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27 August 2015

Naomi Azulai  
Maralex  
PO Box 338  
Ignacio, CO 81137  
RE: Table 910

Enclosed are the results of analyses for samples received by the laboratory on 08/14/15 14:25.  
If you need any further assistance, please feel free to contact me.

Sincerely,

DRAFT REPORT  
DATA SUBJECT TO CHANGE

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



Maralex PO Box 338 Ignacio CO, 81137	Project: Table 910 Project Name / Number: Dara Ferguson Spill 2015 Project Manager: Naomi Azulai	Reported: 08/27/15 12:08
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**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Outside of Berm - Breech	1508215-01	Solid	08/14/15 13:00	08/14/15 14:25
Next to Pipes	1508215-02	Solid	08/14/15 13:10	08/14/15 14:25
In Berm Between Tanks	1508215-03	Solid	08/14/15 13:20	08/14/15 14:25
South End Inside Berm	1508215-04	Solid	08/14/15 13:30	08/14/15 14:25
Background	1508215-05	Solid	08/14/15 13:40	08/14/15 14:25

DRAFT REPORT

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Maralex PO Box 338 Ignacio CO, 81137	Project: Table 910 Project Name / Number: Dara Ferguson Spill 2015 Project Manager: Naomi Azulai	Reported: 08/27/15 12:08
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**Outside of Berm - Breech**

**1508215-01 (Solid)**

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

% Dry Solids	91.8			%	1	08/20/15	EPA160.3/2540C		MAJ
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**Saturated Paste Extraction**

Conductivity	4140			umhos/cm	1	08/26/15	ASA#9 10-3.3		LLG
pH	8.13			pH Units	1	08/26/15	ASA#9 12-2.6		LLG

**Total Metals by ICP**

Barium	238	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	40.2	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	8.53	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	39.1	5.00	0.792	mg/kg dry	100	08/24/15	EPA6010 B		JGS

**Subcontracted -- Cardinal Laboratories**

**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	0.010	mg/kg	50	08/20/15	8021B		CK
Toluene*	<0.050	0.050	0.015	mg/kg	50	08/20/15	8021B		CK
Ethylbenzene*	<0.050	0.050	0.008	mg/kg	50	08/20/15	8021B		CK
Total Xylenes*	<0.150	0.150	0.018	mg/kg	50	08/20/15	8021B		CK
Total BTEX	<0.300	0.300		mg/kg	50	08/20/15	8021B		CK

Surrogate: 4-Bromofluorobenzene (PID)			103 %	85.6-137		08/20/15	8021B		CK
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**Outside of Berm - Breech**

**1508215-01 (Solid)**

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

**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	<10.0	10.0	1.30	mg/kg	1	08/19/15	8015B		MS
DRO >C10-C28	<10.0	10.0	2.91	mg/kg	1	08/19/15	8015B		MS
EXT DRO >C28-C35	<10.0	10.0	2.91	mg/kg	1	08/19/15	8015B		MS
Surrogate: 1-Chlorooctane			82.2 %	47.2-157		08/19/15	8015B		MS
Surrogate: 1-Chlorooctadecane			77.5 %	52.1-176		08/19/15	8015B		MS

**Semivolatile Organic Compounds by GCMS**

Naphthalene	<0.002	0.040	0.002	mg/kg	40	08/20/15	8270C		MS
2-Methylnaphthalene	<0.003	0.040	0.003	mg/kg	40	08/20/15	8270C		MS
1-Methylnaphthalene	<0.001	0.020	0.001	mg/kg	40	08/20/15	8270C		MS
Acenaphthylene	<0.003	0.040	0.003	mg/kg	40	08/20/15	8270C		MS
Acenaphthene	<0.003	0.040	0.003	mg/kg	40	08/20/15	8270C		MS
Fluorene	<0.003	0.040	0.003	mg/kg	40	08/20/15	8270C		MS
Phenanthrene	<0.006	0.040	0.006	mg/kg	40	08/20/15	8270C		MS
Anthracene	<0.003	0.040	0.003	mg/kg	40	08/20/15	8270C		MS
Carbazole	<0.004	0.040	0.004	mg/kg	40	08/20/15	8270C		MS
Fluoranthene	<0.007	0.040	0.007	mg/kg	40	08/20/15	8270C		MS
Pyrene	<0.003	0.040	0.003	mg/kg	40	08/20/15	8270C		MS
Benzo[a]anthracene	<0.016	0.040	0.016	mg/kg	40	08/20/15	8270C		MS
Chrysene	<0.003	0.040	0.003	mg/kg	40	08/20/15	8270C		MS
Benzo[b]flouranthene	<0.003	0.040	0.003	mg/kg	40	08/20/15	8270C		MS
Benzo[k]flouranthene	<0.004	0.040	0.004	mg/kg	40	08/20/15	8270C		MS
Benzo[a]pyrene	<0.003	0.040	0.003	mg/kg	40	08/20/15	8270C		MS
Indeno[1,2,3-cd]pyrene	<0.003	0.040	0.003	mg/kg	40	08/20/15	8270C		MS
Dibenz[a,h]anthracene	<0.003	0.040	0.003	mg/kg	40	08/20/15	8270C		MS
Benzo[g,h,i]perylene	<0.030	0.040	0.030	mg/kg	40	08/20/15	8270C		MS
Surrogate: Nitrobenzene-d5			65.9 %	20.4-109		08/20/15	8270C		MS
Surrogate: 2-Fluorobiphenyl			89.4 %	23.4-133		08/20/15	8270C		MS
Surrogate: Terphenyl-d14			95.6 %	38.4-163		08/20/15	8270C		MS

