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01 September 2015

Kerry Smith  
Monument Global Resources  
12160 N. Abrams Rd. Suite 160  
Dallas, TX 75243  
RE: Table 910

Enclosed are the results of analyses for samples received by the laboratory on 08/13/15 14:35.  
If you need any further assistance, please feel free to contact me.

Sincerely,

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

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



Monument Global Resources  
12160 N. Abrams Rd. Suite 160  
Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S3#1 Pipe 3'	1508195-01	Solid	08/13/15 10:19	08/13/15 14:35
S3#2 Source 1'	1508195-02	Solid	08/13/15 10:21	08/13/15 14:35
S3#3 1'	1508195-03	Solid	08/13/15 10:26	08/13/15 14:35
S3#4 6"	1508195-04	Solid	08/13/15 10:30	08/13/15 14:35
S3#5 1'	1508195-05	Solid	08/13/15 10:33	08/13/15 14:35
S3#6 1'	1508195-06	Solid	08/13/15 10:35	08/13/15 14:35
AR 1	1508195-07	Solid	08/13/15 10:38	08/13/15 14:35
AR 2	1508195-08	Solid	08/13/15 10:40	08/13/15 14:35

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Debbie Zufelt, Reports Manager

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Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

**S3#1 Pipe 3'****1508195-01 (Solid)**

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

% Dry Solids	90.0			%	1	08/31/15	EPA160.3/2540C	H2	MAJ
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**Saturated Paste Extraction**

Calcium	362	10.0	0.039	mg/L	10	08/31/15	EPA200.7		JGS
Conductivity	10500			umhos/cm	1	08/26/15	ASA#9 10-3.3		LLG
Magnesium	27.7	10.0	0.190	mg/L	10	08/31/15	EPA200.7		JGS
pH	8.06			pH Units	1	08/26/15	ASA#9 12-2.6		LLG
SAR	27.7			[blank]	1	08/31/15	Calculation		JGS
Sodium	2030	20.0	0.041	mg/L	10	08/31/15	EPA200.7		JGS

**Total Metals by ICP**

Barium	189	1.00	0.191	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Cadmium	<5.00	5.00	0.117	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Chromium	<5.00	5.00	0.636	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Copper	3.42	2.00	0.650	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Lead	<10.0	10.0	1.84	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Nickel	<5.00	5.00	1.55	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Selenium	<20.0	20.0	3.61	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Silver	<5.00	5.00	0.231	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Zinc	22.4	5.00	0.792	mg/kg dry	100	08/24/15	EPA6010 B		JGS

**Total Metals by ICPMS**

Arsenic	2.23	0.500	0.260	mg/kg dry	1000	08/27/15	6020 A		JGS
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**Total Mercury by CVAA**

Mercury	<0.111	0.111	0.0120	mg/kg dry	500	08/17/15	EPA7471		JGS
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Debbie Zufelt, Reports Manager

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Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

### S3#1 Pipe 3'

#### 1508195-01 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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#### Hot Water Extractable

Boron	<0.600	0.600	0.065	mg/L	2	08/24/15	EPA200.7		JGS
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Subcontracted -- Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	0.010	mg/kg	50	08/19/15	8021B		MS
Toluene*	<0.050	0.050	0.015	mg/kg	50	08/19/15	8021B		MS
Ethylbenzene*	<0.050	0.050	0.008	mg/kg	50	08/19/15	8021B		MS
Total Xylenes*	<0.150	0.150	0.018	mg/kg	50	08/19/15	8021B		MS
Total BTEX	<0.300	0.300		mg/kg	50	08/19/15	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID)	101 %	85.6-137			08/19/15	8021B		MS
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#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0	10.0	1.30	mg/kg	1	08/17/15	8015B		MS
DRO >C10-C28	<10.0	10.0	2.91	mg/kg	1	08/17/15	8015B		MS
EXT DRO >C28-C35	<10.0	10.0	2.91	mg/kg	1	08/17/15	8015B		MS

Surrogate: 1-Chlorooctane	78.6 %	47.2-157			08/17/15	8015B		MS
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Surrogate: 1-Chlorooctadecane	86.1 %	52.1-176			08/17/15	8015B		MS
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Reported:  
09/01/15 10:54

**S3#1 Pipe 3'****1508195-01 (Solid)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- **Cardinal Laboratories**

**Semivolatile Organic Compounds by GCMS**

Naphthalene	<0.002	0.040	0.002	mg/kg	40	08/18/15	8270C		MS
2-Methylnaphthalene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
1-Methylnaphthalene	<0.001	0.020	0.001	mg/kg	40	08/18/15	8270C		MS
Acenaphthylene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Acenaphthene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Fluorene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Phenanthrene	<0.006	0.040	0.006	mg/kg	40	08/18/15	8270C		MS
Anthracene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Carbazole	<0.004	0.040	0.004	mg/kg	40	08/18/15	8270C		MS
Fluoranthene	<0.007	0.040	0.007	mg/kg	40	08/18/15	8270C		MS
Pyrene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[a]anthracene	<0.016	0.040	0.016	mg/kg	40	08/18/15	8270C		MS
Chrysene	<b>0.010</b>	0.040	0.003	mg/kg	40	08/18/15	8270C	J	MS
Benzo[b]fluoranthene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[k]fluoranthene	<0.004	0.040	0.004	mg/kg	40	08/18/15	8270C		MS
Benzo[a]pyrene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Indeno[1,2,3-cd]pyrene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Dibenz[a,h]anthracene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[g,h,i]perylene	<0.030	0.040	0.030	mg/kg	40	08/18/15	8270C		MS

Surrogate: Nitrobenzene-d5	65.9 %	20.4-109	08/18/15	8270C	MS
Surrogate: 2-Fluorobiphenyl	70.5 %	23.4-133	08/18/15	8270C	MS
Surrogate: Terphenyl-d14	81.6 %	38.4-163	08/18/15	8270C	MS

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Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

**S3#2 Source 1'****1508195-02 (Solid)**

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

% Dry Solids	97.1			%	1	08/31/15	EPA160.3/2540C	H2	MAJ
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**Saturated Paste Extraction**

Calcium	283	10.0	0.039	mg/L	10	08/31/15	EPA200.7		JGS
Conductivity	9640			umhos/cm	1	08/26/15	ASA#9 10-3.3		LLG
Magnesium	27.3	10.0	0.190	mg/L	10	08/31/15	EPA200.7		JGS
pH	8.14			pH Units	1	08/26/15	ASA#9 12-2.6		LLG
SAR	29.7			[blank]	1	08/31/15	Calculation		JGS
Sodium	1950	20.0	0.041	mg/L	10	08/31/15	EPA200.7		JGS

