



Analytica Group, LLC-Thornton
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8/4/2014

Maralex Resources, Inc.
864 20 Road
Unit A
Fruita, CO 81521
Attn: Jim Graves

Work Order #: B1407105
Date: 8/4/2014
Work ID: Roan Creek Evaporation Pond
Date Received: 7/18/2014
Proj #: None

Sample Identification

Lab Sample Number	Client Description	Lab Sample Number	Client Description
B1407105-01	@ Sump	B1407105-02	Outside Sump
B1407105-03	Outside Fence	B1407105-04	P-1
B1407105-05	P-2	B1407105-06	P-3
B1407105-07	P-4	B1407105-08	P-5
B1407105-09	@ Tank		

Enclosed are the analytical results for the submitted sample(s). Please review the CASE NARRATIVE for a discussion of any data and/or quality control issues. Listings of data qualifiers, analytical codes, key dates, and QC relationships are provided at the end of the report.

Sincerely,

A handwritten signature in cursive script that reads "Kimberly Dicken".

Kimberly Dicken
Project Manager

"The Science of Analysis, The Art of Service"

Case Narrative

Analytica Group, LLC - Thornton

Work Order: B1407105

Samples were prepared and analyzed according to EPA or equivalent methods outlined in the following references:

Test Methods for Evaluating Solid Waste, USEPA SW-846, Third Edition, Revision 4, December 1996.

Standard Method for Laboratory Determination of Water (Moisture) Content of Soil, Rock, and Soil-Aggregate Mixtures, ASTM D 2216-80, July 1980.

Standard Methods for the Examination of Water and Wastewater, 21st Edition, 2005.

SAMPLE RECEIPT:

Nine (9) samples were received on 7/18/2014 at 9:50:00 AM at a temperature of 4.2 °C at Analytica-Thornton. The samples were received in good condition and in order per chain of custody.

REVIEW FOR COMPLIANCE WITH ANALYTICA QA PLAN

A summary of our review is shown below.

All analytical results contained in this report have been reviewed under Analytica's internal quality assurance and quality control program. Any deviations in quality control parameters for specific analyses are noted in the following text. A complete quality assurance report, including laboratory control, matrix spike, and sample duplicate recoveries, is kept on file in our office and is available upon request.

All method specifications were met for the following tests, unless otherwise noted:

Test Method: Aromatic VOCs by GC/PID via method 8021B - BTEX - Soil

Test Method: ASTM D2216 - Pmoist - Soil

Test Method: Corrosivity in Waste by pH - pH - Soil

Test Method: SVOC by GC/FID via method 8015B - DRO - Soil

SAMPLE PREPARATION ISSUES AND OBSERVATIONS:

The MB associated with these samples is below the PQL but greater than half the PQL. Any detections greater than 5X the MB level, in the associated samples, are flagged with a B. This means that the samples could be biased slightly high by the background level, even though the blank is a non-detect, because the blank level is still high enough to potentially indicate a slight potential bias.

Test Method: SW6010B - ICP - Total - Soil

Test Method: SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Total Hg - Soil

Test Method: VOC by GC/FID via method 8015B - GRO - Soil

Test Method: SM3500-CrB - Chromium, Colorimetric Method - Total Cr(III) calculat - Soil

Test Method: Specific Conductance - Cond. - Soil

The following are subcontracted tests and have been represented to us as having met criteria:

Test Method: SW6020 - ICPMS - Low Level Metals - Soil

Test Method: Chromium, Hexavalent (Colorimetric) - Cr(VI) - Soil

Test Method: SW8270C - Semivolatiles Organics by GC/MS - SC - Soil

Test Method: Sodium Absorption Ratio - Soil

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name:

@ Sump

Matrix: Soil

Collection Date: 7/17/2014 7:45:00AM

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-01B Analysis Date: 7/23/2014 11:57:14AM
Prep Date: 07-21-2014 10:07 Instrument: GC_E
Analytical Method ID: SVOC by GC/FID via method 8015B - DRO File Name: 14072307.D
Prep Method ID: 3550B Dilution Factor: 1
Prep Batch Number: T140721016 Percent Moisture: 10
Report Basis: Dry Weight Basis Analyst Initials: TL
Sample prep wt./vol: 30.03 g Prep Extract Vol: 1.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>	
Diesel Range Organics	n/a	6.2	B	mg/Kg	5.6	1.6				1	
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
o-Terphenyl	84-15-1	1.7		mg/Kg	0.37	0.29	1.9	92.5	50	150	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-01A Analysis Date: 7/25/2014 4:18:00PM
Prep Date: 07-25-2014 09:07 Instrument: Hank-Hg
Analytical Method ID: SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Total H File Name: 072514ss.csv
Prep Method ID: 7471A Dilution Factor: 1
Prep Batch Number: T140724014 Percent Moisture: 10
Report Basis: Dry Weight Basis Analyst Initials: EH
Sample prep wt./vol: 0.63 g Prep Extract Vol: 50.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
Mercury	7439-97-6	ND		mg/Kg	0.044	0.0060				1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-01A Analysis Date: 7/22/2014 3:45:07PM
Prep Date: 07-21-2014 11:07 Instrument: Optima7300Icp
Analytical Method ID: SW6010B - ICP - Total File Name: 072214.csv
Prep Method ID: 3050B Dilution Factor: 1
Prep Batch Number: T140721013 Percent Moisture: 10
Report Basis: Dry Weight Basis Analyst Initials: AC
Sample prep wt./vol: 0.50 g Prep Extract Vol: 50.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
Barium	7440-39-3	360		mg/Kg	0.45	0.15				1
Boron	7440-42-8	11		mg/Kg	5.6	0.70				
Cadmium	7440-43-9	ND		mg/Kg	0.90	0.62				
Chromium	7440-47-3	13		mg/Kg	2.2	1.3				
Copper	7440-50-8	13		mg/Kg	0.67	0.44				
Lead	7439-92-1	ND		mg/Kg	13	12				
Nickel	7440-02-0	12		mg/Kg	4.5	2.8				
Selenium	7784-49-2	ND		mg/Kg	28	24				
Silver	7440-22-4	ND		mg/Kg	1.7	0.32				

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: **Roan Creek Evaporation Pond**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Report Section: **Client Sample Report**

Client Sample Name: **@ Sump**

Matrix: Soil Collection Date: 7/17/2014 7:45:00AM

Lab Sample Number: B1407105-01A Analysis Date: 7/23/2014 5:31:48PM
Prep Date: 07-21-2014 11:07 Instrument: Optima7300Icp
Analytical Method ID: SW6010B - ICP - Total File Name: 072314.csv
Prep Method ID: 3050B Dilution Factor: 1
Prep Batch Number: T140721013 Percent Moisture: 10
Report Basis: Dry Weight Basis Analyst Initials: AC
Sample prep wt./vol: 0.50 g Prep Extract Vol: 50.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Zinc	7440-66-6	35		mg/Kg	0.67	0.25	2

The following test was conducted by:ALS Environmental

Lab Sample Number: B1407105-01D Analysis Date:
Prep Date: Instrument:
Analytical Method ID: SW8270C - Semivolatile Organics by GC/MS - SC File Name:
Prep Method ID: 3550B Dilution Factor:
Prep Batch Number: T140801017 Percent Moisture
Report Basis: As Received Analyst Initials:
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
See subcontractor report							

The following test was conducted by:ALS Environmental

Lab Sample Number: B1407105-01D Analysis Date:
Prep Date: Instrument:
Analytical Method ID: Chromium, Hexavalent (Colorimetric) - Cr(VI) File Name:
Prep Method ID: 3060A Dilution Factor:
Prep Batch Number: T140801019 Percent Moisture
Report Basis: As Received Analyst Initials:
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
See subcontractor report							1

The following test was conducted by:ALS Environmental

Lab Sample Number: B1407105-01D Analysis Date:
Prep Date: Instrument:
Analytical Method ID: SW6020 - ICPMS - Low Level Metals - Sol File Name:
Prep Method ID: Dilution Factor:
Prep Batch Number: T140801020 Percent Moisture
Report Basis: As Received Analyst Initials:
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
See Subcontractor Report							1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: @ Sump

Matrix: Soil Collection Date: 7/17/2014 7:45:00AM

The following test was conducted by: ALS Environmental

Lab Sample Number: B1407105-01D

Analysis Date:

Prep Date:

Instrument:

Analytical Method ID: Sodium Absorption Ratio

File Name:

Prep Method ID:

Dilution Factor:

Prep Batch Number: T140801018

Percent Moisture

Report Basis: As Received

Analyst Initials:

Sample prep wt./vol:

Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
See subcontractor report							

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-01C

Analysis Date: 7/21/2014 1:30:00PM

Prep Date: 07-21-2014 10:07

Instrument: GC_B

Analytical Method ID: Aromatic VOCs by GC/PID via method 8021B - BTEX

File Name: 14072108.D

Prep Method ID: 5030B

Dilution Factor: 1

Prep Batch Number: T140722013

Percent Moisture: 10

Report Basis: Dry Weight Basis

Analyst Initials: CK

Sample prep wt./vol: 5.00 g

Prep Extract Vol: 5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Benzene	71-43-2	ND		ug/Kg	1.1	0.37	1
Ethylbenzene	100-41-4	ND		ug/Kg	1.7	0.51	
Toluene	108-88-3	ND		ug/Kg	1.1	0.22	
Xylenes, Total	1330-20-7	ND		ug/Kg	3.3	0.91	

<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	29		ug/Kg	0.56	0.37	33	86.8	70	130	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-01C

Analysis Date: 7/21/2014 1:30:00PM

Prep Date: 07-21-2014 09:07

Instrument: GC_B

Analytical Method ID: VOC by GC/FID via method 8015B - GRO

File Name: 14072108.D

Prep Method ID: 5030B

Dilution Factor: 1

Prep Batch Number: T140722012

Percent Moisture: 10

Report Basis: Dry Weight Basis

Analyst Initials: CK

Sample prep wt./vol: 5.00 g

Prep Extract Vol: 5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Gasoline Range Organics	n/a	ND		ug/Kg	220	29	1

<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	28		ug/Kg	3.3	1.1	30	92.0	50	150	1

The following test was conducted by: Analytica - Thornton

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: @ Sump

Matrix: Soil Collection Date: 7/17/2014 7:45:00AM

Lab Sample Number: B1407105-01A Analysis Date: 8/1/2014 5:41:16PM
Prep Date: 08-01-2014 17:08 Instrument: calc
Analytical Method ID: SM3500-CrB - Chromium, Colorimetric Method - Total Cr(III) cal File Name:
Prep Method ID: 3500-Cr-B Dilution Factor: 1
Prep Batch Number: T140801022 Percent Moisture
Report Basis: As Received Analyst Initials: KD
Sample prep wt./vol: 1.00 ml Prep Extract Vol: 1.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Chromium, Trivalent	16065-83-1	13		mg/Kg	0.010	0.0020	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-01A Analysis Date: 7/31/2014 2:18:14PM
Prep Date: 07-31-2014 08:07 Instrument: Probe
Analytical Method ID: Specific Conductance - Cond. File Name:
Prep Method ID: 9050A Dilution Factor: 1
Prep Batch Number: T140731011 Percent Moisture
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 39.96 g Prep Extract Vol: 39.96 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Conductance		13,000		umhos/cm	5.0	1.0	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-01A Analysis Date: 7/28/2014 2:45:00PM
Prep Date: 07-28-2014 14:07 Instrument: Probe
Analytical Method ID: Corrosivity in Waste by pH - pH File Name:
Prep Method ID: 9045B Dilution Factor: 1
Prep Batch Number: T140729014 Percent Moisture
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 9.97 g Prep Extract Vol: 9.97 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
pH		7.81		pH	0.10	0.10	1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: Outside Sump

Matrix: Soil Collection Date: 7/17/2014 8:24:00AM

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1407105-02A	Analysis Date:	7/23/2014 1:42:33PM
Prep Date:	07-21-2014 10:07	Instrument:	GC_E
Analytical Method ID:	SVOC by GC/FID via method 8015B - DRO	File Name:	14072309.D
Prep Method ID:	3550B	Dilution Factor:	1
Prep Batch Number:	T140721016	Percent Moisture:	5.87
Report Basis:	Dry Weight Basis	Analyst Initials:	TL
Sample prep wt./vol:	30.06 g	Prep Extract Vol:	1.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
Diesel Range Organics	n/a	ND		mg/Kg	5.3	1.5					1
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
o-Terphenyl	84-15-1	1.2		mg/Kg	0.35	0.28	1.8	69.6	50	150	1

The following test was conducted by: ALS Environmental

Lab Sample Number:	B1407105-02B	Analysis Date:	
Prep Date:		Instrument:	
Analytical Method ID:	Sodium Absorption Ratio	File Name:	
Prep Method ID:		Dilution Factor:	
Prep Batch Number:	T140801018	Percent Moisture:	
Report Basis:	As Received	Analyst Initials:	
Sample prep wt./vol:		Prep Extract Vol:	ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
See subcontractor report											

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1407105-02A	Analysis Date:	7/21/2014 2:04:00PM
Prep Date:	07-21-2014 10:07	Instrument:	GC_B
Analytical Method ID:	Aromatic VOCs by GC/PID via method 8021B - BTEX	File Name:	14072109.D
Prep Method ID:	5030B	Dilution Factor:	1
Prep Batch Number:	T140722013	Percent Moisture:	5.87
Report Basis:	Dry Weight Basis	Analyst Initials:	CK
Sample prep wt./vol:	5.00 g	Prep Extract Vol:	5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
Benzene	71-43-2	ND		ug/Kg	1.1	0.35					1
Ethylbenzene	100-41-4	ND		ug/Kg	1.6	0.49					
Toluene	108-88-3	ND		ug/Kg	1.1	0.21					
Xylenes, Total	1330-20-7	ND		ug/Kg	3.2	0.87					
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	28		ug/Kg	0.53	0.35	32	89.0	70	130	1

The following test was conducted by: Analytica - Thornton

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name:

Outside Sump

Matrix: Soil Collection Date: 7/17/2014 8:24:00AM

Lab Sample Number: B1407105-02A Analysis Date: 7/21/2014 2:04:00PM
Prep Date: 07-21-2014 09:07 Instrument: GC_B
Analytical Method ID: VOC by GC/FID via method 8015B - GRO File Name: 14072109.D
Prep Method ID: 5030B Dilution Factor: 1
Prep Batch Number: T140722012 Percent Moisture: 5.87
Report Basis: Dry Weight Basis Analyst Initials: CK
Sample prep wt./vol: 5.00 g Prep Extract Vol: 5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>	
Gasoline Range Organics	n/a	ND		ug/Kg	210	28				1	
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	22		ug/Kg	3.2	1.1	29	76.9	50	150	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-02A Analysis Date: 7/31/2014 2:18:14PM
Prep Date: 07-31-2014 08:07 Instrument: Probe
Analytical Method ID: Specific Conductance - Cond. File Name:
Prep Method ID: 9050A Dilution Factor: 1
Prep Batch Number: T140731011 Percent Moisture:
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 40.04 g Prep Extract Vol: 40.04 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
Conductance		2,700		umhos/cm	5.0	1.0				1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-02A Analysis Date: 7/28/2014 2:45:00PM
Prep Date: 07-28-2014 14:07 Instrument: Probe
Analytical Method ID: Corrosivity in Waste by pH - pH File Name:
Prep Method ID: 9045B Dilution Factor: 1
Prep Batch Number: T140729014 Percent Moisture:
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 10.02 g Prep Extract Vol: 10.02 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
pH		10.2		pH	0.10	0.10				1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: Outside Fence