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**Next to Pipes**

**1508215-02 (Solid)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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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	08/20/15	8021B		CK
<b>Toluene*</b>	<0.050	0.050	0.015	mg/kg	50	08/20/15	8021B		CK
<b>Ethylbenzene*</b>	<0.050	0.050	0.008	mg/kg	50	08/20/15	8021B		CK
<b>Total Xylenes*</b>	<0.150	0.150	0.018	mg/kg	50	08/20/15	8021B		CK
<b>Total BTEX</b>	<0.300	0.300		mg/kg	50	08/20/15	8021B		CK

Surrogate: 4-Bromofluorobenzene (PID) 101 % 85.6-137 08/20/15 8021B CK

**Petroleum Hydrocarbons by GC FID**

<b>GRO C6-C10</b>	<10.0	10.0	1.30	mg/kg	1	08/19/15	8015B		MS
<b>DRO &gt;C10-C28</b>	<b>70.4</b>	10.0	2.91	mg/kg	1	08/19/15	8015B		MS
<b>EXT DRO &gt;C28-C35</b>	<b>88.6</b>	10.0	2.91	mg/kg	1	08/19/15	8015B		MS

Surrogate: 1-Chlorooctane 94.4 % 47.2-157 08/19/15 8015B MS

Surrogate: 1-Chlorooctadecane 84.0 % 52.1-176 08/19/15 8015B MS

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**In Berm Between Tanks**

**1508215-03 (Solid)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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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	08/20/15	8021B		CK
<b>Toluene*</b>	<0.050	0.050	0.015	mg/kg	50	08/20/15	8021B		CK
<b>Ethylbenzene*</b>	<0.050	0.050	0.008	mg/kg	50	08/20/15	8021B		CK
<b>Total Xylenes*</b>	<0.150	0.150	0.018	mg/kg	50	08/20/15	8021B		CK
<b>Total BTEX</b>	<0.300	0.300		mg/kg	50	08/20/15	8021B		CK

Surrogate: 4-Bromofluorobenzene (PID) 102 % 85.6-137 08/20/15 8021B CK

**Petroleum Hydrocarbons by GC FID**

<b>GRO C6-C10</b>	<10.0	10.0	1.30	mg/kg	1	08/19/15	8015B		MS
<b>DRO &gt;C10-C28</b>	<b>531</b>	10.0	2.91	mg/kg	1	08/19/15	8015B		MS
<b>EXT DRO &gt;C28-C35</b>	<b>651</b>	10.0	2.91	mg/kg	1	08/19/15	8015B		MS

Surrogate: 1-Chlorooctane 88.0 % 47.2-157 08/19/15 8015B MS

Surrogate: 1-Chlorooctadecane 82.3 % 52.1-176 08/19/15 8015B MS

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**South End Inside Berm**

**1508215-04 (Solid)**

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

<b>% Dry Solids</b>	<b>90.5</b>			%	1	08/20/15	EPA160.3/2540C		MAJ
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**Saturated Paste Extraction**

<b>Conductivity</b>	<b>2010</b>			umhos/cm	1	08/26/15	ASA#9 10-3.3		LLG
<b>pH</b>	<b>8.10</b>			pH Units	1	08/26/15	ASA#9 12-2.6		LLG