**Total Metals by ICP**

Barium	156	1.00	0.191	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Cadmium	<5.00	5.00	0.117	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Chromium	<5.00	5.00	0.636	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Copper	2.49	2.00	0.650	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Lead	<10.0	10.0	1.84	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Nickel	<5.00	5.00	1.55	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Selenium	<20.0	20.0	3.61	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Silver	<5.00	5.00	0.231	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Zinc	16.6	5.00	0.792	mg/kg dry	100	08/24/15	EPA6010 B		JGS

**Total Metals by ICPMS**

Arsenic	1.84	0.500	0.260	mg/kg dry	1000	08/27/15	6020 A		JGS
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**Total Mercury by CVAA**

Mercury	<0.101	0.101	0.0109	mg/kg dry	490	08/17/15	EPA7471		JGS
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Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

**S3#2 Source 1'****1508195-02 (Solid)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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**Hot Water Extractable**

<b>Boron</b>	<0.600	0.600	0.065	mg/L	2	08/24/15	EPA200.7		JGS
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Subcontracted -- **Cardinal Laboratories**

**Volatile Organic Compounds by EPA Method 8021**

<b>Benzene*</b>	<0.050	0.050	0.010	mg/kg	50	08/19/15	8021B		MS
<b>Toluene*</b>	<0.050	0.050	0.015	mg/kg	50	08/19/15	8021B		MS
<b>Ethylbenzene*</b>	<0.050	0.050	0.008	mg/kg	50	08/19/15	8021B		MS
<b>Total Xylenes*</b>	<0.150	0.150	0.018	mg/kg	50	08/19/15	8021B		MS
<b>Total BTEX</b>	<0.300	0.300		mg/kg	50	08/19/15	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID)	101 %	85.6-137				08/19/15	8021B		MS
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**Petroleum Hydrocarbons by GC FID**

<b>GRO C6-C10</b>	<10.0	10.0	1.30	mg/kg	1	08/17/15	8015B		MS
<b>DRO &gt;C10-C28</b>	<10.0	10.0	2.91	mg/kg	1	08/17/15	8015B		MS
<b>EXT DRO &gt;C28-C35</b>	<10.0	10.0	2.91	mg/kg	1	08/17/15	8015B		MS

Surrogate: 1-Chlorooctane	84.0 %	47.2-157				08/17/15	8015B		MS
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Surrogate: 1-Chlorooctadecane	91.8 %	52.1-176				08/17/15	8015B		MS
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Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

**S3#2 Source 1'****1508195-02 (Solid)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- **Cardinal Laboratories**

**Semivolatile Organic Compounds by GCMS**

Naphthalene	<0.002	0.040	0.002	mg/kg	40	08/18/15	8270C		MS
2-Methylnaphthalene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
1-Methylnaphthalene	<0.001	0.020	0.001	mg/kg	40	08/18/15	8270C		MS
Acenaphthylene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Acenaphthene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Fluorene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Phenanthrene	<0.006	0.040	0.006	mg/kg	40	08/18/15	8270C		MS
Anthracene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Carbazole	<0.004	0.040	0.004	mg/kg	40	08/18/15	8270C		MS
Fluoranthene	<0.007	0.040	0.007	mg/kg	40	08/18/15	8270C		MS
Pyrene	<b>0.003</b>	0.040	0.003	mg/kg	40	08/18/15	8270C	J	MS
Benzo[a]anthracene	<0.016	0.040	0.016	mg/kg	40	08/18/15	8270C		MS
Chrysene	<b>0.015</b>	0.040	0.003	mg/kg	40	08/18/15	8270C	J	MS
Benzo[b]fluoranthene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[k]fluoranthene	<0.004	0.040	0.004	mg/kg	40	08/18/15	8270C		MS
Benzo[a]pyrene	<b>0.004</b>	0.040	0.003	mg/kg	40	08/18/15	8270C	J	MS
Indeno[1,2,3-cd]pyrene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Dibenz[a,h]anthracene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[g,h,i]perylene	<0.030	0.040	0.030	mg/kg	40	08/18/15	8270C		MS

Surrogate: Nitrobenzene-d5	79.4 %	20.4-109	08/18/15	8270C	MS
Surrogate: 2-Fluorobiphenyl	85.2 %	23.4-133	08/18/15	8270C	MS
Surrogate: Terphenyl-d14	100 %	38.4-163	08/18/15	8270C	MS

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Project: Table 910  
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Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

**S3#3 1'****1508195-03 (Solid)**

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

% Dry Solids	96.1			%	1	08/31/15	EPA160.3/2540C	H2	MAJ
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**Saturated Paste Extraction**

Calcium	19.6	5.00	0.020	mg/L	5	08/31/15	EPA200.7		JGS
Conductivity	531			umhos/cm	1	08/26/15	ASA#9 10-3.3		LLG
Magnesium	<5.00	5.00	0.095	mg/L	5	08/31/15	EPA200.7		JGS
pH	8.38			pH Units	1	08/26/15	ASA#9 12-2.6		LLG
SAR	6.00			[blank]	1	08/31/15	Calculation		JGS
Sodium	106	10.0	0.020	mg/L	5	08/31/15	EPA200.7		JGS

**Total Metals by ICP**

Barium	120	1.00	0.191	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Cadmium	<5.00	5.00	0.117	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Chromium	<5.00	5.00	0.636	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Copper	<2.00	2.00	0.650	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Lead	<10.0	10.0	1.84	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Nickel	<5.00	5.00	1.55	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Selenium	<20.0	20.0	3.61	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Silver	<5.00	5.00	0.231	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Zinc	16.1	5.00	0.792	mg/kg dry	100	08/24/15	EPA6010 B		JGS

**Total Metals by ICPMS**

Arsenic	2.16	0.500	0.260	mg/kg dry	1000	08/27/15	6020 A		JGS
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**Total Mercury by CVAA**

Mercury	<0.102	0.102	0.0110	mg/kg dry	490	08/17/15	EPA7471		JGS
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Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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Monument Global Resources  
12160 N. Abrams Rd. Suite 160  
Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

**S3#3 1'****1508195-03 (Solid)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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**Hot Water Extractable**

Boron	<0.600	0.600	0.065	mg/L	2	08/24/15	EPA200.7		JGS
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Subcontracted -- Cardinal Laboratories