Matrix: Soil Collection Date: 7/17/2014 8:35:00AM

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1407105-03A	Analysis Date:	7/23/2014 7:01:14PM
Prep Date:	07-21-2014 10:07	Instrument:	GC_E
Analytical Method ID:	SVOC by GC/FID via method 8015B - DRO	File Name:	14072315.D
Prep Method ID:	3550B	Dilution Factor:	1
Prep Batch Number:	T140721016	Percent Moisture:	12
Report Basis:	Dry Weight Basis	Analyst Initials:	TL
Sample prep wt./vol:	30.04 g	Prep Extract Vol:	1.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
Diesel Range Organics	n/a	10	B	mg/Kg	5.7	1.6					1

<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
o-Terphenyl	84-15-1	1.9		mg/Kg	0.38	0.30	1.9	99.1	50	150	1

The following test was conducted by: Energy Laboratories

Lab Sample Number:	B1407105-03B	Analysis Date:	
Prep Date:		Instrument:	
Analytical Method ID:	Sodium Absorption Ratio	File Name:	
Prep Method ID:		Dilution Factor:	
Prep Batch Number:	T140801018	Percent Moisture:	
Report Basis:	As Received	Analyst Initials:	
Sample prep wt./vol:		Prep Extract Vol:	ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
See subcontractor report											

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1407105-03A	Analysis Date:	7/21/2014 2:38:00PM
Prep Date:	07-21-2014 10:07	Instrument:	GC_B
Analytical Method ID:	Aromatic VOCs by GC/PID via method 8021B - BTEX	File Name:	14072110.D
Prep Method ID:	5030B	Dilution Factor:	1
Prep Batch Number:	T140722013	Percent Moisture:	12
Report Basis:	Dry Weight Basis	Analyst Initials:	CK
Sample prep wt./vol:	5.00 g	Prep Extract Vol:	5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
Benzene	71-43-2	ND		ug/Kg	1.1	0.37					1
Ethylbenzene	100-41-4	ND		ug/Kg	1.7	0.52					
Toluene	108-88-3	ND		ug/Kg	1.1	0.22					
Xylenes, Total	1330-20-7	ND		ug/Kg	3.4	0.93					

<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	30		ug/Kg	0.57	0.37	34	87.2	70	130	1

The following test was conducted by: Analytica - Thornton

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: **Outside Fence**

Matrix: Soil Collection Date: 7/17/2014 8:35:00AM

Lab Sample Number: B1407105-03A Analysis Date: 7/21/2014 2:38:00PM
Prep Date: 07-21-2014 09:07 Instrument: GC_B
Analytical Method ID: VOC by GC/FID via method 8015B - GRO File Name: 14072110.D
Prep Method ID: 5030B Dilution Factor: 1
Prep Batch Number: T140722012 Percent Moisture: 12
Report Basis: Dry Weight Basis Analyst Initials: CK
Sample prep wt./vol: 5.00 g Prep Extract Vol: 5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>	
Gasoline Range Organics	n/a	ND		ug/Kg	230	30				1	
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	27		ug/Kg	3.4	1.1	31	88.9	50	150	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-03A Analysis Date: 7/31/2014 2:18:14PM
Prep Date: 07-31-2014 08:07 Instrument: Probe
Analytical Method ID: Specific Conductance - Cond. File Name:
Prep Method ID: 9050A Dilution Factor: 1
Prep Batch Number: T140731011 Percent Moisture:
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 39.99 g Prep Extract Vol: 39.99 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
Conductance		7,100		umhos/cm	5.0	1.0				1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-03A Analysis Date: 7/28/2014 2:45:00PM
Prep Date: 07-28-2014 14:07 Instrument: Probe
Analytical Method ID: Corrosivity in Waste by pH - pH File Name:
Prep Method ID: 9045B Dilution Factor: 1
Prep Batch Number: T140729014 Percent Moisture:
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 9.95 g Prep Extract Vol: 9.95 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
pH		9.69		pH	0.10	0.10				1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name:

P-1

Matrix: Soil

Collection Date: 7/17/2014 9:00:00AM

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-04A Analysis Date: 7/23/2014 11:23:32PM
Prep Date: 07-21-2014 10:07 Instrument: GC_E
Analytical Method ID: SVOC by GC/FID via method 8015B - DRO File Name: 14072320.D
Prep Method ID: 3550B Dilution Factor: 1
Prep Batch Number: T140721016 Percent Moisture: 3.33
Report Basis: Dry Weight Basis Analyst Initials: TL
Sample prep wt./vol: 30.15 g Prep Extract Vol: 1.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>	
Diesel Range Organics	n/a	8.7	B	mg/Kg	5.1	1.5				1	
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
o-Terphenyl	84-15-1	1.5		mg/Kg	0.34	0.27	1.7	86.9	50	150	1

The following test was conducted by: ALS Environmental

Lab Sample Number: B1407105-04B Analysis Date:
Prep Date: Instrument:
Analytical Method ID: Sodium Absorption Ratio File Name:
Prep Method ID: Dilution Factor:
Prep Batch Number: T140801018 Percent Moisture
Report Basis: As Received Analyst Initials:
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
See subcontractor report										

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-04A Analysis Date: 7/21/2014 3:12:00PM
Prep Date: 07-21-2014 10:07 Instrument: GC_B
Analytical Method ID: Aromatic VOCs by GC/PID via method 8021B - BTEX File Name: 14072111.D
Prep Method ID: 5030B Dilution Factor: 1
Prep Batch Number: T140722013 Percent Moisture: 3.33
Report Basis: Dry Weight Basis Analyst Initials: CK
Sample prep wt./vol: 5.00 g Prep Extract Vol: 5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>	
Benzene	71-43-2	ND		ug/Kg	1.0	0.34				1	
Ethylbenzene	100-41-4	ND		ug/Kg	1.6	0.48					
Toluene	108-88-3	ND		ug/Kg	1.0	0.20					
Xylenes, Total	1330-20-7	ND		ug/Kg	3.1	0.85					
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	27		ug/Kg	0.52	0.34	31	86.6	70	130	1

The following test was conducted by: Analytica - Thornton

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name:

P-1

Matrix: Soil Collection Date: 7/17/2014 9:00:00AM

Lab Sample Number: B1407105-04A Analysis Date: 7/21/2014 3:12:00PM
Prep Date: 07-21-2014 09:07 Instrument: GC_B
Analytical Method ID: VOC by GC/FID via method 8015B - GRO File Name: 14072111.D
Prep Method ID: 5030B Dilution Factor: 1
Prep Batch Number: T140722012 Percent Moisture: 3.33
Report Basis: Dry Weight Basis Analyst Initials: CK
Sample prep wt./vol: 5.00 g Prep Extract Vol: 5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>	
Gasoline Range Organics	n/a	ND		ug/Kg	210	27				1	
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	24		ug/Kg	3.1	1.0	28	86.1	50	150	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-04A Analysis Date: 7/31/2014 2:18:14PM
Prep Date: 07-31-2014 08:07 Instrument: Probe
Analytical Method ID: Specific Conductance - Cond. File Name:
Prep Method ID: 9050A Dilution Factor: 1
Prep Batch Number: T140731011 Percent Moisture:
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 40.05 g Prep Extract Vol: 40.05 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
Conductance		6,300		umhos/cm	5.0	1.0				1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-04A Analysis Date: 7/28/2014 2:45:00PM
Prep Date: 07-28-2014 14:07 Instrument: Probe
Analytical Method ID: Corrosivity in Waste by pH - pH File Name:
Prep Method ID: 9045B Dilution Factor: 1
Prep Batch Number: T140729014 Percent Moisture:
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 10.03 g Prep Extract Vol: 10.03 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
pH		8.10		pH	0.10	0.10				1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: P-2

Matrix: Soil Collection Date: 7/17/2014 9:12:00AM

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1407105-05B	Analysis Date:	7/24/2014 1:07:13AM
Prep Date:	07-21-2014 10:07	Instrument:	GC_E
Analytical Method ID:	SVOC by GC/FID via method 8015B - DRO	File Name:	14072322.D
Prep Method ID:	3550B	Dilution Factor:	1
Prep Batch Number:	T140721016	Percent Moisture:	4.69
Report Basis:	Dry Weight Basis	Analyst Initials:	TL
Sample prep wt./vol:	30.06 g	Prep Extract Vol:	1.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
Diesel Range Organics	n/a	21		mg/Kg	5.2	1.5					1
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
o-Terphenyl	84-15-1	1.9		mg/Kg	0.35	0.27	1.7	109	50	150	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1407105-05A	Analysis Date:	7/25/2014 4:26:00PM
Prep Date:	07-25-2014 09:07	Instrument:	Hank-Hg
Analytical Method ID:	SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Total H	File Name:	072514ss.csv
Prep Method ID:	7471A	Dilution Factor:	1
Prep Batch Number:	T140724014	Percent Moisture:	4.69
Report Basis:	Dry Weight Basis	Analyst Initials:	EH
Sample prep wt./vol:	0.65 g	Prep Extract Vol:	50.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
Mercury	7439-97-6	ND		mg/Kg	0.040	0.0055					1

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1407105-05A	Analysis Date:	7/22/2014 3:47:48PM
Prep Date:	07-21-2014 11:07	Instrument:	Optima7300Icp
Analytical Method ID:	SW6010B - ICP - Total	File Name:	072214.csv
Prep Method ID:	3050B	Dilution Factor:	1
Prep Batch Number:	T140721013	Percent Moisture:	4.69
Report Basis:	Dry Weight Basis	Analyst Initials:	AC
Sample prep wt./vol:	0.50 g	Prep Extract Vol:	50.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
Barium	7440-39-3	380		mg/Kg	0.42	0.14					1
Boron	7440-42-8	13		mg/Kg	5.2	0.66					
Cadmium	7440-43-9	ND		mg/Kg	0.84	0.58					
Chromium	7440-47-3	16		mg/Kg	2.1	1.2					
Copper	7440-50-8	13		mg/Kg	0.63	0.41					
Lead	7439-92-1	ND		mg/Kg	13	11					
Nickel	7440-02-0	12		mg/Kg	4.2	2.6					
Selenium	7784-49-2	ND		mg/Kg	26	22					
Silver	7440-22-4	ND		mg/Kg	1.6	0.30					

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name:

P-2

Matrix: Soil Collection Date: 7/17/2014 9:12:00AM

Lab Sample Number: B1407105-05A Analysis Date: 7/23/2014 5:35:38PM
Prep Date: 07-21-2014 11:07 Instrument: Optima7300Icp
Analytical Method ID: SW6010B - ICP - Total File Name: 072314.csv
Prep Method ID: 3050B Dilution Factor: 1
Prep Batch Number: T140721013 Percent Moisture: 4.69
Report Basis: Dry Weight Basis Analyst Initials: AC
Sample prep wt./vol: 0.50 g Prep Extract Vol: 50.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Zinc	7440-66-6	43		mg/Kg	0.63	0.23	2

The following test was conducted by:ALS Environmental

Lab Sample Number: B1407105-05D Analysis Date:
Prep Date: Instrument:
Analytical Method ID: SW8270C - Semivolatile Organics by GC/MS - SC File Name:
Prep Method ID: 3550B Dilution Factor:
Prep Batch Number: T140801017 Percent Moisture
Report Basis: As Received Analyst Initials:
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
See subcontractor report							

The following test was conducted by:ALS Environmental

Lab Sample Number: B1407105-05D Analysis Date:
Prep Date: Instrument:
Analytical Method ID: Chromium, Hexavalent (Colorimetric) - Cr(VI) File Name:
Prep Method ID: 3060A Dilution Factor:
Prep Batch Number: T140801019 Percent Moisture
Report Basis: As Received Analyst Initials:
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Hexavalent Chromium				mg/Kg	1.0	0.11	1

The following test was conducted by:ALS Environmental

Lab Sample Number: B1407105-05D Analysis Date:
Prep Date: Instrument:
Analytical Method ID: SW6020 - ICPMS - Low Level Metals - Sol File Name:
Prep Method ID: Dilution Factor:
Prep Batch Number: T140801020 Percent Moisture
Report Basis: As Received Analyst Initials:
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
See Subcontractor Report				NA	1.0	1.0	1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: P-2

Matrix: Soil Collection Date: 7/17/2014 9:12:00AM

The following test was conducted by: ALS Environmental

Lab Sample Number: B1407105-05D

Analysis Date:

Prep Date:

Instrument:

Analytical Method ID: Sodium Absorption Ratio

File Name:

Prep Method ID:

Dilution Factor:

Prep Batch Number: T140801018

Percent Moisture

Report Basis: As Received

Analyst Initials:

Sample prep wt./vol:

Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
See subcontractor report							

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-05C

Analysis Date: 7/22/2014 2:33:00PM

Prep Date: 07-22-2014 10:07

Instrument: GC_B

Analytical Method ID: Aromatic VOCs by GC/PID via method 8021B - BTEX

File Name: 14072208.D

Prep Method ID: 5030B

Dilution Factor: 1

Prep Batch Number: T140723008

Percent Moisture 4.69

Report Basis: Dry Weight Basis

Analyst Initials: CK

Sample prep wt./vol: 5.00 g

Prep Extract Vol: 5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Benzene	71-43-2	ND		ug/Kg	1.0	0.35	1
Ethylbenzene	100-41-4	ND		ug/Kg	1.6	0.48	
Toluene	108-88-3	ND		ug/Kg	1.0	0.20	
Xylenes, Total	1330-20-7	ND		ug/Kg	3.1	0.86	

<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	26		ug/Kg	0.52	0.35	31	81.4	70	130	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-05C

Analysis Date: 7/22/2014 2:33:00PM

Prep Date: 07-22-2014 10:07

Instrument: GC_B

Analytical Method ID: VOC by GC/FID via method 8015B - GRO

File Name: 14072208.D

Prep Method ID: 5030B

Dilution Factor: 1

Prep Batch Number: T140723006

Percent Moisture 4.69

Report Basis: Dry Weight Basis

Analyst Initials: CK

Sample prep wt./vol: 5.00 g

Prep Extract Vol: 5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Gasoline Range Organics	n/a	ND		ug/Kg	210	28	1

<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	26		ug/Kg	3.1	1.0	31	81.5	50	150	1

The following test was conducted by: Analytica - Thornton

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105
Project: **Roan Creek Evaporation Pond**
Client: **Maralex Resources, Inc.**
Client Project Number: **None**