**Total Metals by ICP**

<b>Barium</b>	<b>303</b>	1.00	0.191	mg/kg dry	100	08/24/15	EPA6010 B		JGS
<b>Cadmium</b>	<5.00	5.00	0.117	mg/kg dry	100	08/24/15	EPA6010 B		JGS
<b>Chromium</b>	<5.00	5.00	0.636	mg/kg dry	100	08/24/15	EPA6010 B		JGS
<b>Copper</b>	<b>46.3</b>	2.00	0.650	mg/kg dry	100	08/24/15	EPA6010 B		JGS
<b>Lead</b>	<b>10.5</b>	10.0	1.84	mg/kg dry	100	08/24/15	EPA6010 B		JGS
<b>Nickel</b>	<b>8.15</b>	5.00	1.55	mg/kg dry	100	08/24/15	EPA6010 B		JGS
<b>Selenium</b>	<20.0	20.0	3.61	mg/kg dry	100	08/24/15	EPA6010 B		JGS
<b>Silver</b>	<5.00	5.00	0.231	mg/kg dry	100	08/24/15	EPA6010 B		JGS
<b>Zinc</b>	<b>40.0</b>	5.00	0.792	mg/kg dry	100	08/24/15	EPA6010 B		JGS

Subcontracted -- **Cardinal Laboratories**

**Volatile Organic Compounds by EPA Method 8021**

<b>Benzene*</b>	<0.050	0.050	0.010	mg/kg	50	08/20/15	8021B		CK
<b>Toluene*</b>	<0.050	0.050	0.015	mg/kg	50	08/20/15	8021B		CK
<b>Ethylbenzene*</b>	<0.050	0.050	0.008	mg/kg	50	08/20/15	8021B		CK
<b>Total Xylenes*</b>	<0.150	0.150	0.018	mg/kg	50	08/20/15	8021B		CK
<b>Total BTEX</b>	<0.300	0.300		mg/kg	50	08/20/15	8021B		CK

Surrogate: 4-Bromofluorobenzene (PID) 102 % 85.6-137 08/20/15 8021B CK

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**South End Inside Berm**

**1508215-04 (Solid)**

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

**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	<10.0	10.0	1.30	mg/kg	1	08/19/15	8015B		MS
DRO >C10-C28	<b>887</b>	10.0	2.91	mg/kg	1	08/19/15	8015B		MS
EXT DRO >C28-C35	<b>950</b>	10.0	2.91	mg/kg	1	08/19/15	8015B		MS
Surrogate: 1-Chlorooctane			89.8 %	47.2-157		08/19/15	8015B		MS
Surrogate: 1-Chlorooctadecane			87.8 %	52.1-176		08/19/15	8015B		MS

**Semivolatile Organic Compounds by GCMS**

Naphthalene	<0.018	0.400	0.018	mg/kg	400	08/21/15	8270C		CK
2-Methylnaphthalene	<0.029	0.400	0.029	mg/kg	400	08/21/15	8270C		CK
1-Methylnaphthalene	<0.011	0.200	0.011	mg/kg	400	08/21/15	8270C		CK
Acenaphthylene	<0.031	0.400	0.031	mg/kg	400	08/21/15	8270C		CK
Acenaphthene	<0.026	0.400	0.026	mg/kg	400	08/21/15	8270C		CK
Fluorene	<b>0.036</b>	0.400	0.031	mg/kg	400	08/21/15	8270C	J	CK
Phenanthrene	<0.060	0.400	0.060	mg/kg	400	08/21/15	8270C		CK
Anthracene	<0.032	0.400	0.032	mg/kg	400	08/21/15	8270C		CK
Carbazole	<0.037	0.400	0.037	mg/kg	400	08/21/15	8270C		CK
Fluoranthene	<0.071	0.400	0.071	mg/kg	400	08/21/15	8270C		CK
Pyrene	<0.030	0.400	0.030	mg/kg	400	08/21/15	8270C		CK
Benzo[a]anthracene	<0.156	0.400	0.156	mg/kg	400	08/21/15	8270C		CK
Chrysene	<b>0.124</b>	0.400	0.033	mg/kg	400	08/21/15	8270C	J	CK
Benzo[b]flouranthene	<0.034	0.400	0.034	mg/kg	400	08/21/15	8270C		CK
Benzo[k]flouranthene	<0.037	0.400	0.037	mg/kg	400	08/21/15	8270C		CK
Benzo[a]pyrene	<0.028	0.400	0.028	mg/kg	400	08/21/15	8270C		CK
Indeno[1,2,3-cd]pyrene	<0.027	0.400	0.027	mg/kg	400	08/21/15	8270C		CK
Dibenz[a,h]anthracene	<0.026	0.400	0.026	mg/kg	400	08/21/15	8270C		CK
Benzo[g,h,i]perylene	<0.296	0.400	0.296	mg/kg	400	08/21/15	8270C		CK
Surrogate: Nitrobenzene-d5			63.0 %	20.4-109		08/21/15	8270C		CK
Surrogate: 2-Fluorobiphenyl			93.8 %	23.4-133		08/21/15	8270C		CK
Surrogate: Terphenyl-d14			80.8 %	38.4-163		08/21/15	8270C		CK