**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	0.010	mg/kg	50	08/19/15	8021B		MS
Toluene*	<0.050	0.050	0.015	mg/kg	50	08/19/15	8021B		MS
Ethylbenzene*	<0.050	0.050	0.008	mg/kg	50	08/19/15	8021B		MS
Total Xylenes*	<0.150	0.150	0.018	mg/kg	50	08/19/15	8021B		MS
Total BTEX	<0.300	0.300		mg/kg	50	08/19/15	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID)	102 %	85.6-137				08/19/15	8021B		MS
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	<10.0	10.0	1.30	mg/kg	1	08/18/15	8015B		MS
DRO >C10-C28	<10.0	10.0	2.91	mg/kg	1	08/18/15	8015B		MS
EXT DRO >C28-C35	<10.0	10.0	2.91	mg/kg	1	08/18/15	8015B		MS

Surrogate: 1-Chlorooctane	83.7 %	47.2-157				08/18/15	8015B		MS
Surrogate: 1-Chlorooctadecane	90.7 %	52.1-176				08/18/15	8015B		MS

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Monument Global Resources  
12160 N. Abrams Rd. Suite 160  
Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

## S3#3 1'

## 1508195-03 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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## Subcontracted -- Cardinal Laboratories

## Semivolatile Organic Compounds by GCMS

Naphthalene	<0.002	0.040	0.002	mg/kg	40	08/18/15	8270C		MS
2-Methylnaphthalene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
1-Methylnaphthalene	<0.001	0.020	0.001	mg/kg	40	08/18/15	8270C		MS
Acenaphthylene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Acenaphthene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Fluorene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Phenanthrene	<0.006	0.040	0.006	mg/kg	40	08/18/15	8270C		MS
Anthracene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Carbazole	<0.004	0.040	0.004	mg/kg	40	08/18/15	8270C		MS
Fluoranthene	<0.007	0.040	0.007	mg/kg	40	08/18/15	8270C		MS
Pyrene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[a]anthracene	<0.016	0.040	0.016	mg/kg	40	08/18/15	8270C		MS
Chrysene	0.007	0.040	0.003	mg/kg	40	08/18/15	8270C	J	MS
Benzo[b]fluoranthene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[k]fluoranthene	<0.004	0.040	0.004	mg/kg	40	08/18/15	8270C		MS
Benzo[a]pyrene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Indeno[1,2,3-cd]pyrene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Dibenz[a,h]anthracene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[g,h,i]perylene	<0.030	0.040	0.030	mg/kg	40	08/18/15	8270C		MS

Surrogate: Nitrobenzene-d5	83.2 %	20.4-109	08/18/15	8270C	MS
Surrogate: 2-Fluorobiphenyl	89.8 %	23.4-133	08/18/15	8270C	MS
Surrogate: Terphenyl-d14	108 %	38.4-163	08/18/15	8270C	MS

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Debbie Zufelt, Reports Manager

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Monument Global Resources  
12160 N. Abrams Rd. Suite 160  
Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

**S3#4 6"****1508195-04 (Solid)**

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

% Dry Solids	97.1			%	1	08/31/15	EPA160.3/2540C	H2	MAJ
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**Saturated Paste Extraction**

Calcium	13.8	10.0	0.039	mg/L	10	08/31/15	EPA200.7		JGS
Conductivity	1500			umhos/cm	1	08/26/15	ASA#9 10-3.3		LLG
Magnesium	<10.0	10.0	0.190	mg/L	10	08/31/15	EPA200.7		JGS
pH	8.76			pH Units	1	08/26/15	ASA#9 12-2.6		LLG
SAR	19.8			[blank]	1	08/31/15	Calculation		JGS
Sodium	307	20.0	0.041	mg/L	10	08/31/15	EPA200.7		JGS

**Total Metals by ICP**

Barium	137	1.00	0.191	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Cadmium	<5.00	5.00	0.117	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Chromium	<5.00	5.00	0.636	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Copper	2.39	2.00	0.650	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Lead	<10.0	10.0	1.84	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Nickel	<5.00	5.00	1.55	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Selenium	<20.0	20.0	3.61	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Silver	<5.00	5.00	0.231	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Zinc	16.1	5.00	0.792	mg/kg dry	100	08/24/15	EPA6010 B		JGS

**Total Metals by ICPMS**

Arsenic	2.00	0.500	0.260	mg/kg dry	1000	08/27/15	6020 A		JGS
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**Total Mercury by CVAA**

Mercury	<0.0989	0.0989	0.0107	mg/kg dry	480	08/17/15	EPA7471		JGS
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Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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Monument Global Resources  
12160 N. Abrams Rd. Suite 160  
Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

S3#4 6"

1508195-04 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Hot Water Extractable

Boron	<0.600	0.600	0.065	mg/L	2	08/24/15	EPA200.7		JGS
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Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	0.010	mg/kg	50	08/19/15	8021B		MS
Toluene*	<0.050	0.050	0.015	mg/kg	50	08/19/15	8021B		MS
Ethylbenzene*	<0.050	0.050	0.008	mg/kg	50	08/19/15	8021B		MS
Total Xylenes*	<0.150	0.150	0.018	mg/kg	50	08/19/15	8021B		MS
Total BTEX	<0.300	0.300		mg/kg	50	08/19/15	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID)	102 %	85.6-137				08/19/15	8021B		MS
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Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0	10.0	1.30	mg/kg	1	08/18/15	8015B		MS
DRO >C10-C28	<10.0	10.0	2.91	mg/kg	1	08/18/15	8015B		MS
EXT DRO >C28-C35	<10.0	10.0	2.91	mg/kg	1	08/18/15	8015B		MS

Surrogate: 1-Chlorooctane	79.7 %	47.2-157				08/18/15	8015B		MS
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Surrogate: 1-Chlorooctadecane	88.3 %	52.1-176				08/18/15	8015B		MS
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Green Analytical Laboratories

Debbie Zufelt

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Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

S3#4 6"

