0.191	mg/kg dry	25	05/02/23 13:41	3060A/3500-Cr B		CAI
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**Saturated Paste Extraction**

Calcium	25.9	0.100	0.058	mg/L	1	05/01/23 16:58	EPA200.7		AES
Conductivity	339			umho/cm@25 C	1	05/01/23 09:41	ASA#9 10-3.3		KRW
Magnesium	8.71	0.100	0.065	mg/L	1	05/01/23 16:58	EPA200.7		AES
pH	8.03			pH Units	1	05/01/23 09:42	ASA#9 10-3.2		KRW
SAR	1.75			No Unit	1	05/01/23 16:58	Calculation		AES
Sodium	40.4	1.00	0.079	mg/L	1	05/01/23 16:58	EPA200.7		AES

**Total Metals by ICP**

Barium	134	5.00	0.942	mg/kg dry	100	05/02/23 16:06	6010B		AES
Cadmium	<5.00	5.00	1.29	mg/kg dry	100	05/02/23 16:06	6010B		AES
Chromium	8.33	5.00	4.53	mg/kg dry	100	05/02/23 16:06	6010B		AES
Copper	11.1	10.0	4.61	mg/kg dry	100	05/02/23 16:06	6010B		AES
Lead	<10.0	10.0	1.88	mg/kg dry	100	05/02/23 16:06	6010B		AES
Nickel	5.60	5.00	1.41	mg/kg dry	100	05/02/23 16:06	6010B		AES
Selenium	<20.0	20.0	9.47	mg/kg dry	100	05/02/23 16:06	6010B		AES
Silver	<1.00	1.00	0.460	mg/kg dry	100	05/02/23 16:06	6010B		AES
Zinc	29.2	10.0	1.24	mg/kg dry	100	05/02/23 16:06	6010B		AES

**Total Metals by ICPMS**

Arsenic	2.98	0.100	0.0158	mg/kg dry	100	05/02/23 12:15	6020A		AES
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**Hot Water Extractable**

Boron	0.491	0.300	0.142	mg/L	1	05/02/23 20:28	EPA200.7		AES
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**Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240**

**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0	10.0	6.25	mg/kg	1	04/25/23 07:06	8015B		MS
DRO >C10-C28*	25.3	10.0	4.26	mg/kg	1	04/25/23 07:06	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	04/25/23 07:06	8015B		MS

Surrogate: 1-Chlorooctane 98.3 % 48.2-134 04/25/23 07:06 8015B MS

Surrogate: 1-Chlorooctadecane 109 % 49.1-148 04/25/23 07:06 8015B MS

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**YB-501-SS-1**

**2304241-01 (Soil)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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**Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240**

**VOLATILES BY GC/MS**

Benzene*	<0.00885	0.0250	0.00885	mg/kg	50	04/29/23 16:59	8260B		MS
Toluene*	<0.00670	0.0250	0.00670	mg/kg	50	04/29/23 16:59	8260B		MS
Ethylbenzene*	<b>0.00552</b>	0.0250	0.00405	mg/kg	50	04/29/23 16:59	8260B	J	MS
m+p - Xylene*	<0.0186	0.0500	0.0186	mg/kg	50	04/29/23 16:59	8260B		MS
o-Xylene*	<0.00700	0.0250	0.00700	mg/kg	50	04/29/23 16:59	8260B		MS
Total Xylenes*	<0.0256	0.0750	0.0256	mg/kg	50	04/29/23 16:59	8260B		MS
1,3,5-Trimethylbenzene	<0.00450	0.0250	0.00450	mg/kg	50	04/29/23 16:59	8260B		MS
1,2,4-Trimethylbenzene	<0.00650	0.0250	0.00650	mg/kg	50	04/29/23 16:59	8260B		MS
Naphthalene*	<0.00500	0.0250	0.00500	mg/kg	50	04/29/23 16:59	8260B		MS
Surrogate: Dibromofluoromethane			100 %	84.6-114		04/29/23 16:59	8260B		MS
Surrogate: Toluene-d8			91.0 %	90.4-109		04/29/23 16:59	8260B		MS
Surrogate: 4-Bromofluorobenzene			101 %	82.5-117		04/29/23 16:59	8260B		MS