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**Background**

**1508215-05 (Solid)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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**Saturated Paste Extraction**

<b>Conductivity</b>	<b>4010</b>			umhos/cm	1	08/26/15	ASA#9 10-3.3		LLG
<b>pH</b>	<b>7.98</b>			pH Units	1	08/26/15	ASA#9 12-2.6		LLG

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**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**

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

**Batch B508280 - General Prep - Wet Chem**

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

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**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 B508254 - EPA 3050**

**Blank (B508254-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 (B508254-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 (B508254-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	

DRAFT REPORT

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DRAFT REPORT, DATA SUBJECT TO CHANGE



Maralex PO Box 338 Ignacio CO, 81137	Project: Table 910 Project Name / Number: Dara Ferguson Spill 2015 Project Manager: Naomi Azulai	Reported: 08/27/15 12:08
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**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 5082002 - Volatiles**

**Blank (5082002-BLK1)**

Prepared & Analyzed: 08/20/15

Surrogate: 4-Bromofluorobenzene (PID)	0.0515		mg/kg	0.0500		103	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 (5082002-BS1)**

Prepared & Analyzed: 08/20/15

Surrogate: 4-Bromofluorobenzene (PID)	0.0478		mg/kg	0.0500		95.7	85.6-137			
Benzene	2.20	0.050	mg/kg	2.00		110	73-130			
Ethylbenzene	2.24	0.050	mg/kg	2.00		112	71.9-119			
Toluene	2.09	0.050	mg/kg	2.00		105	77-117			
Total Xylenes	6.28	0.150	mg/kg	6.00		105	76.2-112			

**LCS Dup (5082002-BSD1)**

Prepared & Analyzed: 08/20/15

Surrogate: 4-Bromofluorobenzene (PID)	0.0474		mg/kg	0.0500		94.7	85.6-137			
Benzene	2.20	0.050	mg/kg	2.00		110	73-130	0.105	6.59	
Ethylbenzene	2.21	0.050	mg/kg	2.00		110	71.9-119	1.42	8.3	
Toluene	2.09	0.050	mg/kg	2.00		104	77-117	0.341	6.92	
Total Xylenes	6.20	0.150	mg/kg	6.00		103	76.2-112	1.26	8.93	

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DRAFT REPORT, DATA SUBJECT TO CHANGE



Maralex PO Box 338 Ignacio CO, 81137	Project: Table 910 Project Name / Number: Dara Ferguson Spill 2015 Project Manager: Naomi Azulai	Reported: 08/27/15 12:08
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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 5081901 - General Prep - Organics**

**Blank (5081901-BLK1)**

Prepared & Analyzed: 08/19/15

Surrogate: 1-Chlorooctadecane	47.0		mg/kg	50.0		94.0	52.1-176			
Surrogate: 1-Chlorooctane	46.8		mg/kg	50.0		93.5	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 (5081901-BS1)**

Prepared & Analyzed: 08/19/15

Surrogate: 1-Chlorooctadecane	52.0		mg/kg	50.0		104	52.1-176			
Surrogate: 1-Chlorooctane	49.0		mg/kg	50.0		98.1	47.2-157			
DRO >C10-C28	202	10.0	mg/kg	200		101	81.3-118			
GRO C6-C10	187	10.0	mg/kg	200		93.6	72.5-115			
Total TPH C6-C28	389	10.0	mg/kg	400		97.3	80-113			

**LCS Dup (5081901-BSD1)**

Prepared & Analyzed: 08/19/15

Surrogate: 1-Chlorooctadecane	51.4		mg/kg	50.0		103	52.1-176			
Surrogate: 1-Chlorooctane	49.8		mg/kg	50.0		99.6	47.2-157			
DRO >C10-C28	204	10.0	mg/kg	200		102	81.3-118	1.03	15.3	
GRO C6-C10	190	10.0	mg/kg	200		94.8	72.5-115	1.27	10.1	
Total TPH C6-C28	394	10.0	mg/kg	400		98.5	80-113	1.15	12.1	

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DRAFT REPORT, DATA SUBJECT TO CHANGE