Report Section: Client Sample Report

Client Sample Name: **P-2**

Matrix: Soil Collection Date: 7/17/2014 9:12:00AM

Lab Sample Number: B1407105-05A Analysis Date: 8/1/2014 5:41:16PM
Prep Date: 08-01-2014 17:08 Instrument: clac
Analytical Method ID: SM3500-CrB - Chromium, Colorimetric Method - Total Cr(III) cal File Name:
Prep Method ID: 3500-Cr-B Dilution Factor: 1
Prep Batch Number: T140801022 Percent Moisture
Report Basis: As Received Analyst Initials: KD
Sample prep wt./vol: 1.00 ml Prep Extract Vol: 1.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Chromium, Trivalent	16065-83-1	16		mg/Kg	0.010	0.0020	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-05A Analysis Date: 7/31/2014 2:18:14PM
Prep Date: 07-31-2014 08:07 Instrument: Probe
Analytical Method ID: Specific Conductance - Cond. File Name:
Prep Method ID: 9050A Dilution Factor: 1
Prep Batch Number: T140731011 Percent Moisture
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 40.04 g Prep Extract Vol: 40.04 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Conductance		2,800		umhos/cm	5.0	1.0	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-05A Analysis Date: 7/28/2014 2:45:00PM
Prep Date: 07-28-2014 14:07 Instrument: Probe
Analytical Method ID: Corrosivity in Waste by pH - pH File Name:
Prep Method ID: 9045B Dilution Factor: 1
Prep Batch Number: T140729014 Percent Moisture
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 9.98 g Prep Extract Vol: 9.98 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
pH		8.41		pH	0.10	0.10	1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: P-3

Matrix: Soil Collection Date: 7/17/2014 9:28:00AM

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1407105-06A	Analysis Date:	7/24/2014 2:50:13AM
Prep Date:	07-21-2014 10:07	Instrument:	GC_E
Analytical Method ID:	SVOC by GC/FID via method 8015B - DRO	File Name:	14072324.D
Prep Method ID:	3550B	Dilution Factor:	1
Prep Batch Number:	T140721016	Percent Moisture:	13
Report Basis:	Dry Weight Basis	Analyst Initials:	TL
Sample prep wt./vol:	30.05 g	Prep Extract Vol:	1.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
Diesel Range Organics	n/a	11	B	mg/Kg	5.7	1.6					1
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
o-Terphenyl	84-15-1	1.7		mg/Kg	0.38	0.30	1.9	89.1	50	150	1

The following test was conducted by: ALS Environmental

Lab Sample Number:	B1407105-06B	Analysis Date:	
Prep Date:		Instrument:	
Analytical Method ID:	Sodium Absorption Ratio	File Name:	
Prep Method ID:		Dilution Factor:	
Prep Batch Number:	T140801018	Percent Moisture:	
Report Basis:	As Received	Analyst Initials:	
Sample prep wt./vol:		Prep Extract Vol:	ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
See subcontractor report											

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1407105-06A	Analysis Date:	7/22/2014 3:06:00PM
Prep Date:	07-22-2014 10:07	Instrument:	GC_B
Analytical Method ID:	Aromatic VOCs by GC/PID via method 8021B - BTEX	File Name:	14072209.D
Prep Method ID:	5030B	Dilution Factor:	1
Prep Batch Number:	T140723008	Percent Moisture:	13
Report Basis:	Dry Weight Basis	Analyst Initials:	CK
Sample prep wt./vol:	5.00 g	Prep Extract Vol:	5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
Benzene	71-43-2	ND		ug/Kg	1.1	0.38					1
Ethylbenzene	100-41-4	ND		ug/Kg	1.7	0.53					
Toluene	108-88-3	ND		ug/Kg	1.1	0.22					
Xylenes, Total	1330-20-7	ND		ug/Kg	3.4	0.94					
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	28		ug/Kg	0.57	0.38	34	82.4	70	130	1

The following test was conducted by: Analytica - Thornton

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: **P-3**

Matrix: Soil Collection Date: 7/17/2014 9:28:00AM

Lab Sample Number: B1407105-06A Analysis Date: 7/22/2014 3:06:00PM
Prep Date: 07-22-2014 10:07 Instrument: GC_B
Analytical Method ID: VOC by GC/FID via method 8015B - GRO File Name: 14072209.D
Prep Method ID: 5030B Dilution Factor: 1
Prep Batch Number: T140723006 Percent Moisture: 13
Report Basis: Dry Weight Basis Analyst Initials: CK
Sample prep wt./vol: 5.00 g Prep Extract Vol: 5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Gasoline Range Organics	n/a	ND		ug/Kg	230	30	1

<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	27		ug/Kg	3.4	1.1	34	78.8	50	150	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-06A Analysis Date: 7/31/2014 2:18:14PM
Prep Date: 07-31-2014 08:07 Instrument: Probe
Analytical Method ID: Specific Conductance - Cond. File Name:
Prep Method ID: 9050A Dilution Factor: 1
Prep Batch Number: T140731011 Percent Moisture:
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 40.03 g Prep Extract Vol: 40.03 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Conductance		3,000		umhos/cm	5.0	1.0	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-06A Analysis Date: 7/28/2014 2:45:00PM
Prep Date: 07-28-2014 14:07 Instrument: Probe
Analytical Method ID: Corrosivity in Waste by pH - pH File Name:
Prep Method ID: 9045B Dilution Factor: 1
Prep Batch Number: T140729014 Percent Moisture:
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 10.02 g Prep Extract Vol: 10.02 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
pH		8.57		pH	0.10	0.10	1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name:

P-4

Matrix: Soil

Collection Date: 7/17/2014 9:35:00AM

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-07B Analysis Date: 7/24/2014 4:32:10AM
Prep Date: 07-21-2014 10:07 Instrument: GC_E
Analytical Method ID: SVOC by GC/FID via method 8015B - DRO File Name: 14072326.D
Prep Method ID: 3550B Dilution Factor: 1
Prep Batch Number: T140721016 Percent Moisture: 4.86
Report Basis: Dry Weight Basis Analyst Initials: TL
Sample prep wt./vol: 30.02 g Prep Extract Vol: 1.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>	
Diesel Range Organics	n/a	15	B	mg/Kg	5.3	1.5				1	
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
o-Terphenyl	84-15-1	1.6		mg/Kg	0.35	0.27	1.8	89.9	50	150	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-07A Analysis Date: 7/25/2014 4:28:00PM
Prep Date: 07-25-2014 09:07 Instrument: Hank-Hg
Analytical Method ID: SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Total H File Name: 072514ss.csv
Prep Method ID: 7471A Dilution Factor: 1
Prep Batch Number: T140724014 Percent Moisture: 4.86
Report Basis: Dry Weight Basis Analyst Initials: EH
Sample prep wt./vol: 0.62 g Prep Extract Vol: 50.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
Mercury	7439-97-6	ND		mg/Kg	0.043	0.0058				1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-07A Analysis Date: 7/22/2014 3:50:48PM
Prep Date: 07-21-2014 11:07 Instrument: Optima7300Icp
Analytical Method ID: SW6010B - ICP - Total File Name: 072214.csv
Prep Method ID: 3050B Dilution Factor: 1
Prep Batch Number: T140721013 Percent Moisture: 4.86
Report Basis: Dry Weight Basis Analyst Initials: AC
Sample prep wt./vol: 0.50 g Prep Extract Vol: 50.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
Barium	7440-39-3	380		mg/Kg	0.42	0.14				1
Boron	7440-42-8	13		mg/Kg	5.3	0.66				
Cadmium	7440-43-9	ND		mg/Kg	0.84	0.58				
Chromium	7440-47-3	14		mg/Kg	2.1	1.2				
Copper	7440-50-8	12		mg/Kg	0.63	0.41				
Lead	7439-92-1	ND		mg/Kg	13	11				
Nickel	7440-02-0	11		mg/Kg	4.2	2.6				
Selenium	7784-49-2	ND		mg/Kg	26	23				
Silver	7440-22-4	ND		mg/Kg	1.6	0.30				

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: **P-4**

Matrix: Soil Collection Date: 7/17/2014 9:35:00AM

Lab Sample Number: B1407105-07A Analysis Date: 7/23/2014 5:41:06PM
Prep Date: 07-21-2014 11:07 Instrument: Optima7300Icp
Analytical Method ID: SW6010B - ICP - Total File Name: 072314.csv
Prep Method ID: 3050B Dilution Factor: 1
Prep Batch Number: T140721013 Percent Moisture: 4.86
Report Basis: Dry Weight Basis Analyst Initials: AC
Sample prep wt./vol: 0.50 g Prep Extract Vol: 50.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Zinc	7440-66-6	43		mg/Kg	0.63	0.23	2

The following test was conducted by:ALS Environmental

Lab Sample Number: B1407105-07D Analysis Date:
Prep Date: Instrument:
Analytical Method ID: SW8270C - Semivolatile Organics by GC/MS - SC File Name:
Prep Method ID: 3550B Dilution Factor:
Prep Batch Number: T140801017 Percent Moisture
Report Basis: As Received Analyst Initials:
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
See subcontractor report							

The following test was conducted by:ALS Environmental

Lab Sample Number: B1407105-07D Analysis Date:
Prep Date: Instrument:
Analytical Method ID: Chromium, Hexavalent (Colorimetric) - Cr(VI) File Name:
Prep Method ID: 3060A Dilution Factor:
Prep Batch Number: T140801019 Percent Moisture
Report Basis: As Received Analyst Initials:
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
See subcontractor report							1

The following test was conducted by:ALS Environmental

Lab Sample Number: B1407105-07D Analysis Date:
Prep Date: Instrument:
Analytical Method ID: SW6020 - ICPMS - Low Level Metals - Sol File Name:
Prep Method ID: Dilution Factor:
Prep Batch Number: T140801020 Percent Moisture
Report Basis: As Received Analyst Initials:
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
See Subcontractor Report				NA	1.0	1.0	1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105
Project: Roan Creek Evaporation Pond
Client: Maralex Resources, Inc.
Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: P-4

Matrix: Soil Collection Date: 7/17/2014 9:35:00AM

The following test was conducted by: ALS Environmental

Lab Sample Number: B1407105-07D	Analysis Date:
Prep Date:	Instrument:
Analytical Method ID: Sodium Absorption Ratio	File Name:
Prep Method ID:	Dilution Factor:
Prep Batch Number: T140801018	Percent Moisture:
Report Basis: As Received	Analyst Initials:
Sample prep wt./vol:	Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
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See subcontractor report

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-07C	Analysis Date:	7/22/2014 3:40:00PM
Prep Date: 07-22-2014 10:07	Instrument:	GC_B
Analytical Method ID: Aromatic VOCs by GC/PID via method 8021B - BTEX	File Name:	14072210.D
Prep Method ID: 5030B	Dilution Factor:	1
Prep Batch Number: T140723008	Percent Moisture:	4.86
Report Basis: Dry Weight Basis	Analyst Initials:	CK
Sample prep wt./vol: 5.00 g	Prep Extract Vol:	5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Benzene	71-43-2	ND		ug/Kg	1.1	0.35	1
Ethylbenzene	100-41-4	ND		ug/Kg	1.6	0.48	
Toluene	108-88-3	ND		ug/Kg	1.1	0.20	
Xylenes, Total	1330-20-7	ND		ug/Kg	3.2	0.86	

<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	27		ug/Kg	0.53	0.35	32	84.4	70	130	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-07C	Analysis Date:	7/22/2014 3:40:00PM
Prep Date: 07-22-2014 10:07	Instrument:	GC_B
Analytical Method ID: VOC by GC/FID via method 8015B - GRO	File Name:	14072210.D
Prep Method ID: 5030B	Dilution Factor:	1
Prep Batch Number: T140723006	Percent Moisture:	4.86
Report Basis: Dry Weight Basis	Analyst Initials:	CK
Sample prep wt./vol: 5.00 g	Prep Extract Vol:	5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
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Gasoline Range Organics n/a ND ug/Kg 210 28 1

<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	25		ug/Kg	3.2	1.1	32	80.2	50	150	1

The following test was conducted by: Analytica - Thornton

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name:

P-4

Matrix: Soil Collection Date: 7/17/2014 9:35:00AM

Lab Sample Number: B1407105-07A Analysis Date: 8/1/2014 5:41:16PM
Prep Date: 08-01-2014 17:08 Instrument: calc
Analytical Method ID: SM3500-CrB - Chromium, Colorimetric Method - Total Cr(III) cal File Name:
Prep Method ID: 3500-Cr-B Dilution Factor: 1
Prep Batch Number: T140801022 Percent Moisture
Report Basis: As Received Analyst Initials: KD
Sample prep wt./vol: 1.00 ml Prep Extract Vol: 1.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Chromium, Trivalent	16065-83-1	14		mg/Kg	0.010	0.0020	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-07A Analysis Date: 7/31/2014 2:18:14PM
Prep Date: 07-31-2014 08:07 Instrument: Probe
Analytical Method ID: Specific Conductance - Cond. File Name:
Prep Method ID: 9050A Dilution Factor: 1
Prep Batch Number: T140731011 Percent Moisture
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 39.96 g Prep Extract Vol: 39.96 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Conductance		6,300		umhos/cm	5.0	1.0	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-07A Analysis Date: 7/28/2014 2:45:00PM
Prep Date: 07-28-2014 14:07 Instrument: Probe
Analytical Method ID: Corrosivity in Waste by pH - pH File Name:
Prep Method ID: 9045B Dilution Factor: 1
Prep Batch Number: T140729014 Percent Moisture
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 9.98 g Prep Extract Vol: 9.98 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
pH		8.37		pH	0.10	0.10	1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: P-5

Matrix: Soil Collection Date: 7/17/2014 9:45:00AM

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1407105-08A	Analysis Date:	7/24/2014 6:13:35AM
Prep Date:	07-21-2014 10:07	Instrument:	GC_E
Analytical Method ID:	SVOC by GC/FID via method 8015B - DRO	File Name:	14072328.D
Prep Method ID:	3550B	Dilution Factor:	1
Prep Batch Number:	T140721016	Percent Moisture:	13
Report Basis:	Dry Weight Basis	Analyst Initials:	TL
Sample prep wt./vol:	30.05 g	Prep Extract Vol:	1.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
Diesel Range Organics	n/a	7.0	B	mg/Kg	5.7	1.6					1
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
o-Terphenyl	84-15-1	1.6		mg/Kg	0.38	0.30	1.9	84.0	50	150	1

The following test was conducted by: ALS Environmental

Lab Sample Number:	B1407105-08B	Analysis Date:	
Prep Date:		Instrument:	
Analytical Method ID:	Sodium Absorption Ratio	File Name:	
Prep Method ID:		Dilution Factor:	
Prep Batch Number:	T140801018	Percent Moisture:	
Report Basis:	As Received	Analyst Initials:	
Sample prep wt./vol:		Prep Extract Vol:	ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
See subcontractor report											

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1407105-08A	Analysis Date:	7/22/2014 4:14:00PM
Prep Date:	07-22-2014 10:07	Instrument:	GC_B
Analytical Method ID:	Aromatic VOCs by GC/PID via method 8021B - BTEX	File Name:	14072211.D
Prep Method ID:	5030B	Dilution Factor:	1
Prep Batch Number:	T140723008	Percent Moisture:	13
Report Basis:	Dry Weight Basis	Analyst Initials:	CK
Sample prep wt./vol:	5.00 g	Prep Extract Vol:	5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
Benzene	71-43-2	ND		ug/Kg	1.1	0.38					1
Ethylbenzene	100-41-4	ND		ug/Kg	1.7	0.53					
Toluene	108-88-3	ND		ug/Kg	1.1	0.22					
Xylenes, Total	1330-20-7	ND		ug/Kg	3.4	0.94					
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	30		ug/Kg	0.57	0.38	34	86.6	70	130	1