1508195-04 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

#### Semivolatile Organic Compounds by GCMS

Naphthalene	<0.002	0.040	0.002	mg/kg	40	08/18/15	8270C		MS
2-Methylnaphthalene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
1-Methylnaphthalene	<0.001	0.020	0.001	mg/kg	40	08/18/15	8270C		MS
Acenaphthylene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Acenaphthene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Fluorene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Phenanthrene	<0.006	0.040	0.006	mg/kg	40	08/18/15	8270C		MS
Anthracene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Carbazole	<0.004	0.040	0.004	mg/kg	40	08/18/15	8270C		MS
Fluoranthene	<0.007	0.040	0.007	mg/kg	40	08/18/15	8270C		MS
Pyrene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[a]anthracene	<0.016	0.040	0.016	mg/kg	40	08/18/15	8270C		MS
Chrysene	0.014	0.040	0.003	mg/kg	40	08/18/15	8270C	J	MS
Benzo[b]fluoranthene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[k]fluoranthene	<0.004	0.040	0.004	mg/kg	40	08/18/15	8270C		MS
Benzo[a]pyrene	0.006	0.040	0.003	mg/kg	40	08/18/15	8270C	J	MS
Indeno[1,2,3-cd]pyrene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Dibenz[a,h]anthracene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[g,h,i]perylene	<0.030	0.040	0.030	mg/kg	40	08/18/15	8270C		MS

Surrogate: Nitrobenzene-d5	83.0 %	20.4-109	08/18/15	8270C	MS
Surrogate: 2-Fluorobiphenyl	89.7 %	23.4-133	08/18/15	8270C	MS
Surrogate: Terphenyl-d14	102 %	38.4-163	08/18/15	8270C	MS

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12160 N. Abrams Rd. Suite 160  
Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

**S3#5 1'****1508195-05 (Solid)**

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

% Dry Solids	94.8			%	1	08/31/15	EPA160.3/2540C	H2	MAJ
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**Saturated Paste Extraction**

Calcium	127	10.0	0.039	mg/L	10	08/31/15	EPA200.7		JGS
Conductivity	2220			umhos/cm	1	08/26/15	ASA#9 10-3.3		LLG
Magnesium	14.0	10.0	0.190	mg/L	10	08/31/15	EPA200.7		JGS
pH	7.87			pH Units	1	08/26/15	ASA#9 12-2.6		LLG
SAR	6.45			[blank]	1	08/31/15	Calculation		JGS
Sodium	287	20.0	0.041	mg/L	10	08/31/15	EPA200.7		JGS

**Total Metals by ICP**

Barium	141	1.00	0.191	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Cadmium	<5.00	5.00	0.117	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Chromium	<5.00	5.00	0.636	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Copper	2.27	2.00	0.650	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Lead	<10.0	10.0	1.84	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Nickel	<5.00	5.00	1.55	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Selenium	<20.0	20.0	3.61	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Silver	<5.00	5.00	0.231	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Zinc	15.4	5.00	0.792	mg/kg dry	100	08/24/15	EPA6010 B		JGS

**Total Metals by ICPMS**

Arsenic	1.49	0.500	0.260	mg/kg dry	1000	08/27/15	6020 A		JGS
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**Total Mercury by CVAA**

Mercury	<0.102	0.102	0.0111	mg/kg dry	485	08/17/15	EPA7471		JGS
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Monument Global Resources  
12160 N. Abrams Rd. Suite 160  
Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

**S3#5 1'****1508195-05 (Solid)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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**Hot Water Extractable**

Boron	<0.600	0.600	0.065	mg/L	2	08/24/15	EPA200.7		JGS
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Subcontracted -- Cardinal Laboratories

**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	0.010	mg/kg	50	08/19/15	8021B		MS
Toluene*	<0.050	0.050	0.015	mg/kg	50	08/19/15	8021B		MS
Ethylbenzene*	<0.050	0.050	0.008	mg/kg	50	08/19/15	8021B		MS
Total Xylenes*	<0.150	0.150	0.018	mg/kg	50	08/19/15	8021B		MS
Total BTEX	<0.300	0.300		mg/kg	50	08/19/15	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID)	102 %	85.6-137			08/19/15	8021B		MS
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	<10.0	10.0	1.30	mg/kg	1	08/18/15	8015B		MS
DRO >C10-C28	<10.0	10.0	2.91	mg/kg	1	08/18/15	8015B		MS
EXT DRO >C28-C35	<10.0	10.0	2.91	mg/kg	1	08/18/15	8015B		MS

Surrogate: 1-Chlorooctane	81.2 %	47.2-157			08/18/15	8015B		MS
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Surrogate: 1-Chlorooctadecane	89.7 %	52.1-176			08/18/15	8015B		MS
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Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

**S3#5 1'****1508195-05 (Solid)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories**Semivolatile Organic Compounds by GCMS**

Naphthalene	<0.002	0.040	0.002	mg/kg	40	08/18/15	8270C		MS
2-Methylnaphthalene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
1-Methylnaphthalene	<0.001	0.020	0.001	mg/kg	40	08/18/15	8270C		MS
Acenaphthylene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Acenaphthene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Fluorene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Phenanthrene	<0.006	0.040	0.006	mg/kg	40	08/18/15	8270C		MS
Anthracene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Carbazole	<0.004	0.040	0.004	mg/kg	40	08/18/15	8270C		MS
Fluoranthene	<0.007	0.040	0.007	mg/kg	40	08/18/15	8270C		MS
Pyrene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[a]anthracene	<0.016	0.040	0.016	mg/kg	40	08/18/15	8270C		MS
Chrysene	<b>0.006</b>	0.040	0.003	mg/kg	40	08/18/15	8270C	J	MS
Benzo[b]fluoranthene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[k]fluoranthene	<0.004	0.040	0.004	mg/kg	40	08/18/15	8270C		MS
Benzo[a]pyrene	<b>0.003</b>	0.040	0.003	mg/kg	40	08/18/15	8270C	J	MS
Indeno[1,2,3-cd]pyrene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Dibenz[a,h]anthracene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[g,h,i]perylene	<0.030	0.040	0.030	mg/kg	40	08/18/15	8270C		MS

Surrogate: Nitrobenzene-d5	70.1 %	20.4-109	08/18/15	8270C	MS
Surrogate: 2-Fluorobiphenyl	79.7 %	23.4-133	08/18/15	8270C	MS
Surrogate: Terphenyl-d14	94.2 %	38.4-163	08/18/15	8270C	MS

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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Monument Global Resources  
12160 N. Abrams Rd. Suite 160  
Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

**S3#6 1'****1508195-06 (Solid)**

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

% Dry Solids	91.7			%	1	08/31/15	EPA160.3/2540C	H2	MAJ
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**Saturated Paste Extraction**

Calcium	22.5	5.00	0.020	mg/L	5	08/31/15	EPA200.7		JGS
Conductivity	807			umhos/cm	1	08/26/15	ASA#9 10-3.3		LLG
Magnesium	<5.00	5.00	0.095	mg/L	5	08/31/15	EPA200.7		JGS
pH	8.27			pH Units	1	08/26/15	ASA#9 12-2.6		LLG
SAR	9.11			[blank]	1	08/31/15	Calculation		JGS
Sodium	175	10.0	0.020	mg/L	5	08/31/15	EPA200.7		JGS