**Polynuclear Aromatic Compounds by GC/MS**

Naphthalene*	<0.015	0.040	0.015	mg/kg	40	04/27/23 20:05	8270C		CK
2-Methylnaphthalene*	<0.023	0.040	0.023	mg/kg	40	04/27/23 20:05	8270C		CK
1-Methylnaphthalene	<0.016	0.040	0.016	mg/kg	40	04/27/23 20:05	8270C		CK
Acenaphthene*	<0.024	0.040	0.024	mg/kg	40	04/27/23 20:05	8270C		CK
Fluorene*	<0.014	0.040	0.014	mg/kg	40	04/27/23 20:05	8270C		CK
Anthracene*	<0.017	0.040	0.017	mg/kg	40	04/27/23 20:05	8270C		CK
Fluoranthene*	<0.019	0.040	0.019	mg/kg	40	04/27/23 20:05	8270C		CK
Pyrene*	<0.013	0.040	0.013	mg/kg	40	04/27/23 20:05	8270C		CK
Benzo[a]anthracene*	<0.023	0.040	0.023	mg/kg	40	04/27/23 20:05	8270C		CK
Chrysene	<0.017	0.040	0.017	mg/kg	40	04/27/23 20:05	8270C		CK
Benzo[b]fluoranthene*	<0.019	0.040	0.019	mg/kg	40	04/27/23 20:05	8270C		CK
Benzo[k]fluoranthene*	<0.016	0.040	0.016	mg/kg	40	04/27/23 20:05	8270C		CK
Benzo[a]pyrene*	<0.018	0.040	0.018	mg/kg	40	04/27/23 20:05	8270C		CK
Indeno[1,2,3-cd]pyrene*	<0.017	0.040	0.017	mg/kg	40	04/27/23 20:05	8270C		CK
Dibenz[a,h]anthracene*	<0.019	0.040	0.019	mg/kg	40	04/27/23 20:05	8270C		CK
Surrogate: Nitrobenzene-d5			68.4 %	39.6-121		04/27/23 20:05	8270C		CK

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**YB-501-SS-1**

**2304241-01 (Soil)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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**Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240**

**Polynuclear Aromatic Compounds by GC/MS**

Surrogate: 2-Fluorobiphenyl	73.4 %	39.8-134				04/27/23 20:05	8270C		CK
Surrogate: Terphenyl-d14	83.9 %	33.3-136				04/27/23 20:05	8270C		CK

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**General Chemistry - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B231040 - General Prep - Wet Chem</b>										
<b>Blank (B231040-BLK1)</b> Prepared: 04/26/23 Analyzed: 05/02/23										
Hexavalent Chromium	ND	0.250	mg/kg dry							
<b>LCS (B231040-BS1)</b> Prepared: 04/26/23 Analyzed: 05/02/23										
Hexavalent Chromium	2.22	0.250	mg/kg dry	2.50		88.8	85-115			

**Saturated Paste Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B231095 - Paste Extract</b>										
<b>Blank (B231095-BLK1)</b> Prepared & Analyzed: 05/01/23										
Calcium	ND	0.100	mg/L							
Magnesium	ND	0.100	mg/L							
SAR	0.00		No Unit							
Sodium	ND	1.00	mg/L							

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Cortez CO, 81321

Project: COGCC Table 915-1  
Project Name / Number: YB Cluster T501 Spill 2015  
Project Manager: Michael Hannigan

Reported:  
05/03/23 16:11

**Total Metals by ICP - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B231049 - EPA 3050**

**Blank (B231049-BLK1)**

Prepared: 04/27/23 Analyzed: 05/02/23

Barium	ND	5.00	mg/kg dry							
Cadmium	ND	5.00	mg/kg dry							
Chromium	ND	5.00	mg/kg dry							
Copper	ND	10.0	mg/kg dry							
Lead	ND	10.0	mg/kg dry							
Nickel	ND	5.00	mg/kg dry							
Selenium	ND	20.0	mg/kg dry							
Silver	ND	1.00	mg/kg dry							
Zinc	ND	10.0	mg/kg dry							