The following test was conducted by: Analytica - Thornton

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name:

P-5

Matrix: Soil Collection Date: 7/17/2014 9:45:00AM

Lab Sample Number: B1407105-08A Analysis Date: 7/22/2014 4:14:00PM
Prep Date: 07-22-2014 10:07 Instrument: GC_B
Analytical Method ID: VOC by GC/FID via method 8015B - GRO File Name: 14072211.D
Prep Method ID: 5030B Dilution Factor: 1
Prep Batch Number: T140723006 Percent Moisture: 13
Report Basis: Dry Weight Basis Analyst Initials: CK
Sample prep wt./vol: 5.00 g Prep Extract Vol: 5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>	
Gasoline Range Organics	n/a	ND		ug/Kg	230	30				1	
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	28		ug/Kg	3.4	1.1	34	82.7	50	150	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-08A Analysis Date: 7/31/2014 2:18:14PM
Prep Date: 07-31-2014 08:07 Instrument: Probe
Analytical Method ID: Specific Conductance - Cond. File Name:
Prep Method ID: 9050A Dilution Factor: 1
Prep Batch Number: T140731011 Percent Moisture:
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 40.04 g Prep Extract Vol: 40.04 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
Conductance		17,000		umhos/cm	5.0	1.0				1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-08A Analysis Date: 7/28/2014 2:45:00PM
Prep Date: 07-28-2014 14:07 Instrument: Probe
Analytical Method ID: Corrosivity in Waste by pH - pH File Name:
Prep Method ID: 9045B Dilution Factor: 1
Prep Batch Number: T140729014 Percent Moisture:
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 9.97 g Prep Extract Vol: 9.97 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
pH		8.87		pH	0.10	0.10				1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: @ Tank

Matrix: Soil

Collection Date: 7/17/2014 10:10:00AM

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-09A Analysis Date: 7/24/2014 7:55:39AM
Prep Date: 07-21-2014 10:07 Instrument: GC_E
Analytical Method ID: SVOC by GC/FID via method 8015B - DRO File Name: 14072330.D
Prep Method ID: 3550B Dilution Factor: 1
Prep Batch Number: T140721016 Percent Moisture: 9.22
Report Basis: Dry Weight Basis Analyst Initials: TL
Sample prep wt./vol: 30.16 g Prep Extract Vol: 1.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>	
Diesel Range Organics	n/a	7.5	B	mg/Kg	5.5	1.6				1	
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
o-Terphenyl	84-15-1	1.0		mg/Kg	0.37	0.29	1.8	57.1	50	150	1

The following test was conducted by: ALS Environmental

Lab Sample Number: B1407105-09B Analysis Date:
Prep Date: Instrument:
Analytical Method ID: Sodium Absorption Ratio File Name:
Prep Method ID: Dilution Factor:
Prep Batch Number: T140801018 Percent Moisture
Report Basis: As Received Analyst Initials:
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
See subcontractor report										

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-09A Analysis Date: 7/22/2014 4:47:00PM
Prep Date: 07-22-2014 10:07 Instrument: GC_B
Analytical Method ID: Aromatic VOCs by GC/PID via method 8021B - BTEX File Name: 14072212.D
Prep Method ID: 5030B Dilution Factor: 1
Prep Batch Number: T140723008 Percent Moisture: 9.22
Report Basis: Dry Weight Basis Analyst Initials: CK
Sample prep wt./vol: 5.00 g Prep Extract Vol: 5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>	
Benzene	71-43-2	ND		ug/Kg	1.1	0.36				1	
Ethylbenzene	100-41-4	ND		ug/Kg	1.7	0.51					
Toluene	108-88-3	ND		ug/Kg	1.1	0.21					
Xylenes, Total	1330-20-7	ND		ug/Kg	3.3	0.90					
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	28		ug/Kg	0.55	0.36	33	85.7	70	130	1

The following test was conducted by: Analytica - Thornton

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: @ Tank

Matrix: Soil Collection Date: 7/17/2014 10:10:00AM

Lab Sample Number: B1407105-09A Analysis Date: 7/22/2014 4:47:00PM
Prep Date: 07-22-2014 10:07 Instrument: GC_B
Analytical Method ID: VOC by GC/FID via method 8015B - GRO File Name: 14072212.D
Prep Method ID: 5030B Dilution Factor: 1
Prep Batch Number: T140723006 Percent Moisture: 9.22
Report Basis: Dry Weight Basis Analyst Initials: CK
Sample prep wt./vol: 5.00 g Prep Extract Vol: 5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>	
Gasoline Range Organics	n/a	ND		ug/Kg	220	29				1	
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	27		ug/Kg	3.3	1.1	33	81.1	50	150	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-09A Analysis Date: 7/31/2014 2:18:14PM
Prep Date: 07-31-2014 08:07 Instrument: Probe
Analytical Method ID: Specific Conductance - Cond. File Name:
Prep Method ID: 9050A Dilution Factor: 1
Prep Batch Number: T140731011 Percent Moisture:
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 40.03 g Prep Extract Vol: 40.03 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
Conductance		4,500		umhos/cm	5.0	1.0				1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1407105-09A Analysis Date: 7/28/2014 2:45:00PM
Prep Date: 07-28-2014 14:07 Instrument: Probe
Analytical Method ID: Corrosivity in Waste by pH - pH File Name:
Prep Method ID: 9045B Dilution Factor: 1
Prep Batch Number: T140729014 Percent Moisture:
Report Basis: As Received Analyst Initials: sc
Sample prep wt./vol: 9.96 g Prep Extract Vol: 9.96 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
pH		8.39		pH	0.10	0.10				1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Method Blank Report

Client Sample Name:

MB

Matrix: Solid

Collection Date: 7/21/2014 10:00:00AM

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	T140721016-MB	Analysis Date:	7/23/2014 10:15:09AM
Prep Date:	07-21-2014 10:07	Instrument:	GC_E
Analytical Method ID:	SVOC by GC/FID via method 8015B - DRO	File Name:	14072305.D
Prep Method ID:	3550B	Dilution Factor:	1
Prep Batch Number:	T140721016	Percent Moisture:	NA
Report Basis:	As Received	Analyst Initials:	TL
Sample prep wt./vol:	30.00 g	Prep Extract Vol:	1.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>	
Diesel Range Organics	n/a	ND		mg/Kg	5.0	1.4				1	
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
o-Terphenyl	84-15-1	1.8		mg/Kg	0.33	0.26	1.7	110	50	150	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	T140724014-MB	Analysis Date:	7/25/2014 4:15:00PM
Prep Date:	07-25-2014 09:07	Instrument:	Hank-Hg
Analytical Method ID:	SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Total H	File Name:	072514ss.csv
Prep Method ID:	7471A	Dilution Factor:	1
Prep Batch Number:	T140724014	Percent Moisture:	NA
Report Basis:	As Received	Analyst Initials:	EH
Sample prep wt./vol:	0.60 g	Prep Extract Vol:	50.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
Mercury	7439-97-6	ND		mg/Kg	0.042	0.0057				1

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	T140721013-MB	Analysis Date:	7/22/2014 2:39:42PM
Prep Date:	07-21-2014 11:07	Instrument:	Optima7300Icp
Analytical Method ID:	SW6010B - ICP - Total	File Name:	072214.csv
Prep Method ID:	3050B	Dilution Factor:	1
Prep Batch Number:	T140721013	Percent Moisture:	NA
Report Basis:	As Received	Analyst Initials:	AC
Sample prep wt./vol:	0.50 g	Prep Extract Vol:	50.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>				<u>run #:</u>
Barium	7440-39-3	ND		mg/Kg	0.40	0.13				2
Boron	7440-42-8	ND		mg/Kg	5.0	0.63				
Cadmium	7440-43-9	ND		mg/Kg	0.80	0.56				
Chromium	7440-47-3	ND		mg/Kg	2.0	1.2				
Copper	7440-50-8	ND		mg/Kg	0.60	0.39				
Lead	7439-92-1	ND		mg/Kg	12	11				
Nickel	7440-02-0	ND		mg/Kg	4.0	2.5				
Selenium	7784-49-2	ND		mg/Kg	25	21				
Silver	7440-22-4	ND		mg/Kg	1.5	0.28				

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Method Blank Report

Client Sample Name:

MB

Matrix: Solid Collection Date: 7/21/2014 11:15:00AM

Lab Sample Number: T140721013-MB Analysis Date: 7/23/2014 3:31:02PM
Prep Date: 07-21-2014 11:07 Instrument: Optima7300Icp
Analytical Method ID: SW6010B - ICP - Total File Name: 072314.csv
Prep Method ID: 3050B Dilution Factor: 1
Prep Batch Number: T140721013 Percent Moisture: NA
Report Basis: As Received Analyst Initials: AC
Sample prep wt./vol: 0.50 g Prep Extract Vol: 50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Zinc	7440-66-6	ND		mg/Kg	0.60	0.22	4

The following test was conducted by: Analytica - Thornton

Lab Sample Number: T140722013-MB Analysis Date: 7/21/2014 11:15:00AM
Prep Date: 07-21-2014 10:07 Instrument: GC_B
Analytical Method ID: Aromatic VOCs by GC/PID via method 8021B - BTEX File Name: 14072104.D
Prep Method ID: 5030B Dilution Factor: 1
Prep Batch Number: T140722013 Percent Moisture: NA
Report Basis: As Received Analyst Initials: CK
Sample prep wt./vol: 5.00 g Prep Extract Vol: 5.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Benzene	71-43-2	ND		ug/Kg	1.0	0.33	1
Ethylbenzene	100-41-4	ND		ug/Kg	1.5	0.46	
Toluene	108-88-3	ND		ug/Kg	1.0	0.20	
Xylenes, Total	1330-20-7	ND		ug/Kg	3.0	0.82	

Surrogate	CASNo	Result	Flags	Units	PQL	MDL	Spike	% Recov	LCL	UCL	run #:
p-Bromofluorobenzene	460-00-4	26		ug/Kg	0.50	0.33	30	87.7	70	130	1

Lab Sample Number: T140723008-MB Analysis Date: 7/22/2014 12:20:00PM
Prep Date: 07-22-2014 10:07 Instrument: GC_B
Analytical Method ID: Aromatic VOCs by GC/PID via method 8021B - BTEX File Name: 14072204.D
Prep Method ID: 5030B Dilution Factor: 1
Prep Batch Number: T140723008 Percent Moisture: NA
Report Basis: As Received Analyst Initials: CK
Sample prep wt./vol: 5.00 g Prep Extract Vol: 5.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Benzene	71-43-2	ND		ug/Kg	1.0	0.33	1
Ethylbenzene	100-41-4	ND		ug/Kg	1.5	0.46	
Toluene	108-88-3	ND		ug/Kg	1.0	0.20	
Xylenes, Total	1330-20-7	ND		ug/Kg	3.0	0.82	

Surrogate	CASNo	Result	Flags	Units	PQL	MDL	Spike	% Recov	LCL	UCL	run #:
p-Bromofluorobenzene	460-00-4	26		ug/Kg	0.50	0.33	30	87.9	70	130	1

The following test was conducted by: Analytica - Thornton

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Method Blank Report

Client Sample Name: MB

Matrix: Solid Collection Date: 7/21/2014 9:34:00AM

Lab Sample Number:	T140722012-MB	Analysis Date:	7/21/2014 11:15:00AM
Prep Date:	07-21-2014 09:07	Instrument:	GC_B
Analytical Method ID:	VOC by GC/FID via method 8015B - GRO	File Name:	14072104.D
Prep Method ID:	5030B	Dilution Factor:	1
Prep Batch Number:	T140722012	Percent Moisture:	NA
Report Basis:	As Received	Analyst Initials:	CK
Sample prep wt./vol:	5.00 g	Prep Extract Vol:	5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
Gasoline Range Organics	n/a	ND		ug/Kg	200	26					1
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	24		ug/Kg	3.0	1.0	27	90.0	50	150	1

Lab Sample Number:	T140723006-MB	Analysis Date:	7/22/2014 12:20:00PM
Prep Date:	07-22-2014 10:07	Instrument:	GC_B
Analytical Method ID:	VOC by GC/FID via method 8015B - GRO	File Name:	14072204.D
Prep Method ID:	5030B	Dilution Factor:	1
Prep Batch Number:	T140723006	Percent Moisture:	NA
Report Basis:	As Received	Analyst Initials:	CK
Sample prep wt./vol:	5.00 g	Prep Extract Vol:	5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
Gasoline Range Organics	n/a	ND		ug/Kg	200	26					1
<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
p-Bromofluorobenzene	460-00-4	26		ug/Kg	3.0	1.0	30	87.2	50	150	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	T140731011-MB	Analysis Date:	7/31/2014 2:18:14PM
Prep Date:	07-31-2014 08:07	Instrument:	Probe
Analytical Method ID:	Specific Conductance - Cond.	File Name:	
Prep Method ID:	9050A	Dilution Factor:	1
Prep Batch Number:	T140731011	Percent Moisture:	NA
Report Basis:	As Received	Analyst Initials:	sc
Sample prep wt./vol:	40.00 g	Prep Extract Vol:	40.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>					<u>run #:</u>
Conductance		ND		umhos/cm	5.0	1.0					1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105
Project: Roan Creek Evaporation Pond
Client: Maralex Resources, Inc.
Client Project Number: None

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado
 Workorder (SDG): B1407105
 Project: Roan Creek Evaporation Pond
 Project Number: **QUALITY CONTROL REPORT**
 Prep Batch: **T140721016**

LCS REPORT

Analysis: SVOC by GC/FID via method 8015B - DRO MB: T140721016-MB
 Prep Date: 7/21/2014
 MB Anal. Date: 7/23/2014 10:15:09AM Units: mg/Kg
 LCS Anal. Date: 7/23/2014 11:05:48AM Matrix: Solid

Analyte Name	SampResult	LCSRes.	SPLev	Recov.	Recov Lim	RPDLim	Flag
Diesel Range Organics	ND	56.3	66.6	84.6	75 - 125		

MS/MSD REPORT

Analysis: SVOC by GC/FID via method 8015B - DRO Parent: B1407105-02A
 Prep Date: 7/21/2014
 Samp. Anal. Date: 7/23/2014 1:42:33PM Units: mg/Kg
 MS Anal. Date: 7/23/2014 3:27:00PM MSD Anal. Date: 7/23/2014 5:14:05PM Matrix: Soil

Analyte Name	SampResult	MSRes.	MSDRes	SPLev	SPDLev	Recov.	MSD Rec.	RPD	Recov Lim	RPDLim	Flag
Diesel Range Organics	ND	71.6	57.4	70.6	70.6	101.4	81.3	22.0	50 - 129	20	RPD

FOOTNOTES TO QC REPORT

- Note 1: Results are shown to three significant figures to avoid rounding errors in calculations.
- Note 2: If the sample concentration is greater than 4 times the spike level, a recovery is not meaningful, and the result should be used as a replicate. In such cases the spike is not as high as expected random measurement variability of the sample result itself.
- Note 3: For sample duplicates, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample and duplicate results are not five times the PQL or greater, then the RPD is not expected to fall within the window shown and the comparison should be made on the basis of the absolute difference. Analytica uses the criterion that the absolute difference should be less than the PQL for water or less than 2XPQL for other matrices.
- Note 4: For serial dilutions, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample result is not 50 times the MDL or greater, then the fact that the RPD does not meet the 10% criterion has little significance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: **Roan Creek Evaporation Pond**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Project Number:

QUALITY CONTROL REPORT

Prep Batch: **T140721013**

LCS REPORT

Analysis: SW6010B - ICP - Total

MB: T140721013-MB

Prep Date: 7/21/2014

MB Anal. Date: 7/22/2014 2:39:42PM

Units: mg/Kg

LCS Anal. Date: 7/22/2014 2:50:04PM

Matrix: Solid

<u>Analyte Name</u>	<u>SampResult</u>	<u>LCSRes.</u>	<u>SPLev</u>	<u>Recov.</u>	<u>Recov Lim</u>	<u>RPDLim</u>	<u>Flag</u>
Barium	ND	187	200	93.5	70 - 130		
Boron	ND	45.8	50.0	91.6	70 - 130		
Cadmium	ND	45.5	50.0	91.0	70 - 130		
Chromium	ND	19.3	20.0	96.5	70 - 130		
Copper	ND	22.8	25.0	91.2	70 - 130		
Lead	ND	95.8	100	95.8	70 - 130		
Nickel	ND	48.2	50.0	96.4	70 - 130		
Selenium	ND	188	200	94.0	70 - 130		
Silver	ND	24.1	25.0	96.4	70 - 130		
Zinc	ND	47.1	50.0	94.2	70 - 130		

Prep Batch: **T140724014**

SAMPLE DUPLICATE REPORT

Analysis: SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Tot

Base Sample: B1407105-01A

Prep Date: 7/25/2014

Samp. Anal. Date: 7/25/2014 4:18:00PM

Units: mg/Kg

DUP Anal. Date: 7/25/2014 4:20:00PM

Matrix: Soil

<u>Analyte Name</u>	<u>SampResult</u>	<u>DUPRes.</u>	<u>RPD</u>	<u>RPDLim</u>	<u>Flag</u>
Mercury	ND	ND	0.0	35	

LCS REPORT

Analysis: SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Tot

MB: T140724014-MB

Prep Date: 7/25/2014

MB Anal. Date: 7/25/2014 4:15:00PM

Units: mg/Kg

LCS Anal. Date: 7/25/2014 4:17:00PM

Matrix: Solid

<u>Analyte Name</u>	<u>SampResult</u>	<u>LCSRes.</u>	<u>SPLev</u>	<u>Recov.</u>	<u>Recov Lim</u>	<u>RPDLim</u>	<u>Flag</u>
Mercury	ND	0.464	0.417	111.4	70 - 130		

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105
Project: **Roan Creek Evaporation Pond**
Client: **Maralex Resources, Inc.**
Client Project Number: **None**

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado
Workorder (SDG): B1407105
Project: Roan Creek Evaporation Pond
Project Number:
Prep Batch: **T140724014**

QUALITY CONTROL REPORT

MS/MSD REPORT

Analysis: SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Tot Parent: B1407105-01A
Prep Date: 7/25/2014
Samp. Anal. Date: 7/25/2014 4:18:00PM Units: mg/Kg
MS Anal. Date: 7/25/2014 4:22:00PM MSD Anal. Date: 7/25/2014 4:24:00PM Matrix: Soil

Analyte Name	SampResult	MSRes.	MSDRes	SPLev	SPDLev	Recov.	MSD Rec.	RPD	Recov Lim	RPDLim	Flag
Mercury	ND	0.552	0.553	0.447	0.448	123.5	123.4	0.2	70 - 130	35	

FOOTNOTES TO QC REPORT

- Note 1: Results are shown to three significant figures to avoid rounding errors in calculations.
- Note 2: If the sample concentration is greater than 4 times the spike level, a recovery is not meaningful, and the result should be used as a replicate. In such cases the spike is not as high as expected random measurement variability of the sample result itself.
- Note 3: For sample duplicates, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample and duplicate results are not five times the PQL or greater, then the RPD is not expected to fall within the window shown and the comparison should be made on the basis of the absolute difference. Analytica uses the criterion that the absolute difference should be less than the PQL for water or less than 2XPQL for other matrices.
- Note 4: For serial dilutions, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample result is not 50 times the MDL or greater, then the fact that the RPD does not meet the 10% criterion has little significance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Project Number:

QUALITY CONTROL REPORT

Prep Batch: **T140722012**

LCS REPORT

Analysis: VOC by GC/FID via method 8015B - GRO

MB: T140722012-MB

Prep Date: 7/21/2014

MB Anal. Date: 7/21/2014 11:15:00AM

Units: ug/Kg

LCS Anal. Date: 7/21/2014 11:48:00AM

Matrix: Solid

<u>Analyte Name</u>	<u>SampResult</u>	<u>LCSRes.</u>	<u>SPLev</u>	<u>Recov.</u>	<u>Recov Lim</u>	<u>RPDLim</u>	<u>Flag</u>
Gasoline Range Organics	ND	482	500	96.4	60 - 118		

MS/MSD REPORT

Analysis: VOC by GC/FID via method 8015B - GRO

Parent: B1407105-01C

Prep Date: 7/21/2014

Samp. Anal. Date: 7/21/2014 1:30:00PM

Units: ug/Kg

MS Anal. Date: 7/21/2014 3:45:00PM MSD Anal. Date: 7/21/2014 4:20:00PM Matrix: Soil

<u>Analyte Name</u>	<u>SampResult</u>	<u>MSRes.</u>	<u>MSDRes</u>	<u>SPLev</u>	<u>SPDLev</u>	<u>Recov.</u>	<u>MSD Rec.</u>	<u>RPD</u>	<u>Recov Lim</u>	<u>RPDLim</u>	<u>Flag</u>
Gasoline Range Organics	ND	397	415	558	558	71.2	74.4	4.4	50 - 138	20	

Prep Batch: **T140723006**

LCS REPORT

Analysis: VOC by GC/FID via method 8015B - GRO

MB: T140723006-MB

Prep Date: 7/22/2014

MB Anal. Date: 7/22/2014 12:20:00PM

Units: ug/Kg

LCS Anal. Date: 7/22/2014 12:53:00PM

Matrix: Solid

<u>Analyte Name</u>	<u>SampResult</u>	<u>LCSRes.</u>	<u>SPLev</u>	<u>Recov.</u>	<u>Recov Lim</u>	<u>RPDLim</u>	<u>Flag</u>
Gasoline Range Organics	ND	480	500	96.0	60 - 118		

MS/MSD REPORT

Analysis: VOC by GC/FID via method 8015B - GRO

Parent: B1407105-09A

Prep Date: 7/22/2014

Samp. Anal. Date: 7/22/2014 4:47:00PM

Units: ug/Kg

MS Anal. Date: 7/22/2014 5:21:00PM MSD Anal. Date: 7/22/2014 5:54:00PM Matrix: Soil

<u>Analyte Name</u>	<u>SampResult</u>	<u>MSRes.</u>	<u>MSDRes</u>	<u>SPLev</u>	<u>SPDLev</u>	<u>Recov.</u>	<u>MSD Rec.</u>	<u>RPD</u>	<u>Recov Lim</u>	<u>RPDLim</u>	<u>Flag</u>
Gasoline Range Organics	ND	424	414	551	551	77.0	75.2	2.4	50 - 138	20	

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: **Roan Creek Evaporation Pond**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Project Number:

QUALITY CONTROL REPORT

Prep Batch: **T140722013**

LCS REPORT

Analysis: Aromatic VOCs by GC/PID via method 8021B - BTEX

MB: T140722013-MB

Prep Date: 7/21/2014

MB Anal. Date: 7/21/2014 11:15:00AM

Units: ug/Kg

LCS Anal. Date: 7/21/2014 12:22:00PM

Matrix: Solid

Analyte Name	SampResult	LCSRes.	SPLev	Recov.	Recov Lim	RPDLim	Flag
Benzene	ND	10.8	10.0	108.0	70 - 130		
Toluene	ND	10.8	10.0	108.0	70 - 130		
Ethylbenzene	ND	10.4	10.0	104.0	70 - 130		
Xylenes, Total	ND	33.0	30.0	110.0	70 - 130		

MS/MSD REPORT

Analysis: Aromatic VOCs by GC/PID via method 8021B - BTEX

Parent: B1407105-04A

Prep Date: 7/21/2014

Samp. Anal. Date: 7/21/2014 3:12:00PM

Units: ug/Kg

MS Anal. Date: 7/21/2014 5:29:00PM MSD Anal. Date: 7/21/2014 6:03:00PM

Matrix: Soil

Analyte Name	SampResult	MSRes.	MSDRes	SPLev	SPDLev	Recov.	MSD Rec.	RPD	Recov Lim	RPDLim	Flag
Benzene	ND	11.3	12.0	10.3	10.3	109.2	116.0	6.0	70 - 130	20	
Toluene	ND	11.0	11.8	10.3	10.3	106.3	114.1	7.0	70 - 130	20	
Ethylbenzene	ND	10.2	11.2	10.3	10.3	98.6	108.3	9.3	70 - 130	20	
Xylenes, Total	ND	32.3	35.5	31.0	31.0	104.1	114.4	9.4	70 - 130	20	

Prep Batch: **T140723008**

LCS REPORT

Analysis: Aromatic VOCs by GC/PID via method 8021B - BTEX

MB: T140723008-MB

Prep Date: 7/22/2014

MB Anal. Date: 7/22/2014 12:20:00PM

Units: ug/Kg

LCS Anal. Date: 7/22/2014 1:27:00PM

Matrix: Solid

Analyte Name	SampResult	LCSRes.	SPLev	Recov.	Recov Lim	RPDLim	Flag
Benzene	ND	10.3	10.0	103.0	70 - 130		
Toluene	ND	10.3	10.0	103.0	70 - 130		
Ethylbenzene	ND	10.6	10.0	106.0	70 - 130		
Xylenes, Total	ND	31.6	30.0	105.3	70 - 130		

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105
Project: Roan Creek Evaporation Pond
Client: Maralex Resources, Inc.
Client Project Number: None

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado
 Workorder (SDG): B1407105
 Project: Roan Creek Evaporation Pond
 Project Number: **QUALITY CONTROL REPORT**
 Prep Batch: **T140723008**

LCS REPORT

MS/MSD REPORT

Analysis: Aromatic VOCs by GC/PID via method 8021B - BTEX Parent: B1407105-05C
 Prep Date: 7/22/2014
 Samp. Anal. Date: 7/22/2014 2:33:00PM Units: ug/Kg
 MS Anal. Date: 7/22/2014 7:02:00PM MSD Anal. Date: 7/22/2014 7:36:00PM Matrix: Soil

<u>Analyte Name</u>	<u>SampResult</u>	<u>MSRes.</u>	<u>MSDRes</u>	<u>SPLev</u>	<u>SPDLev</u>	<u>Recov.</u>	<u>MSD Rec.</u>	<u>RPD</u>	<u>Recov Lim</u>	<u>RPDLim</u>	<u>Flag</u>
Benzene	ND	11.6	11.4	10.5	10.5	110.6	108.7	1.7	70 - 130	20	
Toluene	ND	11.5	11.5	10.5	10.5	109.6	109.6	0.0	70 - 130	20	
Ethylbenzene	ND	9.99	9.93	10.5	10.5	95.2	94.6	0.6	70 - 130	20	
Xylenes, Total	ND	31.5	31.1	31.5	31.5	100.1	98.8	1.3	70 - 130	20	

FOOTNOTES TO QC REPORT

- Note 1: Results are shown to three significant figures to avoid rounding errors in calculations.
- Note 2: If the sample concentration is greater than 4 times the spike level, a recovery is not meaningful, and the result should be used as a replicate. In such cases the spike is not as high as expected random measurement variability of the sample result itself.
- Note 3: For sample duplicates, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample and duplicate results are not five times the PQL or greater, then the RPD is not expected to fall within the window shown and the comparison should be made on the basis of the absolute difference. Analytica uses the criterion that the absolute difference should be less than the PQL for water or less than 2XPQL for other matrices.
- Note 4: For serial dilutions, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample result is not 50 times the MDL or greater, then the fact that the RPD does not meet the 10% criterion has little significance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105
Project: Roan Creek Evaporation Pond
Client: Maralex Resources, Inc.
Client Project Number: None

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado
 Workorder (SDG): B1407105
 Project: Roan Creek Evaporation Pond
 Project Number:
 Prep Batch: **T140729014**

QUALITY CONTROL REPORT

SAMPLE DUPLICATE REPORT

Analysis: Corrosivity in Waste by pH - pH
 Base Sample: B1407105-01A
 Prep Date: 7/28/2014
 Samp. Anal. Date: 7/28/2014 2:45:00PM
 DUP Anal. Date: 7/28/2014 2:45:00PM
 Units: pH
 Matrix: Soil

<u>Analyte Name</u>	<u>SampResult</u>	<u>DUPRes.</u>	<u>RPD</u>	<u>RPDLim</u>	<u>Flag</u>
pH	7.81	7.92	1.4	35	

Prep Batch: **T140731011**

SAMPLE DUPLICATE REPORT

Analysis: Specific Conductance - Cond.
 Base Sample: B1407105-09A
 Prep Date: 7/31/2014
 Samp. Anal. Date: 7/31/2014 2:18:14PM
 DUP Anal. Date: 7/31/2014 2:18:14PM
 Units: umhos/cm
 Matrix: Soil

<u>Analyte Name</u>	<u>SampResult</u>	<u>DUPRes.</u>	<u>RPD</u>	<u>RPDLim</u>	<u>Flag</u>
Conductance	4,480	4,280	4.6	20	

LCS REPORT

Analysis: Specific Conductance - Cond.
 MB: T140731011-MB
 Prep Date: 7/31/2014
 MB Anal. Date: 7/31/2014 2:18:14PM
 LCS Anal. Date: 7/31/2014 2:18:14PM
 Units: umhos/cm
 Matrix: Solid

<u>Analyte Name</u>	<u>SampResult</u>	<u>LCSRes.</u>	<u>SPLev</u>	<u>Recov.</u>	<u>Recov Lim</u>	<u>RPDLim</u>	<u>Flag</u>
Conductance	ND	156	150	104.0	80 - 120		

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

FOOTNOTES TO QC REPORT

Note 1: Results are shown to three significant figures to avoid rounding errors in calculations.

Note 2: If the sample concentration is greater than 4 times the spike level, a recovery is not meaningful, and the result should be used as a replicate. In such cases the spike is not as high as expected random measurement variability of the sample result itself.

Note 3: For sample duplicates, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample and duplicate results are not five times the PQL or greater, then the RPD is not expected to fall within the window shown and the comparison should be made on the basis of the absolute difference. Analytica uses the criterion that the absolute difference should be less than the PQL for water or less than 2XPQL for other matrices.