**Total Metals by ICP**

Barium	156	1.00	0.191	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Cadmium	<5.00	5.00	0.117	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Chromium	<5.00	5.00	0.636	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Copper	2.83	2.00	0.650	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Lead	<10.0	10.0	1.84	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Nickel	<5.00	5.00	1.55	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Selenium	<20.0	20.0	3.61	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Silver	<5.00	5.00	0.231	mg/kg dry	100	08/24/15	EPA6010 B		JGS
Zinc	17.2	5.00	0.792	mg/kg dry	100	08/24/15	EPA6010 B		JGS

**Total Metals by ICPMS**

Arsenic	1.30	0.500	0.260	mg/kg dry	1000	08/27/15	6020 A		JGS
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**Total Mercury by CVAA**

Mercury	<0.107	0.107	0.0115	mg/kg dry	490	08/17/15	EPA7471		JGS
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12160 N. Abrams Rd. Suite 160  
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Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

**S3#6 1'****1508195-06 (Solid)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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**Hot Water Extractable**

<b>Boron</b>	<0.600	0.600	0.065	mg/L	2	08/24/15	EPA200.7		JGS
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Subcontracted -- **Cardinal Laboratories**

**Volatile Organic Compounds by EPA Method 8021**

<b>Benzene*</b>	<0.050	0.050	0.010	mg/kg	50	08/19/15	8021B		MS
<b>Toluene*</b>	<0.050	0.050	0.015	mg/kg	50	08/19/15	8021B		MS
<b>Ethylbenzene*</b>	<0.050	0.050	0.008	mg/kg	50	08/19/15	8021B		MS
<b>Total Xylenes*</b>	<0.150	0.150	0.018	mg/kg	50	08/19/15	8021B		MS
<b>Total BTEX</b>	<0.300	0.300		mg/kg	50	08/19/15	8021B		MS

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			103 %	85.6-137		08/19/15	8021B		MS
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**Petroleum Hydrocarbons by GC FID**

<b>GRO C6-C10</b>	<10.0	10.0	1.30	mg/kg	1	08/18/15	8015B		MS
<b>DRO &gt;C10-C28</b>	<10.0	10.0	2.91	mg/kg	1	08/18/15	8015B		MS
<b>EXT DRO &gt;C28-C35</b>	<10.0	10.0	2.91	mg/kg	1	08/18/15	8015B		MS

<i>Surrogate: 1-Chlorooctane</i>			82.3 %	47.2-157		08/18/15	8015B		MS
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<i>Surrogate: 1-Chlorooctadecane</i>			79.6 %	52.1-176		08/18/15	8015B		MS
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Monument Global Resources  
12160 N. Abrams Rd. Suite 160  
Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

S3#6 1'

1508195-06 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

#### Semivolatile Organic Compounds by GCMS

Naphthalene	<0.002	0.040	0.002	mg/kg	40	08/18/15	8270C		MS
2-Methylnaphthalene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
1-Methylnaphthalene	<0.001	0.020	0.001	mg/kg	40	08/18/15	8270C		MS
Acenaphthylene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Acenaphthene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Fluorene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Phenanthrene	<0.006	0.040	0.006	mg/kg	40	08/18/15	8270C		MS
Anthracene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Carbazole	<0.004	0.040	0.004	mg/kg	40	08/18/15	8270C		MS
Fluoranthene	<0.007	0.040	0.007	mg/kg	40	08/18/15	8270C		MS
Pyrene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[a]anthracene	<0.016	0.040	0.016	mg/kg	40	08/18/15	8270C		MS
Chrysene	0.005	0.040	0.003	mg/kg	40	08/18/15	8270C	J	MS
Benzo[b]fluoranthene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[k]fluoranthene	<0.004	0.040	0.004	mg/kg	40	08/18/15	8270C		MS
Benzo[a]pyrene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Indeno[1,2,3-cd]pyrene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Dibenz[a,h]anthracene	<0.003	0.040	0.003	mg/kg	40	08/18/15	8270C		MS
Benzo[g,h,i]perylene	<0.030	0.040	0.030	mg/kg	40	08/18/15	8270C		MS

Surrogate: Nitrobenzene-d5	68.6 %	20.4-109	08/18/15	8270C	MS
Surrogate: 2-Fluorobiphenyl	74.2 %	23.4-133	08/18/15	8270C	MS
Surrogate: Terphenyl-d14	99.0 %	38.4-163	08/18/15	8270C	MS

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Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

**Reported:**  
09/01/15 10:54

**AR 1**

**1508195-07 (Solid)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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**Total Metals by ICPMS**

Arsenic	1.11	0.500	0.260	mg/kg dry	1000	08/27/15	6020 A		JGS
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*Debbie Zufelt*

Debbie Zufelt, Reports Manager

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Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

**Reported:**  
09/01/15 10:54

**AR 2**

**1508195-08 (Solid)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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**Total Metals by ICPMS**

<b>Arsenic</b>	<b>1.30</b>	0.500	0.260	mg/kg dry	1000	08/27/15	6020 A		JGS
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Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

### Saturated Paste Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch B508279 - General Prep - Wet Chem

Duplicate (B508279-DUP1)		Source: 1508196-01		Prepared & Analyzed: 08/26/15					
pH	7.88		pH Units		7.90			0.253	20

#### Batch B508280 - General Prep - Wet Chem

Duplicate (B508280-DUP1)		Source: 1508196-01		Prepared & Analyzed: 08/26/15					
Conductivity	430		umhos/cm		425			1.17	20

#### Batch B508295 - Paste Extract

Duplicate (B508295-DUP1)		Source: 1508129-01		Prepared: 08/27/15 Analyzed: 08/31/15					
SAR	1.34		[blank]		1.34			0.00	20

Duplicate (B508295-DUP2)		Source: 1508196-01		Prepared: 08/27/15 Analyzed: 08/31/15					
Calcium	45.1	5.00	mg/L		42.9			5.00	20
Magnesium	5.84	5.00	mg/L		5.50			6.00	20
SAR	1.74		[blank]		1.73			0.576	20
Sodium	46.8	10.0	mg/L		45.4			3.19	20

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Monument Global Resources  
12160 N. Abrams Rd. Suite 160  
Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