**LCS (B231049-BS1)**

Prepared: 04/27/23 Analyzed: 05/02/23

Barium	195	5.00	mg/kg dry	200		97.6	80-120			
Cadmium	180	5.00	mg/kg dry	200		90.1	80-120			
Chromium	197	5.00	mg/kg dry	200		98.7	80-120			
Copper	421	10.0	mg/kg dry	400		105	80-120			
Lead	192	10.0	mg/kg dry	200		95.8	80-120			
Nickel	191	5.00	mg/kg dry	200		95.6	80-120			
Selenium	817	20.0	mg/kg dry	800		102	80-120			
Silver	9.57	1.00	mg/kg dry	10.0		95.7	80-120			
Zinc	175	10.0	mg/kg dry	200		87.5	80-120			

**LCS Dup (B231049-BSD1)**

Prepared: 04/27/23 Analyzed: 05/02/23

Barium	190	5.00	mg/kg dry	200		94.9	80-120	2.83	20	
Cadmium	176	5.00	mg/kg dry	200		87.9	80-120	2.45	20	
Chromium	192	5.00	mg/kg dry	200		95.9	80-120	2.90	20	
Copper	406	10.0	mg/kg dry	400		101	80-120	3.61	20	
Lead	186	10.0	mg/kg dry	200		93.2	80-120	2.76	20	
Nickel	186	5.00	mg/kg dry	200		92.8	80-120	2.91	20	
Selenium	784	20.0	mg/kg dry	800		98.0	80-120	4.05	20	
Silver	9.19	1.00	mg/kg dry	10.0		91.9	80-120	4.08	20	
Zinc	171	10.0	mg/kg dry	200		85.3	80-120	2.56	20	

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**Total Metals by ICPMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B231050 - EPA 3050M**

**Blank (B231050-BLK1)**

Prepared: 04/27/23 Analyzed: 05/02/23

Arsenic ND 0.100 mg/kg dry

**LCS (B231050-BS1)**

Prepared: 04/27/23 Analyzed: 05/02/23

Arsenic 4.57 0.100 mg/kg dry 5.00 91.5 80-120

**LCS Dup (B231050-BSD1)**

Prepared: 04/27/23 Analyzed: 05/02/23

Arsenic 4.80 0.100 mg/kg dry 5.00 96.0 80-120 4.84 20

**Hot Water Extractable - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B231099 - General Prep-SOILS**

**Blank (B231099-BLK1)**

Prepared: 05/01/23 Analyzed: 05/02/23

Boron ND 0.300 mg/L

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**Petroleum Hydrocarbons by GC FID - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3042427 - General Prep - Organics**

**Blank (3042427-BLK1)**

Prepared: 04/24/23 Analyzed: 04/25/23

Surrogate: 1-Chlorooctadecane	57.5		mg/kg	50.0		115	49.1-148			
Surrogate: 1-Chlorooctane	48.3		mg/kg	49.6		97.6	48.2-134			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							

**LCS (3042427-BS1)**

Prepared: 04/24/23 Analyzed: 04/25/23

Surrogate: 1-Chlorooctadecane	50.0		mg/kg	50.0		100	49.1-148			
Surrogate: 1-Chlorooctane	43.7		mg/kg	49.6		88.3	48.2-134			
DRO >C10-C28	201	10.0	mg/kg	200		100	72.5-126			
GRO C6-C10	179	10.0	mg/kg	200		89.6	78.5-124			
Total TPH C6-C28	380	10.0	mg/kg	400		94.9	77.6-123			

**LCS Dup (3042427-BSD1)**

Prepared: 04/24/23 Analyzed: 04/25/23

Surrogate: 1-Chlorooctadecane	51.7		mg/kg	50.0		103	49.1-148			
Surrogate: 1-Chlorooctane	46.1		mg/kg	49.6		93.0	48.2-134			
DRO >C10-C28	192	10.0	mg/kg	200		96.1	72.5-126	4.24	21	
GRO C6-C10	173	10.0	mg/kg	200		86.5	78.5-124	3.48	17.7	
Total TPH C6-C28	365	10.0	mg/kg	400		91.3	77.6-123	3.88	18.5	

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**VOLATILES BY GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3042824 - Volatiles**