Note 4: For serial dilutions, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample result is not 50 times the MDL or greater, then the fact that the RPD does not meet the 10% criterion has little significance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

SURROGATE RECOVERY SUMMARY REPORT

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: **Roan Creek Evaporation Pond**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Test Method: **SVOC by GC/FID via method 8015B - DRO**

Lab Sample #: B1407105-01B Dilution: 1
 Analysis Date: 7/23/2014 11:57:14AM Client Sample: @ Sump
 Batch Number: T140721016 Data File: 14072307.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	93	50	150		Complete

Lab Sample #: B1407105-01B Dilution: 10
 Analysis Date: 7/23/2014 12:49:30PM Client Sample: @ Sump
 Batch Number: T140721016 Data File: 14072308.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	99	50	150	DILUTED OUT	Confirm

Lab Sample #: B1407105-02A Dilution: 1
 Analysis Date: 7/23/2014 1:42:33PM Client Sample: Outside Sump
 Batch Number: T140721016 Data File: 14072309.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	70	50	150		Complete

Lab Sample #: B1407105-02A Dilution: 10
 Analysis Date: 7/23/2014 2:34:48PM Client Sample: Outside Sump
 Batch Number: T140721016 Data File: 14072310.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	63	50	150	DILUTED OUT	Rrun

Lab Sample #: B1407105-03A Dilution: 1
 Analysis Date: 7/23/2014 7:01:14PM Client Sample: Outside Fence
 Batch Number: T140721016 Data File: 14072315.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	99	50	150		Complete

Lab Sample #: B1407105-03A Dilution: 10
 Analysis Date: 7/23/2014 7:54:14PM Client Sample: Outside Fence
 Batch Number: T140721016 Data File: 14072316.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	20	50	150	LOW DILUTED OUT	Rrun

Lab Sample #: B1407105-04A Dilution: 1
 Analysis Date: 7/23/2014 11:23:32PM Client Sample: P-1
 Batch Number: T140721016 Data File: 14072320.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	87	50	150		Complete

Lab Sample #: B1407105-04A Dilution: 10
 Analysis Date: 7/24/2014 12:15:27AM Client Sample: P-1
 Batch Number: T140721016 Data File: 14072321.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	95	50	150	DILUTED OUT	Rrun

Lab Sample #: B1407105-05B Dilution: 1
 Analysis Date: 7/24/2014 1:07:13AM Client Sample: P-2
 Batch Number: T140721016 Data File: 14072322.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl					

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Test Method: SVOC by GC/FID via method 8015B - DRO

Lab Sample #: B1407105-05B Dilution: 1
 Analysis Date: 7/24/2014 1:07:13AM Client Sample: **P-2**
 Batch Number: T140721016 Data File: 14072322.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	109	50	150		Complete

Lab Sample #: B1407105-05B Dilution: 10
 Analysis Date: 7/24/2014 1:58:51AM Client Sample: **P-2**
 Batch Number: T140721016 Data File: 14072323.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	88	50	150	DILUTED OUT	Rrun

Lab Sample #: B1407105-06A Dilution: 1
 Analysis Date: 7/24/2014 2:50:13AM Client Sample: **P-3**
 Batch Number: T140721016 Data File: 14072324.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	89	50	150		Complete

Lab Sample #: B1407105-06A Dilution: 10
 Analysis Date: 7/24/2014 3:41:21AM Client Sample: **P-3**
 Batch Number: T140721016 Data File: 14072325.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	99	50	150	DILUTED OUT	Rrun

Lab Sample #: B1407105-07B Dilution: 1
 Analysis Date: 7/24/2014 4:32:10AM Client Sample: **P-4**
 Batch Number: T140721016 Data File: 14072326.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	90	50	150		Complete

Lab Sample #: B1407105-07B Dilution: 10
 Analysis Date: 7/24/2014 5:23:01AM Client Sample: **P-4**
 Batch Number: T140721016 Data File: 14072327.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	88	50	150	DILUTED OUT	Rrun

Lab Sample #: B1407105-08A Dilution: 1
 Analysis Date: 7/24/2014 6:13:35AM Client Sample: **P-5**
 Batch Number: T140721016 Data File: 14072328.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	84	50	150		Complete

Lab Sample #: B1407105-08A Dilution: 10
 Analysis Date: 7/24/2014 7:04:19AM Client Sample: **P-5**
 Batch Number: T140721016 Data File: 14072329.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	91	50	150	DILUTED OUT	Rrun

Lab Sample #: B1407105-09A Dilution: 1
 Analysis Date: 7/24/2014 7:55:39AM Client Sample: **@ Tank**
 Batch Number: T140721016 Data File: 14072330.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
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Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: **Roan Creek Evaporation Pond**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Test Method: **SVOC by GC/FID via method 8015B - DRO**

Lab Sample #: B1407105-09A Dilution: 1
 Analysis Date: 7/24/2014 7:55:39AM Client Sample: @ Tank
 Batch Number: T140721016 Data File: 14072330.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	57	50	150		Complete

Lab Sample #: B1407105-09A Dilution: 10
 Analysis Date: 7/24/2014 8:48:14AM Client Sample: @ Tank
 Batch Number: T140721016 Data File: 14072331.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	59	50	150	DILUTED OUT	Rrun

Lab Sample #: T140721016-MB Dilution: 1
 Analysis Date: 7/23/2014 10:15:09AM Client Sample: MB
 Batch Number: T140721016 Data File: 14072305.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	110	60	120		Complete

Lab Sample #: T140721016-LCS Dilution: 1
 Analysis Date: 7/23/2014 11:05:48AM Client Sample: LCS
 Batch Number: T140721016 Data File: 14072306.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl		60	120		Complete

Lab Sample #: B1407105-02A-MS Dilution: 1
 Analysis Date: 7/23/2014 3:27:00PM Client Sample: MS
 Batch Number: T140721016 Data File: 14072311.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	107	50	150		Complete

Lab Sample #: B1407105-02A-MS Dilution: 10
 Analysis Date: 7/23/2014 4:19:57PM Client Sample: MS
 Batch Number: T140721016 Data File: 14072312.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	7.80	50	150	LOW	DILUTED OUT Rrun

Lab Sample #: B1407105-02A-MSD Dilution: 1
 Analysis Date: 7/23/2014 5:14:05PM Client Sample: MSD
 Batch Number: T140721016 Data File: 14072313.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	93	50	150		Complete

Lab Sample #: B1407105-02A-MSD Dilution: 10
 Analysis Date: 7/23/2014 6:07:57PM Client Sample: MSD
 Batch Number: T140721016 Data File: 14072314.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	2.60	50	150	LOW	DILUTED OUT Rrun

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: **Roan Creek Evaporation Pond**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Test Method: **Aromatic VOCs by GC/PID via method 8021B - BTEX**

Lab Sample #: B1407105-01C Dilution: 1
 Analysis Date: 7/21/2014 1:30:00PM Client Sample: @ Sump
 Batch Number: T140722013 Data File: 14072108.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	87	70	130		Complete

Lab Sample #: B1407105-02A Dilution: 1
 Analysis Date: 7/21/2014 2:04:00PM Client Sample: Outside Sump
 Batch Number: T140722013 Data File: 14072109.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	89	70	130		Complete

Lab Sample #: B1407105-03A Dilution: 1
 Analysis Date: 7/21/2014 2:38:00PM Client Sample: Outside Fence
 Batch Number: T140722013 Data File: 14072110.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	87	70	130		Complete

Lab Sample #: B1407105-04A Dilution: 1
 Analysis Date: 7/21/2014 3:12:00PM Client Sample: P-1
 Batch Number: T140722013 Data File: 14072111.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	87	70	130		Complete

Lab Sample #: B1407105-05C Dilution: 1
 Analysis Date: 7/22/2014 2:33:00PM Client Sample: P-2
 Batch Number: T140723008 Data File: 14072208.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	81	70	130		Complete

Lab Sample #: B1407105-06A Dilution: 1
 Analysis Date: 7/22/2014 3:06:00PM Client Sample: P-3
 Batch Number: T140723008 Data File: 14072209.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	82	70	130		Complete

Lab Sample #: B1407105-07C Dilution: 1
 Analysis Date: 7/22/2014 3:40:00PM Client Sample: P-4
 Batch Number: T140723008 Data File: 14072210.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	84	70	130		Complete

Lab Sample #: B1407105-08A Dilution: 1
 Analysis Date: 7/22/2014 4:14:00PM Client Sample: P-5
 Batch Number: T140723008 Data File: 14072211.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	87	70	130		Complete

Lab Sample #: B1407105-09A Dilution: 1
 Analysis Date: 7/22/2014 4:47:00PM Client Sample: @ Tank
 Batch Number: T140723008 Data File: 14072212.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene					

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: **Roan Creek Evaporation Pond**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Test Method: **Aromatic VOCs by GC/PID via method 8021B - BTEX**

Lab Sample #: B1407105-09A Dilution: 1
 Analysis Date: 7/22/2014 4:47:00PM Client Sample: **@ Tank**
 Batch Number: T140723008 Data File: 14072212.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	86	70	130		Complete

Lab Sample #: T140722013-MB Dilution: 1
 Analysis Date: 7/21/2014 11:15:00AM Client Sample: **MB**
 Batch Number: T140722013 Data File: 14072104.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	88	70	130		Complete

Lab Sample #: T140723008-MB Dilution: 1
 Analysis Date: 7/22/2014 12:20:00PM Client Sample: **MB**
 Batch Number: T140723008 Data File: 14072204.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	88	70	130		Complete

Lab Sample #: T140722013-LCS Dilution: 1
 Analysis Date: 7/21/2014 12:22:00PM Client Sample: **LCS**
 Batch Number: T140722013 Data File: 14072106.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	89	70	130		Complete

Lab Sample #: T140723008-LCS Dilution: 1
 Analysis Date: 7/22/2014 1:27:00PM Client Sample: **LCS**
 Batch Number: T140723008 Data File: 14072206.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	91	70	130		Complete

Lab Sample #: B1407105-04A-MS Dilution: 1
 Analysis Date: 7/21/2014 5:29:00PM Client Sample: **MS**
 Batch Number: T140722013 Data File: 14072115.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	89	70	130		Complete

Lab Sample #: B1407105-05C-MS Dilution: 1
 Analysis Date: 7/22/2014 7:02:00PM Client Sample: **MS**
 Batch Number: T140723008 Data File: 14072216.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	87	70	130		Complete

Lab Sample #: B1407105-04A-MSD Dilution: 1
 Analysis Date: 7/21/2014 6:03:00PM Client Sample: **MSD**
 Batch Number: T140722013 Data File: 14072116.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	89	70	130		Complete

Lab Sample #: B1407105-05C-MSD Dilution: 1
 Analysis Date: 7/22/2014 7:36:00PM Client Sample: **MSD**
 Batch Number: T140723008 Data File: 14072217.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene					

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Test Method: Aromatic VOCs by GC/PID via method 8021B - BTEX

Lab Sample #: B1407105-05C-MSD

Dilution: 1

Analysis Date: 7/22/2014 7:36:00PM

Client Sample: **MSD**

Batch Number: T140723008

Data File: 14072217.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	89	70	130		Complete

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: **Roan Creek Evaporation Pond**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Test Method: **VOC by GC/FID via method 8015B - GRO**

Lab Sample #: B1407105-01C Dilution: 1
Analysis Date: 7/21/2014 1:30:00PM Client Sample: **@ Sump**
Batch Number: T140722012 Data File: 14072108.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	92	50	150		Complete

Lab Sample #: B1407105-02A Dilution: 1
Analysis Date: 7/21/2014 2:04:00PM Client Sample: **Outside Sump**
Batch Number: T140722012 Data File: 14072109.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	77	50	150		Complete

Lab Sample #: B1407105-03A Dilution: 1
Analysis Date: 7/21/2014 2:38:00PM Client Sample: **Outside Fence**
Batch Number: T140722012 Data File: 14072110.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	89	50	150		Complete

Lab Sample #: B1407105-04A Dilution: 1
Analysis Date: 7/21/2014 3:12:00PM Client Sample: **P-1**
Batch Number: T140722012 Data File: 14072111.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	86	50	150		Complete

Lab Sample #: B1407105-05C Dilution: 1
Analysis Date: 7/22/2014 2:33:00PM Client Sample: **P-2**
Batch Number: T140723006 Data File: 14072208.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	82	50	150		Complete

Lab Sample #: B1407105-06A Dilution: 1
Analysis Date: 7/22/2014 3:06:00PM Client Sample: **P-3**
Batch Number: T140723006 Data File: 14072209.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	79	50	150		Complete

Lab Sample #: B1407105-07C Dilution: 1
Analysis Date: 7/22/2014 3:40:00PM Client Sample: **P-4**
Batch Number: T140723006 Data File: 14072210.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	80	50	150		Complete

Lab Sample #: B1407105-08A Dilution: 1
Analysis Date: 7/22/2014 4:14:00PM Client Sample: **P-5**
Batch Number: T140723006 Data File: 14072211.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	83	50	150		Complete

Lab Sample #: B1407105-09A Dilution: 1
Analysis Date: 7/22/2014 4:47:00PM Client Sample: **@ Tank**
Batch Number: T140723006 Data File: 14072212.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
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Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Test Method: VOC by GC/FID via method 8015B - GRO

Lab Sample #: B1407105-09A Dilution: 1
Analysis Date: 7/22/2014 4:47:00PM Client Sample: @ Tank
Batch Number: T140723006 Data File: 14072212.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	81	50	150		Complete

Lab Sample #: T140722012-MB Dilution: 1
Analysis Date: 7/21/2014 11:15:00AM Client Sample: MB
Batch Number: T140722012 Data File: 14072104.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	90	63	130		Complete

Lab Sample #: T140723006-MB Dilution: 1
Analysis Date: 7/22/2014 12:20:00PM Client Sample: MB
Batch Number: T140723006 Data File: 14072204.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	87	63	130		Complete

Lab Sample #: T140722012-LCS Dilution: 1
Analysis Date: 7/21/2014 11:48:00AM Client Sample: LCS
Batch Number: T140722012 Data File: 14072105.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	101	63	130		Complete

Lab Sample #: T140723006-LCS Dilution: 1
Analysis Date: 7/22/2014 12:53:00PM Client Sample: LCS
Batch Number: T140723006 Data File: 14072205.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	91	63	130		Complete

Lab Sample #: B1407105-01C-MS Dilution: 1
Analysis Date: 7/21/2014 3:45:00PM Client Sample: MS
Batch Number: T140722012 Data File: 14072112.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	101	50	150		Complete

Lab Sample #: B1407105-09A-MS Dilution: 1
Analysis Date: 7/22/2014 5:21:00PM Client Sample: MS
Batch Number: T140723006 Data File: 14072213.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	89	50	150		Complete

Lab Sample #: B1407105-01C-MSD Dilution: 1
Analysis Date: 7/21/2014 4:20:00PM Client Sample: MSD
Batch Number: T140722012 Data File: 14072113.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	97	50	150		Complete

Lab Sample #: B1407105-09A-MSD Dilution: 1
Analysis Date: 7/22/2014 5:54:00PM Client Sample: MSD
Batch Number: T140723006 Data File: 14072214.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
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Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

Test Method: VOC by GC/FID via method 8015B - GRO

Lab Sample #: B1407105-09A-MSD

Dilution: 1

Analysis Date: 7/22/2014 5:54:00PM

Client Sample: **MSD**

Batch Number: T140723006

Data File: 14072214.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	90	50	150		Complete

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105
Project: **Roan Creek Evaporation Pond**
Client: **Maralex Resources, Inc.**
Client Project Number: **None**

QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID: 162,208 Lab Project Number: B1407105

Prep Date: 7/21/2014

Lab Method Blank Id: T140721013-MB
Prep Batch ID: T140721013
Method: SW6010B - ICP - Total

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
B1407096-01A	Batch QC	072214.csv	7/22/2014 4:17:47PM
B1407105-01A	@ Sump	072214.csv	7/22/2014 3:45:07PM
B1407105-05A	P-2	072214.csv	7/22/2014 3:47:48PM
B1407105-07A	P-4	072214.csv	7/22/2014 3:50:48PM
T140721013-LCS	LCS	072214.csv	7/22/2014 2:50:04PM
B1407096-01A-DUP	DUP	072214.csv	7/22/2014 4:20:31PM
B1407096-01A-MS	MS	072214.csv	7/22/2014 4:25:52PM
B1407096-01A-MSD	MSD	072214.csv	7/22/2014 4:28:42PM
B1407096-01A-PDS	PDS	072214.csv	7/22/2014 4:31:31PM
B1407105-01A	@ Sump	072314.csv	7/23/2014 5:31:48PM
B1407105-05A	P-2	072314.csv	7/23/2014 5:35:38PM
B1407105-07A	P-4	072314.csv	7/23/2014 5:41:06PM

Prep Date: 7/21/2014

Lab Method Blank Id: T140721016-MB
Prep Batch ID: T140721016
Method: SVOC by GC/FID via method 8015B - DRO

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
T140721016-LCS	LCS	14072306.D	7/23/2014 11:05:48AM
B1407105-01B	@ Sump	14072307.D	7/23/2014 11:57:14AM
B1407105-02A	Outside Sump	14072309.D	7/23/2014 1:42:33PM
B1407105-02A-MS	MS	14072311.D	7/23/2014 3:27:00PM
B1407105-02A-MSD	MSD	14072313.D	7/23/2014 5:14:05PM
B1407105-03A	Outside Fence	14072315.D	7/23/2014 7:01:14PM
B1407105-04A	P-1	14072320.D	7/23/2014 11:23:32PM
B1407105-05B	P-2	14072322.D	7/24/2014 1:07:13AM
B1407105-06A	P-3	14072324.D	7/24/2014 2:50:13AM
B1407105-07B	P-4	14072326.D	7/24/2014 4:32:10AM
B1407105-08A	P-5	14072328.D	7/24/2014 6:13:35AM
B1407105-09A	@ Tank	14072330.D	7/24/2014 7:55:39AM

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105
Project: **Roan Creek Evaporation Pond**
Client: **Maralex Resources, Inc.**
Client Project Number: **None**

QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID: 162,208 Lab Project Number: B1407105

Prep Date: 7/21/2014

Lab Method Blank Id: T140721017-MB
Prep Batch ID: T140721017
Method: ASTM D2216 - Pmoist

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
B1407096-01A	Batch QC		7/22/2014 9:24:47AM
B1407105-01B	@ Sump		7/22/2014 9:24:47AM
B1407105-02A	Outside Sump		7/22/2014 9:24:47AM
B1407105-03A	Outside Fence		7/22/2014 9:24:47AM
B1407105-04A	P-1		7/22/2014 9:24:47AM
B1407105-05B	P-2		7/22/2014 9:24:47AM
B1407105-06A	P-3		7/22/2014 9:24:47AM
B1407105-07B	P-4		7/22/2014 9:24:47AM
B1407105-08A	P-5		7/22/2014 9:24:47AM
B1407105-09A	@ Tank		7/22/2014 9:24:47AM
B1407096-01A-DUP	DUP		7/22/2014 9:24:47AM

Prep Date: 7/21/2014

Lab Method Blank Id: T140722012-MB
Prep Batch ID: T140722012
Method: VOC by GC/FID via method 8015B - GRO

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
T140722012-LCS	LCS	14072105.D	7/21/2014 11:48:00AM
B1407105-01C	@ Sump	14072108.D	7/21/2014 1:30:00PM
B1407105-02A	Outside Sump	14072109.D	7/21/2014 2:04:00PM
B1407105-03A	Outside Fence	14072110.D	7/21/2014 2:38:00PM
B1407105-04A	P-1	14072111.D	7/21/2014 3:12:00PM
B1407105-01C-MS	MS	14072112.D	7/21/2014 3:45:00PM
B1407105-01C-MSD	MSD	14072113.D	7/21/2014 4:20:00PM

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: **Roan Creek Evaporation Pond**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID: 162,208 Lab Project Number: B1407105

Prep Date: 7/21/2014

Lab Method Blank Id: T140722013-MB

Prep Batch ID: T140722013

Method: Aromatic VOCs by GC/PID via method 8021B - BTEX

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
T140722013-LCS	LCS	14072106.D	7/21/2014 12:22:00PM
B1407105-01C	@ Sump	14072108.D	7/21/2014 1:30:00PM
B1407105-02A	Outside Sump	14072109.D	7/21/2014 2:04:00PM
B1407105-03A	Outside Fence	14072110.D	7/21/2014 2:38:00PM
B1407105-04A	P-1	14072111.D	7/21/2014 3:12:00PM
B1407105-04A-MS	MS	14072115.D	7/21/2014 5:29:00PM
B1407105-04A-MSD	MSD	14072116.D	7/21/2014 6:03:00PM

Prep Date: 7/22/2014

Lab Method Blank Id: T140723006-MB

Prep Batch ID: T140723006

Method: VOC by GC/FID via method 8015B - GRO

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
T140723006-LCS	LCS	14072205.D	7/22/2014 12:53:00PM
B1407105-05C	P-2	14072208.D	7/22/2014 2:33:00PM
B1407105-06A	P-3	14072209.D	7/22/2014 3:06:00PM
B1407105-07C	P-4	14072210.D	7/22/2014 3:40:00PM
B1407105-08A	P-5	14072211.D	7/22/2014 4:14:00PM
B1407105-09A	@ Tank	14072212.D	7/22/2014 4:47:00PM
B1407105-09A-MS	MS	14072213.D	7/22/2014 5:21:00PM
B1407105-09A-MSD	MSD	14072214.D	7/22/2014 5:54:00PM

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: **Roan Creek Evaporation Pond**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID: 162,208 Lab Project Number: B1407105

Prep Date: 7/22/2014

Lab Method Blank Id: T140723008-MB

Prep Batch ID: T140723008

Method: Aromatic VOCs by GC/PID via method 8021B - BTEX

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
T140723008-LCS	LCS	14072206.D	7/22/2014 1:27:00PM
B1407105-05C	P-2	14072208.D	7/22/2014 2:33:00PM
B1407105-06A	P-3	14072209.D	7/22/2014 3:06:00PM
B1407105-07C	P-4	14072210.D	7/22/2014 3:40:00PM
B1407105-08A	P-5	14072211.D	7/22/2014 4:14:00PM
B1407105-09A	@ Tank	14072212.D	7/22/2014 4:47:00PM
B1407105-05C-MS	MS	14072216.D	7/22/2014 7:02:00PM
B1407105-05C-MSD	MSD	14072217.D	7/22/2014 7:36:00PM

Prep Date: 7/25/2014

Lab Method Blank Id: T140724014-MB

Prep Batch ID: T140724014

Method: SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Tot

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
B1407105-01A	@ Sump	072514ss.csv	7/25/2014 4:18:00PM
B1407105-05A	P-2	072514ss.csv	7/25/2014 4:26:00PM
B1407105-07A	P-4	072514ss.csv	7/25/2014 4:28:00PM
T140724014-LCS	LCS	072514ss.csv	7/25/2014 4:17:00PM
B1407105-01A-DUP	DUP	072514ss.csv	7/25/2014 4:20:00PM
B1407105-01A-MS	MS	072514ss.csv	7/25/2014 4:22:00PM
B1407105-01A-MSD	MSD	072514ss.csv	7/25/2014 4:24:00PM

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: **Roan Creek Evaporation Pond**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID: 162,208 Lab Project Number: B1407105

Prep Date: 7/31/2014

Lab Method Blank Id: T140731011-MB

Prep Batch ID: T140731011

Method: Specific Conductance - Cond.

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
B1407105-01A	@ Sump		7/31/2014 2:18:14PM
B1407105-02A	Outside Sump		7/31/2014 2:18:14PM
B1407105-03A	Outside Fence		7/31/2014 2:18:14PM
B1407105-04A	P-1		7/31/2014 2:18:14PM
B1407105-05A	P-2		7/31/2014 2:18:14PM
B1407105-06A	P-3		7/31/2014 2:18:14PM
B1407105-07A	P-4		7/31/2014 2:18:14PM
B1407105-08A	P-5		7/31/2014 2:18:14PM
B1407105-09A	@ Tank		7/31/2014 2:18:14PM
T140731011-LCS	LCS		7/31/2014 2:18:14PM
B1407105-09A-DUP	DUP		7/31/2014 2:18:14PM

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: Roan Creek Evaporation Pond

Client: Maralex Resources, Inc.

Client Project Number: None

DATA FLAGS AND DEFINITIONS

The PQL is the Method Quantitation Limit as defined by USACE.

Reporting Limit: Limit below which results are shown as "ND". This may be the PQL, MDL, or a value between. See the report conventions below.

Result Field:

ND = Not Detected at or above the Reporting Limit

NA = Analyte not applicable (see Case Narrative for discussion)

Qualifier Fields:

LOW = Recovery is below Lower Control Limit

HIGH = Recovery, RPD, or other parameter is above Upper Control Limit

E = Reported concentration is above the instrument calibration upper range

Organic Analysis Flags:

B = Analyte was detected in the laboratory method blank

J = Analyte was detected above MDL or Reporting Limit but below the Quant Limit (PQL)

Inorganic Analysis Flags:

J = Analyte was detected above the Reporting Limit but below the Quant Limit (PQL)

W = Post digestion spike did not meet criteria

S = Reported value determined by the Method of Standard Additions (MSA)

Several ways of defining the limit of detection and quantitation are prevalent in the laboratory industry and may appear in Analytica reports. These include the following:

MRL = "minimum reporting level", from the EPA Safe Drinking Water program (SDW)

PQL = "practical quantitation limit", from SW-846

EQL = "estimated quantitation limit", from SW-846

LOQ = "limit of quantitation", from a number of authoritative sources

In Analytica's work, all of these terms have the same meaning, equivalent to the EPA definition of the MRL. This reporting level is supported by a satisfactory calibration data point which is at that level or lower, and also is supported by a method detection limit (MDL) determined by the procedure in 40CFR. The MDL is lower than the MRL and represents an estimate of the level where positive detections have a 99% probability of being real, but where quantitation accuracy is unknown.

The MRL as defined by Analytica is the lowest demonstrated point of known quantitation accuracy.

The MRL should not be confused with the MCL, which is the EPA-defined "maximum contaminant level" allowed for certain regulated targets under specific regulations, such as the National Primary Drinking Water Regulations. Normally, the MRL is set at a level which is much lower than the MCL in order to ensure that levels are well below those limits. Not all target analytes have MCL levels established.

Other Flags may be applied. See Case Narrative for Description

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1407105

Project: **Roan Creek Evaporation Pond**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

REPORTING CONVENTIONS FOR THIS REPORT

B1407105

<u>TestPkgName</u>	<u>Basis</u>	<u># Sig Figs</u>	<u>Reporting Limit</u>
3500-Cr-B/3500-Cr-B (Solid) - Total Cr(III) calculat	As Received	2	Report to PQL
6010B/3050B (Solid) - Total	Dry Weight Basis	2	Report to PQL
6020A (Solid) - Low Level Metals - Sol	Dry Weight Basis	2	Report to PQL
7196_A/3060A (Solid) - Cr(VI)	Dry Weight Basis	2	Report to PQL
7471A/7471A (Solid) - Total Hg	Dry Weight Basis	2	Report to PQL
8015/5030B (Solid) - GRO	Dry Weight Basis	2	Report to PQL
8015B/3550B (Solid) - DRO	Dry Weight Basis	2	Report to PQL
8021/5030B (Solid) - BTEX	Dry Weight Basis	2	Report to PQL
8270C/3550B (Solid) - SC	Dry Weight Basis	2	Report to MDL, J qual below PQL
9045B/9045B (Solid) - pH	As Received	3	Report to PQL
9050A/9050A (Solid) - Cond.	As Received	2	Report to PQL
ASTMD2216/ASTMD2216 (Solid) - Pmoist	As Received	3	Report to MDL, J qual below PQL
SAR (Solid)	As Received	2	Report to PQL

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-01D
Legal Location:
Collection Date: 7/17/2014 07:45

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-1
Matrix: SOIL
Percent Moisture: 11.2

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
GC/MS Semi-volatiles			SW8270SIMPAAH		Prep Date: 7/29/2014	PrepBy: BCH
NAPHTHALENE	ND		3.7	UG/KG	1	7/30/2014 18:46
ACENAPHTHENE	ND		3.7	UG/KG	1	7/30/2014 18:46
FLUORENE	ND		3.7	UG/KG	1	7/30/2014 18:46
ANTHRACENE	ND		3.7	UG/KG	1	7/30/2014 18:46
FLUORANTHENE	ND		3.7	UG/KG	1	7/30/2014 18:46
PYRENE	ND		3.7	UG/KG	1	7/30/2014 18:46
BENZO(A)ANTHRACENE	ND		3.7	UG/KG	1	7/30/2014 18:46
CHRYSENE	ND		3.7	UG/KG	1	7/30/2014 18:46
BENZO(B)FLUORANTHENE	ND		3.7	UG/KG	1	7/30/2014 18:46
BENZO(K)FLUORANTHENE	ND		3.7	UG/KG	1	7/30/2014 18:46
BENZO(A)PYRENE	ND		3.7	UG/KG	1	7/30/2014 18:46
INDENO(1,2,3-CD)PYRENE	ND		3.7	UG/KG	1	7/30/2014 18:46
DIBENZO(A,H)ANTHRACENE	ND		3.7	UG/KG	1	7/30/2014 18:46
Surr: NITROBENZENE-D5	90		28-113	%REC	1	7/30/2014 18:46
Surr: 2-FLUOROBIPHENYL	78		41-106	%REC	1	7/30/2014 18:46
Surr: TERPHENYL-D14	74		25-147	%REC	1	7/30/2014 18:46
Hexavalent Chromium			SW7196		Prep Date: 7/29/2014	PrepBy: AJD
CHROMIUM VI	ND		0.11	MG/KG	1	7/29/2014
ICPMS Metals			SW6020		Prep Date: 7/28/2014	PrepBy: NAQ
ARSENIC	5800		200	UG/KG	10	7/29/2014 12:26
Sodium Adsorption Ratio			USDA60		Prep Date: 7/29/2014	PrepBy: KMP
PASTE PH	8.1		0.1	pH	1	7/29/2014

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-02B
Legal Location:
Collection Date: 7/17/2014 08:24

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-2
Matrix: SOIL
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Sodium Adsorption Ratio PASTE PH	10		USDA60	0.1 pH	Prep Date: 7/29/2014 1	PrepBy: KMP 7/29/2014

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-03B
Legal Location:
Collection Date: 7/17/2014 08:35