### 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 B508252 - EPA 3050

##### Blank (B508252-BLK1)

Prepared & Analyzed: 08/24/15

Barium	ND	0.010	mg/kg dry
Cadmium	ND	0.050	mg/kg dry
Chromium	ND	0.050	mg/kg dry
Copper	ND	0.020	mg/kg dry
Lead	ND	0.100	mg/kg dry
Nickel	ND	0.050	mg/kg dry
Selenium	ND	0.200	mg/kg dry
Silver	ND	0.050	mg/kg dry
Zinc	ND	0.050	mg/kg dry

##### LCS (B508252-BS1)

Prepared & Analyzed: 08/24/15

Barium	1.90	0.010	mg/kg dry	2.00	95.1	85-115
Cadmium	1.82	0.050	mg/kg dry	2.00	91.1	85-115
Chromium	2.00	0.050	mg/kg dry	2.00	100	85-115
Copper	3.97	0.020	mg/kg dry	4.00	99.3	85-115
Lead	1.94	0.100	mg/kg dry	2.00	97.2	85-115
Nickel	1.88	0.050	mg/kg dry	2.00	93.8	85-115
Selenium	7.70	0.200	mg/kg dry	8.00	96.2	85-115
Silver	0.094	0.050	mg/kg dry	0.100	93.9	85-115
Zinc	1.81	0.050	mg/kg dry	2.00	90.4	85-115

##### LCS Dup (B508252-BSD1)

Prepared & Analyzed: 08/24/15

Barium	1.88	0.010	mg/kg dry	2.00	94.1	85-115	1.08	20
Cadmium	1.80	0.050	mg/kg dry	2.00	90.0	85-115	1.19	20
Chromium	1.98	0.050	mg/kg dry	2.00	99.1	85-115	0.945	20
Copper	3.98	0.020	mg/kg dry	4.00	99.5	85-115	0.197	20
Lead	1.92	0.100	mg/kg dry	2.00	96.0	85-115	1.31	20
Nickel	1.88	0.050	mg/kg dry	2.00	93.9	85-115	0.0414	20
Selenium	7.55	0.200	mg/kg dry	8.00	94.4	85-115	1.89	20
Silver	0.093	0.050	mg/kg dry	0.100	93.0	85-115	0.992	20
Zinc	1.79	0.050	mg/kg dry	2.00	89.6	85-115	0.816	20

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Project Manager: Kerry Smith

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09/01/15 10:54

### 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 B508288 - EPA 3050M

##### Blank (B508288-BLK1)

Prepared & Analyzed: 08/27/15

Arsenic ND 0.0005 mg/kg dry

##### LCS (B508288-BS1)

Prepared & Analyzed: 08/27/15

Arsenic 0.0559 0.0005 mg/kg dry 0.0500 112 85-115

##### LCS Dup (B508288-BSD1)

Prepared & Analyzed: 08/27/15

Arsenic 0.0535 0.0005 mg/kg dry 0.0500 107 85-115 4.38 20

#### Batch B508289 - EPA 3050M

##### Blank (B508289-BLK1)

Prepared & Analyzed: 08/27/15

Arsenic ND 0.0005 mg/kg dry

##### LCS (B508289-BS1)

Prepared & Analyzed: 08/27/15

Arsenic 0.0559 0.0005 mg/kg dry 0.0500 112 85-115

##### LCS Dup (B508289-BSD1)

Prepared & Analyzed: 08/27/15

Arsenic 0.0535 0.0005 mg/kg dry 0.0500 107 85-115 4.38 20

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Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

### Total Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch B508168 - EPA 7471

##### Blank (B508168-BLK1)

Prepared & Analyzed: 08/17/15

Mercury ND 0.0002 mg/kg wet

##### LCS (B508168-BS1)

Prepared & Analyzed: 08/17/15

Mercury 0.0023 0.0002 mg/kg wet 0.00200 115 85-115

##### LCS Dup (B508168-BSD1)

Prepared & Analyzed: 08/17/15

Mercury 0.0023 0.0002 mg/kg wet 0.00200 117 85-115 0.905 20 BS1

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Monument Global Resources  
12160 N. Abrams Rd. Suite 160  
Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

### 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 B508243 - Hot Water Soluble Metals Extract

##### Blank (B508243-BLK1)

Prepared & Analyzed: 08/24/15

Boron	ND	0.300	mg/L
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##### LCS (B508243-BS1)

Prepared & Analyzed: 08/24/15

Boron	4.61	0.300	mg/L	5.00	92.1	85-115
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##### LCS Dup (B508243-BSD1)

Prepared & Analyzed: 08/24/15

Boron	4.58	0.300	mg/L	5.00	91.5	85-115	0.630	20
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Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

### 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
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#### Batch 5081808 - Volatiles

##### Blank (5081808-BLK1)

Prepared: 08/18/15 Analyzed: 08/19/15

Surrogate: 4-Bromofluorobenzene (PID)	0.0528		mg/kg	0.0500		106	85.6-137			
Benzene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Total Xylenes	ND	0.150	mg/kg							

##### LCS (5081808-BS1)

Prepared & Analyzed: 08/18/15

Surrogate: 4-Bromofluorobenzene (PID)	0.0484		mg/kg	0.0500		96.9	85.6-137			
Benzene	2.19	0.050	mg/kg	2.00		109	73-130			
Ethylbenzene	2.27	0.050	mg/kg	2.00		114	71.9-119			
Toluene	2.10	0.050	mg/kg	2.00		105	77-117			
Total Xylenes	6.32	0.150	mg/kg	6.00		105	76.2-112			

##### LCS Dup (5081808-BSD1)

Prepared & Analyzed: 08/18/15

Surrogate: 4-Bromofluorobenzene (PID)	0.0484		mg/kg	0.0500		96.7	85.6-137			
Benzene	2.20	0.050	mg/kg	2.00		110	73-130	0.860	6.59	
Ethylbenzene	2.28	0.050	mg/kg	2.00		114	71.9-119	0.379	8.3	
Toluene	2.11	0.050	mg/kg	2.00		105	77-117	0.496	6.92	
Total Xylenes	6.33	0.150	mg/kg	6.00		106	76.2-112	0.188	8.93	

#### Batch 5081902 - Volatiles

##### Blank (5081902-BLK1)

Prepared & Analyzed: 08/19/15

Surrogate: 4-Bromofluorobenzene (PID)	0.0508		mg/kg	0.0500		102	85.6-137			
Benzene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Total Xylenes	ND	0.150	mg/kg							