**Blank (3042824-BLK1)**

Prepared: 04/28/23 Analyzed: 04/29/23

1,2,4-Trimethylbenzene	ND	0.0250	mg/kg							
1,3,5-Trimethylbenzene	ND	0.0250	mg/kg							
<i>Surrogate: 4-Bromofluorobenzene</i>	1.24		mg/kg	1.25		99.4	82.5-117			
Benzene	ND	0.0250	mg/kg							
<i>Surrogate: Dibromofluoromethane</i>	1.23		mg/kg	1.25		98.0	84.6-114			
Ethylbenzene	0.00482	0.0250	mg/kg							J
m+p - Xylene	ND	0.0500	mg/kg							
Naphthalene	ND	0.0250	mg/kg							
o-Xylene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	mg/kg							
<i>Surrogate: Toluene-d8</i>	1.21		mg/kg	1.25		97.0	90.4-109			
Total Xylenes	ND	0.0750	mg/kg							

**LCS (3042824-BS1)**

Prepared: 04/28/23 Analyzed: 04/29/23

1,2,4-Trimethylbenzene	0.498	0.0250	mg/kg	0.500		99.6	62.4-140			
1,3,5-Trimethylbenzene	0.501	0.0250	mg/kg	0.500		100	64.4-138			
<i>Surrogate: 4-Bromofluorobenzene</i>	1.24		mg/kg	1.25		99.2	82.5-117			
Benzene	0.456	0.0250	mg/kg	0.500		91.3	73-130			
<i>Surrogate: Dibromofluoromethane</i>	1.22		mg/kg	1.25		97.7	84.6-114			
Ethylbenzene	0.486	0.0250	mg/kg	0.500		97.2	75.4-127			
m+p - Xylene	1.01	0.0500	mg/kg	1.00		101	71.8-133			
Naphthalene	0.453	0.0250	mg/kg	0.500		90.7	28.7-158			
o-Xylene	0.499	0.0250	mg/kg	0.500		99.8	78.6-125			
Toluene	0.500	0.0250	mg/kg	0.500		99.9	79-122			
<i>Surrogate: Toluene-d8</i>	1.23		mg/kg	1.25		98.1	90.4-109			
Total Xylenes	1.51	0.0750	mg/kg	1.50		100	74.6-130			

**LCS Dup (3042824-BSD1)**

Prepared: 04/28/23 Analyzed: 04/29/23

1,2,4-Trimethylbenzene	0.486	0.0250	mg/kg	0.500		97.3	62.4-140	2.33	38.2	
1,3,5-Trimethylbenzene	0.491	0.0250	mg/kg	0.500		98.2	64.4-138	2.00	39.1	
<i>Surrogate: 4-Bromofluorobenzene</i>	1.27		mg/kg	1.25		102	82.5-117			
Benzene	0.473	0.0250	mg/kg	0.500		94.6	73-130	3.62	17.1	
<i>Surrogate: Dibromofluoromethane</i>	1.28		mg/kg	1.25		102	84.6-114			
Ethylbenzene	0.473	0.0250	mg/kg	0.500		94.7	75.4-127	2.65	16.5	
m+p - Xylene	0.984	0.0500	mg/kg	1.00		98.4	71.8-133	2.23	19.1	
Naphthalene	0.412	0.0250	mg/kg	0.500		82.3	28.7-158	9.68	64	
o-Xylene	0.481	0.0250	mg/kg	0.500		96.2	78.6-125	3.75	13.2	
Toluene	0.471	0.0250	mg/kg	0.500		94.1	79-122	5.93	18.3	

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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Kinder Morgan 17801 Hwy 491 Cortez CO, 81321	Project: COGCC Table 915-1 Project Name / Number: YB Cluster T501 Spill 2015 Project Manager: Michael Hannigan	Reported: 05/03/23 16:11
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**VOLATILES BY GC/MS - Quality Control  
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3042824 - Volatiles (Continued)**

**LCS Dup (3042824-BSD1) (Continued)**

Prepared: 04/28/23 Analyzed: 04/29/23

Surrogate: Toluene-d8	1.24		mg/kg	1.25		98.9	90.4-109			
Total Xylenes	1.46	0.0750	mg/kg	1.50		97.6	74.6-130	2.73	16.5	

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Kinder Morgan  
17801 Hwy 491  
Cortez CO, 81321

Project: COGCC Table 915-1  
Project Name / Number: YB Cluster T501 Spill 2015  
Project Manager: Michael Hannigan