Maralex  
PO Box 338  
Ignacio CO, 81137

Project: Table 910  
Project Name / Number: Dara Ferguson Spill 2015  
Project Manager: Naomi Azulai

Reported:  
08/27/15 12:08

**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							
<i>Surrogate: 2-Fluorobiphenyl</i>	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							
<i>Surrogate: Nitrobenzene-d5</i>	1.77		mg/kg	2.00		88.5	20.4-109			
Phenanthrene	ND	0.040	mg/kg							
Pyrene	ND	0.040	mg/kg							
<i>Surrogate: Terphenyl-dl4</i>	2.07		mg/kg	2.00		104	38.4-163			

**LCS (5080503-BS1)**

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

<i>Surrogate: 2-Fluorobiphenyl</i>	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			

DRAFT REPORT

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DRAFT REPORT, DATA SUBJECT TO CHANGE



Maralex PO Box 338 Ignacio CO, 81137	Project: Table 910 Project Name / Number: Dara Ferguson Spill 2015 Project Manager: Naomi Azulai	Reported: 08/27/15 12:08
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**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			
<i>Surrogate: Nitrobenzene-d5</i>	<i>1.61</i>		mg/kg	<i>2.00</i>		<i>80.6</i>	<i>20.4-109</i>			
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			
<i>Surrogate: Terphenyl-d14</i>	<i>1.77</i>		mg/kg	<i>2.00</i>		<i>88.7</i>	<i>38.4-163</i>			

**LCS Dup (5080503-BSD1)**

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

<i>Surrogate: 2-Fluorobiphenyl</i>	<i>1.57</i>		mg/kg	<i>2.00</i>		<i>78.4</i>	<i>23.4-133</i>			
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	
<i>Surrogate: Nitrobenzene-d5</i>	<i>1.60</i>		mg/kg	<i>2.00</i>		<i>79.8</i>	<i>20.4-109</i>			
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	
<i>Surrogate: Terphenyl-d14</i>	<i>1.78</i>		mg/kg	<i>2.00</i>		<i>89.0</i>	<i>38.4-163</i>			

DRAFT REPORT

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DRAFT REPORT, DATA SUBJECT TO CHANGE



Maralex  
PO Box 338  
Ignacio CO, 81137

Project: Table 910  
Project Name / Number: Dara Ferguson Spill 2015  
Project Manager: Naomi Azulai

**Reported:**  
08/27/15 12:08

### Notes and Definitions

- 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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DRAFT REPORT, DATA SUBJECT TO CHANGE



**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

(970) 247-4220  
Fax: (970) 247-4227

service@greenanalytical.com or dzufelt@greenanalytical.com  
75 Suttle St Durango, CO 81303

Page 17 of 17

Company Name: <u>Navalex</u>	Bill to (if different):	<b>ANALYSIS REQUEST</b>		
Project Manager: <u>Dennis Reimers</u>	P.O. #:	Full Table 910-1	TPH	BTEX
Address:	Company:			
City: State: Zip:	Attn:			
Phone #: <u>(970) 563 4000</u> Email: <u>navalex-tech@gmail</u>	Address:			
Additional Report To:	City:			
Project Name: <u>Dava Ferguson Spill 2015</u>	State: Zip:			
Project Number:	Phone #:			
Sampler Name (Print): <u>Nami Azulai</u>	Fax or Email:			

Lab I.D.	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:
<u>1508-215-1</u>	<u>1. outside of berm - breach</u>	<u>8/14/15</u>	<u>6:00</u>					<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						
<u>-2</u>	<u>2. Next to pipes</u>	<u>8/14/15</u>	<u>1:10</u>					<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>					
<u>-3</u>	<u>3. in berm between tanks</u>	<u>8/14/15</u>	<u>1:20</u>					<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>					
<u>-4</u>	<u>4. South end inside berm</u>	<u>8/14/15</u>	<u>1:30</u>					<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				
<u>-5</u>	<u>5. Background</u>	<u>8/14/15</u>	<u>1:40</u>					<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

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Relinquished By: <u>N. Azulai</u>	Date: <u>8/14/15</u>	Received By: <u>Daniel Zuffelt</u>	ADDITIONAL REMARKS:
Relinquished By:	Date:	Received By:	Report to State? (Circle) Yes    No
Relinquished By:	Date:	Received By:	
Delivered By: (Circle One) Sampler - UPS - FedEx - Kangaroo - Other:	Temperature at receipt: <u>#1 9.9°C ice</u>	CHECKED BY: <u>DZ</u>	

† GAL cannot always accept verbal changes. Please fax or email written change requests.  
\* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.