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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Monument Global Resources  
12160 N. Abrams Rd. Suite 160  
Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

### 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
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#### Batch 5081902 - Volatiles

##### LCS (5081902-BS1)

Prepared & Analyzed: 08/19/15

Surrogate: 4-Bromofluorobenzene (PID)	0.0476		mg/kg	0.0500		95.2	85.6-137			
Benzene	2.20	0.050	mg/kg	2.00		110	73-130			
Ethylbenzene	2.23	0.050	mg/kg	2.00		112	71.9-119			
Toluene	2.08	0.050	mg/kg	2.00		104	77-117			
Total Xylenes	6.25	0.150	mg/kg	6.00		104	76.2-112			

##### LCS Dup (5081902-BSD1)

Prepared & Analyzed: 08/19/15

Surrogate: 4-Bromofluorobenzene (PID)	0.0467		mg/kg	0.0500		93.4	85.6-137			
Benzene	2.18	0.050	mg/kg	2.00		109	73-130	0.756	6.59	
Ethylbenzene	2.20	0.050	mg/kg	2.00		110	71.9-119	1.49	8.3	
Toluene	2.06	0.050	mg/kg	2.00		103	77-117	0.692	6.92	
Total Xylenes	6.19	0.150	mg/kg	6.00		103	76.2-112	1.00	8.93	

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12160 N. Abrams Rd. Suite 160  
Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

### 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 5081406 - General Prep - Organics

##### Blank (5081406-BLK1)

Prepared: 08/14/15 Analyzed: 08/17/15

Surrogate: 1-Chlorooctadecane	45.5		mg/kg	50.0		91.0	52.1-176			
Surrogate: 1-Chlorooctane	41.5		mg/kg	50.0		83.0	47.2-157			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							

##### LCS (5081406-BS1)

Prepared: 08/14/15 Analyzed: 08/17/15

Surrogate: 1-Chlorooctadecane	46.7		mg/kg	50.0		93.3	52.1-176			
Surrogate: 1-Chlorooctane	47.3		mg/kg	50.0		94.6	47.2-157			
DRO >C10-C28	199	10.0	mg/kg	200		99.3	81.3-118			
GRO C6-C10	186	10.0	mg/kg	200		93.0	72.5-115			
Total TPH C6-C28	385	10.0	mg/kg	400		96.2	80-113			

##### LCS Dup (5081406-BS1)

Prepared: 08/14/15 Analyzed: 08/17/15

Surrogate: 1-Chlorooctadecane	47.5		mg/kg	50.0		95.1	52.1-176			
Surrogate: 1-Chlorooctane	45.5		mg/kg	50.0		91.0	47.2-157			
DRO >C10-C28	194	10.0	mg/kg	200		97.2	81.3-118	2.15	15.3	
GRO C6-C10	180	10.0	mg/kg	200		90.0	72.5-115	3.31	10.1	
Total TPH C6-C28	374	10.0	mg/kg	400		93.6	80-113	2.71	12.1	

#### Batch 5081708 - General Prep - Organics

##### Blank (5081708-BLK1)

Prepared: 08/17/15 Analyzed: 08/18/15

Surrogate: 1-Chlorooctadecane	44.7		mg/kg	50.0		89.4	52.1-176			
Surrogate: 1-Chlorooctane	46.8		mg/kg	50.0		93.7	47.2-157			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							

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12160 N. Abrams Rd. Suite 160  
Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

### 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 5081708 - General Prep - Organics

##### LCS (5081708-BS1)

Prepared: 08/17/15 Analyzed: 08/18/15

Surrogate: 1-Chlorooctadecane	48.3		mg/kg	50.0		96.7	52.1-176			
Surrogate: 1-Chlorooctane	50.8		mg/kg	50.0		102	47.2-157			
DRO >C10-C28	193	10.0	mg/kg	200		96.6	81.3-118			
GRO C6-C10	187	10.0	mg/kg	200		93.7	72.5-115			
Total TPH C6-C28	381	10.0	mg/kg	400		95.2	80-113			

##### LCS Dup (5081708-BSD1)

Prepared: 08/17/15 Analyzed: 08/18/15

Surrogate: 1-Chlorooctadecane	53.1		mg/kg	50.0		106	52.1-176			
Surrogate: 1-Chlorooctane	51.9		mg/kg	50.0		104	47.2-157			
DRO >C10-C28	205	10.0	mg/kg	200		102	81.3-118	5.65	15.3	
GRO C6-C10	190	10.0	mg/kg	200		95.0	72.5-115	1.45	10.1	
Total TPH C6-C28	395	10.0	mg/kg	400		98.6	80-113	3.60	12.1	

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Monument Global Resources  
12160 N. Abrams Rd. Suite 160  
Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

### Semivolatile Organic Compounds by GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 5080503 - SW846-3510

##### Blank (5080503-BLK1)

Prepared: 08/05/15 Analyzed: 08/06/15

1-Methylnaphthalene	ND	0.020	mg/kg							
Surrogate: 2-Fluorobiphenyl	1.77		mg/kg	2.00		88.3	23.4-133			
2-Methylnaphthalene	ND	0.040	mg/kg							
Acenaphthene	ND	0.040	mg/kg							
Acenaphthylene	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]fluoranthene	ND	0.040	mg/kg							
Benzo[g,h,i]perylene	ND	0.040	mg/kg							
Benzo[k]fluoranthene	ND	0.040	mg/kg							
Carbazole	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							
Surrogate: Nitrobenzene-d5	1.77		mg/kg	2.00		88.5	20.4-109			
Phenanthrene	ND	0.040	mg/kg							
Pyrene	ND	0.040	mg/kg							
Surrogate: Terphenyl-d14	2.07		mg/kg	2.00		104	38.4-163			

##### LCS (5080503-BS1)

Prepared: 08/05/15 Analyzed: 08/06/15

Surrogate: 2-Fluorobiphenyl	1.57		mg/kg	2.00		78.3	23.4-133			
2-Methylnaphthalene	0.588	0.040	mg/kg	0.800		73.5	41.4-151			
Acenaphthene	0.607	0.040	mg/kg	0.800		75.8	39.3-154			
Acenaphthylene	0.592	0.040	mg/kg	0.800		74.0	39.2-150			
Anthracene	0.610	0.040	mg/kg	0.800		76.3	33.5-162			
Benzo[a]anthracene	0.616	0.040	mg/kg	0.800		76.9	28.6-167			
Benzo[a]pyrene	0.619	0.040	mg/kg	0.800		77.4	27.2-163			
Benzo[b]fluoranthene	0.608	0.040	mg/kg	0.800		76.0	24-168			
Benzo[g,h,i]perylene	0.661	0.040	mg/kg	0.800		82.6	14.1-172			
Benzo[k]fluoranthene	0.652	0.040	mg/kg	0.800		81.5	28.9-170			
Carbazole	0.611	0.040	mg/kg	0.800		76.4	31.6-163			
Chrysene	0.625	0.040	mg/kg	0.800		78.1	27.7-171			
Dibenz[a,h]anthracene	0.682	0.040	mg/kg	0.800		85.2	19-164			
Fluoranthene	0.595	0.040	mg/kg	0.800		74.4	38.5-165			