Reported:  
05/03/23 16:11

**Polynuclear Aromatic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3042120 - SW846-3510**

**Blank (3042120-BLK1)**

Prepared: 04/21/23 Analyzed: 04/27/23

1-Methylnaphthalene	ND	0.040	mg/kg							
<i>Surrogate: 2-Fluorobiphenyl</i>	2.20		mg/kg	2.00		110	39.8-134			
2-Methylnaphthalene	ND	0.040	mg/kg							
Acenaphthene	ND	0.040	mg/kg							
Anthracene	ND	0.040	mg/kg							
Benzo[a]anthracene	ND	0.040	mg/kg							
Benzo[a]pyrene	ND	0.040	mg/kg							
Benzo[b]flouranthene	ND	0.040	mg/kg							
Benzo[k]flouranthene	ND	0.040	mg/kg							
Chrysene	ND	0.040	mg/kg							
Dibenz[a,h]anthracene	ND	0.040	mg/kg							
Fluoranthene	ND	0.040	mg/kg							
Fluorene	ND	0.040	mg/kg							
Indeno[1,2,3-cd]pyrene	ND	0.040	mg/kg							
Naphthalene	ND	0.040	mg/kg							
<i>Surrogate: Nitrobenzene-d5</i>	2.17		mg/kg	2.00		108	39.6-121			
Pyrene	ND	0.040	mg/kg							
<i>Surrogate: Terphenyl-d14</i>	1.55		mg/kg	2.00		77.6	33.3-136			

**LCS (3042120-BS1)**

Prepared: 04/21/23 Analyzed: 04/27/23

1-Methylnaphthalene	0.383	0.040	mg/kg	0.400		95.7	57.6-108			
<i>Surrogate: 2-Fluorobiphenyl</i>	3.06		mg/kg	2.00		153	39.8-134			S-04
2-Methylnaphthalene	0.400	0.040	mg/kg	0.400		99.9	59-106			
Acenaphthene	0.366	0.040	mg/kg	0.400		91.4	60.9-105			
Acenaphthylene	0.387	0.040	mg/kg	0.400		96.7	57.4-107			
Anthracene	0.358	0.040	mg/kg	0.400		89.6	60.8-105			
Benzo[a]anthracene	0.376	0.040	mg/kg	0.400		93.9	56.1-121			
Benzo[a]pyrene	0.409	0.040	mg/kg	0.400		102	56.7-115			
Benzo[b]flouranthene	0.392	0.040	mg/kg	0.400		97.9	45.4-128			
Benzo[g,h,i]perylene	0.410	0.040	mg/kg	0.400		103	56.5-107			
Benzo[k]flouranthene	0.397	0.040	mg/kg	0.400		99.4	49.6-119			
Carbazole	0.364	0.040	mg/kg	0.400		91.0	59.7-107			
Chrysene	0.374	0.040	mg/kg	0.400		93.5	12.2-190			
Dibenz[a,h]anthracene	0.395	0.040	mg/kg	0.400		98.7	59.1-111			
Fluoranthene	0.375	0.040	mg/kg	0.400		93.8	60.6-111			
Fluorene	0.374	0.040	mg/kg	0.400		93.4	59.3-108			
Indeno[1,2,3-cd]pyrene	0.419	0.040	mg/kg	0.400		105	53.4-116			
Naphthalene	0.390	0.040	mg/kg	0.400		97.6	56.5-106			

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Kinder Morgan  
17801 Hwy 491  
Cortez CO, 81321

Project: COGCC Table 915-1  
Project Name / Number: YB Cluster T501 Spill 2015  
Project Manager: Michael Hannigan

Reported:  
05/03/23 16:11

**Polynuclear Aromatic Compounds by GC/MS - Quality Control  
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3042120 - SW846-3510 (Continued)**

**LCS (3042120-BS1) (Continued)**

Prepared: 04/21/23 Analyzed: 04/27/23

Surrogate: Nitrobenzene-d5	3.14		mg/kg	2.00		157	39.6-121			S-04
Phenanthrene	0.363	0.040	mg/kg	0.400		90.7	59.9-107			
Pyrene	0.379	0.040	mg/kg	0.400		94.7	51.5-122			
Surrogate: Terphenyl-d14	2.38		mg/kg	2.00		119	33.3-136			