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Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

### Semivolatile Organic Compounds by GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 5080503 - SW846-3510

##### LCS (5080503-BS1)

Prepared: 08/05/15 Analyzed: 08/06/15

Fluorene	0.601	0.040	mg/kg	0.800		75.1	40.4-158			
Indeno[1,2,3-cd]pyrene	0.685	0.040	mg/kg	0.800		85.7	21.9-162			
Naphthalene	0.584	0.040	mg/kg	0.800		73.0	33.8-147			
Surrogate: Nitrobenzene-d5	1.61		mg/kg	2.00		80.6	20.4-109			
Phenanthrene	0.617	0.040	mg/kg	0.800		77.2	34.7-164			
Pyrene	0.576	0.040	mg/kg	0.800		72.0	28-180			
Surrogate: Terphenyl-d14	1.77		mg/kg	2.00		88.7	38.4-163			

##### LCS Dup (5080503-BSD1)

Prepared: 08/05/15 Analyzed: 08/06/15

Surrogate: 2-Fluorobiphenyl	1.57		mg/kg	2.00		78.4	23.4-133			
2-Methylnaphthalene	0.582	0.040	mg/kg	0.800		72.8	41.4-151	0.977	20	
Acenaphthene	0.603	0.040	mg/kg	0.800		75.4	39.3-154	0.600	20	
Acenaphthylene	0.599	0.040	mg/kg	0.800		74.8	39.2-150	1.11	20	
Anthracene	0.610	0.040	mg/kg	0.800		76.3	33.5-162	0.0393	20	
Benzo[a]anthracene	0.612	0.040	mg/kg	0.800		76.5	28.6-167	0.529	20	
Benzo[a]pyrene	0.621	0.040	mg/kg	0.800		77.7	27.2-163	0.350	20	
Benzo[b]fluoranthene	0.633	0.040	mg/kg	0.800		79.1	24-168	3.93	21.5	
Benzo[g,h,i]perylene	0.664	0.040	mg/kg	0.800		83.0	14.1-172	0.474	39.3	
Benzo[k]fluoranthene	0.638	0.040	mg/kg	0.800		79.8	28.9-170	2.16	20.5	
Carbazole	0.617	0.040	mg/kg	0.800		77.2	31.6-163	0.988	20	
Chrysene	0.623	0.040	mg/kg	0.800		77.8	27.7-171	0.313	20	
Dibenz[a,h]anthracene	0.686	0.040	mg/kg	0.800		85.8	19-164	0.680	30.5	
Fluoranthene	0.599	0.040	mg/kg	0.800		74.9	38.5-165	0.703	20	
Fluorene	0.598	0.040	mg/kg	0.800		74.7	40.4-158	0.456	20	
Indeno[1,2,3-cd]pyrene	0.684	0.040	mg/kg	0.800		85.6	21.9-162	0.134	32.1	
Naphthalene	0.578	0.040	mg/kg	0.800		72.3	33.8-147	1.01	20	
Surrogate: Nitrobenzene-d5	1.60		mg/kg	2.00		79.8	20.4-109			
Phenanthrene	0.617	0.040	mg/kg	0.800		77.2	34.7-164	0.0130	20	
Pyrene	0.569	0.040	mg/kg	0.800		71.1	28-180	1.19	20	
Surrogate: Terphenyl-d14	1.78		mg/kg	2.00		89.0	38.4-163			

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12160 N. Abrams Rd. Suite 160  
Dallas TX, 75243

Project: Table 910  
Project Name / Number: Cache Unit Spill 3  
Project Manager: Kerry Smith

Reported:  
09/01/15 10:54

### Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
H2	Sample analysis performed past hold time specified by the method.
BS1	Blank spike recovery above laboratory acceptance criteria. Results for analyte potentially biased high. Will re-analyze per client request.
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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75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name (optional): <b>Mountain Creek - Kasey's</b>		P.O. #:		Bill to (if different):		ANALYSIS REQUEST					
Project Contact Person: <b>Kasey Smith / David Bauer</b>		Company:									
Address: <b>12160 N Abrams Rd Ste 610</b>		Attn:									
City: <b>DAHLA</b>		State: <b>TX</b>		Zip: <b>75243</b>							
Phone #: <b>KS 575 937 8001</b>		Address:									
Email: <b>KSmith@Newmontglobal.com</b>		City:									
Project Name (optional): <b>CACHE UNIT</b>		State:		Zip:							
Project Number (optional): <b>SPILL 3</b>		Phone #:									
Sampler Name (Print): <b>David Bauer</b>		bauer.d@GAL.com		Fax or Email:							
For Lab Use		Sample Name or Location		Collected		Matrix (check one)		# of containers			
		Date		Time		GROUNDWATER					
						SURFACEWATER					
						WASTEWATER					
						PRODUCEDWATER					
						SOIL					
						OTHER :					
						No preservation (general)					
						HNO <sub>3</sub>					
						HCl					
						H <sub>2</sub> SO <sub>4</sub>					
						Other:					
						Other:					
						Other:					
1508-195-01		S3 #1 Pits 3'		8-13-15 10:19							
		S3 #2 Sours 1'		8-13-15 10:21							
		S3 #3 1'		8-13-15 10:26							
		S3 #4 6'		8-13-15 10:30							
		S3 #5 1'		8-13-15 10:33							
		S3 #6 1'		8-13-15 10:35							
		A# 1		8-13-15 10:38							
		A# 2		8-13-15 10:40							
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		Relinquished By:		Date:		Received By:		Date:		Yes No	
		Relinquished By:		Date:		Received By:		Date:			
		Relinquished By:		Date:		Received By:		Date:			
Delivered By: (Circle One)		Temperature at receipt: <b>#1 17.20 °C</b>		CHECKED BY: <b>D3</b>							
Sampler - UPS - FedEx - Kangaroo - Other:											

\* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.