**LCS Dup (3042120-BSD1)**

Prepared: 04/21/23 Analyzed: 04/27/23

1-Methylnaphthalene	0.384	0.040	mg/kg	0.400		96.0	57.6-108	0.235	6.22	
Surrogate: 2-Fluorobiphenyl	3.06		mg/kg	2.00		153	39.8-134			S-04
2-Methylnaphthalene	0.381	0.040	mg/kg	0.400		95.3	59-106	4.78	6.23	
Acenaphthene	0.352	0.040	mg/kg	0.400		88.1	60.9-105	3.71	8.18	
Acenaphthylene	0.381	0.040	mg/kg	0.400		95.2	57.4-107	1.59	5	
Anthracene	0.361	0.040	mg/kg	0.400		90.1	60.8-105	0.612	3.68	
Benzo[a]anthracene	0.374	0.040	mg/kg	0.400		93.4	56.1-121	0.582	9.01	
Benzo[a]pyrene	0.403	0.040	mg/kg	0.400		101	56.7-115	1.64	4.92	
Benzo[b]fluoranthene	0.376	0.040	mg/kg	0.400		94.0	45.4-128	4.09	7.63	
Benzo[g,h,i]perylene	0.395	0.040	mg/kg	0.400		98.8	56.5-107	3.66	12.5	
Benzo[k]fluoranthene	0.403	0.040	mg/kg	0.400		101	49.6-119	1.43	10.6	
Carbazole	0.371	0.040	mg/kg	0.400		92.8	59.7-107	1.93	8.65	
Chrysene	0.374	0.040	mg/kg	0.400		93.6	12.2-190	0.120	21.8	
Dibenz[a,h]anthracene	0.398	0.040	mg/kg	0.400		99.4	59.1-111	0.717	11.6	
Fluoranthene	0.384	0.040	mg/kg	0.400		95.9	60.6-111	2.28	7.54	
Fluorene	0.384	0.040	mg/kg	0.400		96.1	59.3-108	2.86	5.49	
Indeno[1,2,3-cd]pyrene	0.409	0.040	mg/kg	0.400		102	53.4-116	2.50	22.3	
Naphthalene	0.381	0.040	mg/kg	0.400		95.2	56.5-106	2.52	4.56	
Surrogate: Nitrobenzene-d5	3.05		mg/kg	2.00		152	39.6-121			S-04
Phenanthrene	0.365	0.040	mg/kg	0.400		91.1	59.9-107	0.465	5.21	
Pyrene	0.377	0.040	mg/kg	0.400		94.3	51.5-122	0.389	10.6	
Surrogate: Terphenyl-d14	2.42		mg/kg	2.00		121	33.3-136			

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Kinder Morgan  
17801 Hwy 491  
Cortez CO, 81321

Project: COGCC Table 915-1  
Project Name / Number: YB Cluster T501 Spill 2015  
Project Manager: Michael Hannigan

Reported:  
05/03/23 16:11

**Notes and Definitions**

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- 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

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SAMPLE CONDITION RECEIPT FORM

Client Name: Kinder Morgan

Work Order # 2304-237

-238  
-239  
-240  
-241

Courier:  Fed Ex  UPS  USPS  Client  Kangaroo

Custody Seals on Box/Cooler Present:  Yes  No      Seals Intact:  Yes  No

Thermometer Used: 2      Samples on ice, cooling process has begun:  Yes  No

Type of Ice:  Wet  Blue  None

Cooler Temp: Observed Temp: 4.8 °C      Correction Factor: 0 °C      Final Temp: 4.8 °C

\* Temp should be above freezing to 6°C

Date/Initials of person examining contents: VJW 4/19/23  
Labeled by Initials: \_\_\_\_\_  
(if different than above)

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.
Sampler Name and Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	4.
Samples arrived within hold time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Dissolved Testing Needed:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	11.
Field Filtered: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Sample Labels match COC: -Includes Date/Time/ID	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12.
Matrix:	WT (S) OT	
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

Client Notification/Resolution:

Person Contacted: \_\_\_\_\_

Date/Time: \_\_\_\_\_

Comments/Resolution: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_