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-3
Matrix: SOIL
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Sodium Adsorption Ratio PASTE PH	9.6		USDA60	0.1 pH	Prep Date: 7/29/2014 1	PrepBy: KMP 7/29/2014

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-04B
Legal Location:
Collection Date: 7/17/2014 09:00

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-4
Matrix: SOIL
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Sodium Adsorption Ratio PASTE PH	8		USDA60	0.1 pH	Prep Date: 7/29/2014 1	PrepBy: KMP 7/29/2014

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-05D
Legal Location:
Collection Date: 7/17/2014 09:12

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-5
Matrix: SOIL
Percent Moisture: 4.8

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
GC/MS Semi-volatiles			SW8270SIMPAAH		Prep Date: 7/29/2014	PrepBy: BCH
NAPHTHALENE	ND		3.5	UG/KG	1	7/30/2014 19:40
ACENAPHTHENE	ND		3.5	UG/KG	1	7/30/2014 19:40
FLUORENE	ND		3.5	UG/KG	1	7/30/2014 19:40
ANTHRACENE	ND		3.5	UG/KG	1	7/30/2014 19:40
FLUORANTHENE	ND		3.5	UG/KG	1	7/30/2014 19:40
PYRENE	ND		3.5	UG/KG	1	7/30/2014 19:40
BENZO(A)ANTHRACENE	ND		3.5	UG/KG	1	7/30/2014 19:40
CHRYSENE	ND		3.5	UG/KG	1	7/30/2014 19:40
BENZO(B)FLUORANTHENE	ND		3.5	UG/KG	1	7/30/2014 19:40
BENZO(K)FLUORANTHENE	ND		3.5	UG/KG	1	7/30/2014 19:40
BENZO(A)PYRENE	ND		3.5	UG/KG	1	7/30/2014 19:40
INDENO(1,2,3-CD)PYRENE	ND		3.5	UG/KG	1	7/30/2014 19:40
DIBENZO(A,H)ANTHRACENE	ND		3.5	UG/KG	1	7/30/2014 19:40
Surr: NITROBENZENE-D5	93		28-113	%REC	1	7/30/2014 19:40
Surr: 2-FLUOROBIPHENYL	81		41-106	%REC	1	7/30/2014 19:40
Surr: TERPHENYL-D14	61		25-147	%REC	1	7/30/2014 19:40
Hexavalent Chromium			SW7196		Prep Date: 7/29/2014	PrepBy: AJD
CHROMIUM VI	ND		0.11	MG/KG	1	7/29/2014
ICPMS Metals			SW6020		Prep Date: 7/28/2014	PrepBy: NAQ
ARSENIC	6000		200	UG/KG	10	7/29/2014 12:29
Sodium Adsorption Ratio			USDA60		Prep Date: 7/29/2014	PrepBy: KMP
PASTE PH	8.2		0.1	pH	1	7/29/2014

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-06B
Legal Location:
Collection Date: 7/17/2014 09:28

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-6
Matrix: SOIL
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Sodium Adsorption Ratio PASTE PH	8.4		USDA60	0.1 pH	Prep Date: 7/29/2014 1	PrepBy: KMP 7/29/2014

ALS Environmental -- FC

SAMPLE SUMMARY REPORT

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-07D
Legal Location:
Collection Date: 7/17/2014 09:35

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-7
Matrix: SOIL
Percent Moisture: 5.1

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
GC/MS Semi-volatiles			SW8270SIMPAAH		Prep Date: 7/29/2014	PrepBy: BCH
NAPHTHALENE	ND		3.5	UG/KG	1	7/30/2014 19:58
ACENAPHTHENE	ND		3.5	UG/KG	1	7/30/2014 19:58
FLUORENE	ND		3.5	UG/KG	1	7/30/2014 19:58
ANTHRACENE	ND		3.5	UG/KG	1	7/30/2014 19:58
FLUORANTHENE	ND		3.5	UG/KG	1	7/30/2014 19:58
PYRENE	ND		3.5	UG/KG	1	7/30/2014 19:58
BENZO(A)ANTHRACENE	ND		3.5	UG/KG	1	7/30/2014 19:58
CHRYSENE	ND		3.5	UG/KG	1	7/30/2014 19:58
BENZO(B)FLUORANTHENE	ND		3.5	UG/KG	1	7/30/2014 19:58
BENZO(K)FLUORANTHENE	ND		3.5	UG/KG	1	7/30/2014 19:58
BENZO(A)PYRENE	ND		3.5	UG/KG	1	7/30/2014 19:58
INDENO(1,2,3-CD)PYRENE	ND		3.5	UG/KG	1	7/30/2014 19:58
DIBENZO(A,H)ANTHRACENE	ND		3.5	UG/KG	1	7/30/2014 19:58
Surr: NITROBENZENE-D5	89		28-113	%REC	1	7/30/2014 19:58
Surr: 2-FLUOROBIPHENYL	78		41-106	%REC	1	7/30/2014 19:58
Surr: TERPHENYL-D14	69		25-147	%REC	1	7/30/2014 19:58
Hexavalent Chromium			SW7196		Prep Date: 7/29/2014	PrepBy: AJD
CHROMIUM VI	ND		0.11	MG/KG	1	7/29/2014
ICPMS Metals			SW6020		Prep Date: 7/28/2014	PrepBy: NAQ
ARSENIC	6100		190	UG/KG	10	7/29/2014 12:33
Sodium Adsorption Ratio			USDA60		Prep Date: 7/29/2014	PrepBy: KMP
PASTE PH	8.2		0.1	pH	1	7/29/2014

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-08B
Legal Location:
Collection Date: 7/17/2014 09:45

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-8
Matrix: SOIL
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Sodium Adsorption Ratio PASTE PH	9		USDA60	0.1 pH	Prep Date: 7/29/2014 1	PrepBy: KMP 7/29/2014

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-09B
Legal Location:
Collection Date: 7/17/2014 10:10

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-9
Matrix: SOIL
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Sodium Adsorption Ratio PASTE PH	8.3		USDA60	0.1 pH	Prep Date: 7/29/2014 1	PrepBy: KMP 7/29/2014

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-01D
Legal Location:
Collection Date: 7/17/2014 07:45

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-10
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals			SW6010		Prep Date: 7/25/2014	PrepBy: NAQ
CALCIUM	570		10	MG/L	10	7/29/2014 11:47
MAGNESIUM	150		10	MG/L	10	7/29/2014 11:47
SODIUM	3200		100	MG/L	100	7/29/2014 12:03
Sodium Adsorption Ratio			USDA60		Prep Date: 7/29/2014	PrepBy: KMP
ELECTRICAL CONDUCTIVITY @ SATURATION	24000		1	umhos/cm	10	7/29/2014
SODIUM ADSORPTION RATIO	31		5.4	NU	100	7/29/2014 12:03

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-02B
Legal Location:
Collection Date: 7/17/2014 08:24

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-11
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals			SW6010		Prep Date: 7/25/2014	PrepBy: NAQ
CALCIUM	19		10	MG/L	10	7/29/2014 11:48
MAGNESIUM	ND		10	MG/L	10	7/29/2014 11:48
SODIUM	2400		100	MG/L	100	7/29/2014 12:10
Sodium Adsorption Ratio			USDA60		Prep Date: 7/29/2014	PrepBy: KMP
ELECTRICAL CONDUCTIVITY @ SATURATION	14000		1	umhos/cm	10	7/29/2014
SODIUM ADSORPTION RATIO	110	S	5.4	NU	100	7/29/2014 12:10

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-03B
Legal Location:
Collection Date: 7/17/2014 08:35

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-12
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals			SW6010		Prep Date: 7/25/2014	PrepBy: NAQ
CALCIUM	11		10	MG/L	10	7/29/2014 11:49
MAGNESIUM	12		10	MG/L	10	7/29/2014 11:49
SODIUM	5500		100	MG/L	100	7/29/2014 12:11
Sodium Adsorption Ratio			USDA60		Prep Date: 7/29/2014	PrepBy: KMP
ELECTRICAL CONDUCTIVITY @ SATURATION	33000		1	umhos/cm	10	7/29/2014
SODIUM ADSORPTION RATIO	270		5.4	NU	100	7/29/2014 12:11

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-04B
Legal Location:
Collection Date: 7/17/2014 09:00

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-13
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals			SW6010		Prep Date: 7/25/2014	PrepBy: NAQ
CALCIUM	360		10	MG/L	10	7/29/2014 11:50
MAGNESIUM	110		10	MG/L	10	7/29/2014 11:50
SODIUM	1600		100	MG/L	100	7/29/2014 12:12
Sodium Adsorption Ratio			USDA60		Prep Date: 7/29/2014	PrepBy: KMP
ELECTRICAL CONDUCTIVITY @ SATURATION	12000		1	umhos/cm	10	7/29/2014
SODIUM ADSORPTION RATIO	19		5.4	NU	100	7/29/2014 12:12

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-05D
Legal Location:
Collection Date: 7/17/2014 09:12

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-14
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals			SW6010		Prep Date: 7/25/2014	PrepBy: NAQ
CALCIUM	150		10	MG/L	10	7/29/2014 11:51
MAGNESIUM	38		10	MG/L	10	7/29/2014 11:51
SODIUM	880		10	MG/L	10	7/29/2014 11:51
Sodium Adsorption Ratio			USDA60		Prep Date: 7/29/2014	PrepBy: KMP
ELECTRICAL CONDUCTIVITY @ SATURATION	6500		1	umhos/cm	10	7/29/2014
SODIUM ADSORPTION RATIO	16		0.54	NU	10	7/29/2014 11:51

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-06B
Legal Location:
Collection Date: 7/17/2014 09:28

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-15
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals			SW6010		Prep Date: 7/25/2014	PrepBy: NAQ
CALCIUM	180		10	MG/L	10	7/29/2014 11:52
MAGNESIUM	42		10	MG/L	10	7/29/2014 11:52
SODIUM	920		10	MG/L	10	7/29/2014 11:52
Sodium Adsorption Ratio			USDA60		Prep Date: 7/29/2014	PrepBy: KMP
ELECTRICAL CONDUCTIVITY @ SATURATION	6900		1	umhos/cm	10	7/29/2014
SODIUM ADSORPTION RATIO	16		0.54	NU	10	7/29/2014 11:52

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-07D
Legal Location:
Collection Date: 7/17/2014 09:35

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-16
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals			SW6010		Prep Date: 7/25/2014	PrepBy: NAQ
CALCIUM	410		10	MG/L	10	7/29/2014 11:53
MAGNESIUM	110		10	MG/L	10	7/29/2014 11:53
SODIUM	2000		100	MG/L	100	7/29/2014 12:13
Sodium Adsorption Ratio			USDA60		Prep Date: 7/29/2014	PrepBy: KMP
ELECTRICAL CONDUCTIVITY @ SATURATION	15000		1	umhos/cm	10	7/29/2014
SODIUM ADSORPTION RATIO	23		5.4	NU	100	7/29/2014 12:13

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-08B
Legal Location:
Collection Date: 7/17/2014 09:45

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-17
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals			SW6010		Prep Date: 7/25/2014	PrepBy: NAQ
CALCIUM	260		10	MG/L	10	7/29/2014 11:54
MAGNESIUM	77		10	MG/L	10	7/29/2014 11:54
SODIUM	1900		100	MG/L	100	7/29/2014 12:14
Sodium Adsorption Ratio			USDA60		Prep Date: 7/29/2014	PrepBy: KMP
ELECTRICAL CONDUCTIVITY @ SATURATION	14000		1	umhos/cm	10	7/29/2014
SODIUM ADSORPTION RATIO	27		5.4	NU	100	7/29/2014 12:14

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-09B
Legal Location:
Collection Date: 7/17/2014 10:10

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-18
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals			SW6010		Prep Date: 7/25/2014	PrepBy: NAQ
CALCIUM	46		10	MG/L	10	7/29/2014 11:55
MAGNESIUM	15		10	MG/L	10	7/29/2014 11:55
SODIUM	930		10	MG/L	10	7/29/2014 11:55
Sodium Adsorption Ratio			USDA60		Prep Date: 7/29/2014	PrepBy: KMP
ELECTRICAL CONDUCTIVITY @ SATURATION	5900		1	umhos/cm	10	7/29/2014
SODIUM ADSORPTION RATIO	31		0.54	NU	10	7/29/2014 11:55

Client: Analytica Environmental Laboratories
Project: B1407105
Sample ID: B1407105-09B
Legal Location:
Collection Date: 7/17/2014 10:10

Date: 31-Jul-14
Work Order: 1407478
Lab ID: 1407478-18
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
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Explanation of Qualifiers

Radiochemistry:

- U or ND - Result is less than the sample specific MDC.
- Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
- Y2 - Chemical Yield outside default limits.
- W - DER is greater than Warning Limit of 1.42
- * - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
- # - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
- G - Sample density differs by more than 15% of LCS density.
- D - DER is greater than Control Limit
- M - Requested MDC not met.
- LT - Result is less than requested MDC but greater than achieved MDC.
- M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
- L - LCS Recovery below lower control limit.
- H - LCS Recovery above upper control limit.
- P - LCS, Matrix Spike Recovery within control limits.
- N - Matrix Spike Recovery outside control limits
- NC - Not Calculated for duplicate results less than 5 times MDC
- B - Analyte concentration greater than MDC.
- B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

- B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).
- U or ND - Indicates that the compound was analyzed for but not detected.
- E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
- M - Duplicate injection precision was not met.
- N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
- Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
- * - Duplicate analysis (relative percent difference) not within control limits.
- S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

- U or ND - Indicates that the compound was analyzed for but not detected.
- B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.
- E - Analyte concentration exceeds the upper level of the calibration range.
- J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).
- A - A tentatively identified compound is a suspected aldol-condensation product.
- X - The analyte was diluted below an accurate quantitation level.
- * - The spike recovery is equal to or outside the control criteria used.
- + - The relative percent difference (RPD) equals or exceeds the control criteria.
- G - A pattern resembling gasoline was detected in this sample.
- D - A pattern resembling diesel was detected in this sample.
- M - A pattern resembling motor oil was detected in this sample.
- C - A pattern resembling crude oil was detected in this sample.
- 4 - A pattern resembling JP-4 was detected in this sample.
- 5 - A pattern resembling JP-5 was detected in this sample.
- H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.
- L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.
- Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
 - gasoline
 - JP-8
 - diesel
 - mineral spirits
 - motor oil
 - Stoddard solvent
 - bunker C

Client: Analytica Environmental Laboratories
 Work Order: 1407478
 Project: B1407105

QC BATCH REPORT

Batch ID: **IP140728-4-2** Instrument ID **ICPMS2** Method: **SW6020**

LCS		Sample ID: IP140728-4			Units: UG/KG		Analysis Date: 7/29/2014 12:19			
Client ID:		Run ID: IM140729-10A1					Prep Date: 7/28/2014		DF: 10	
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
ARSENIC	10400	200	10000		104	80-120			20	

MB		Sample ID: IP140728-4			Units: UG/KG		Analysis Date: 7/29/2014 12:16			
Client ID:		Run ID: IM140729-10A1					Prep Date: 7/28/2014		DF: 10	
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
ARSENIC	ND	200								

The following samples were analyzed in this batch: 1407478-1 1407478-5 1407478-7

Client: Analytica Environmental Laboratories

QC BATCH REPORT

Work Order: 1407478

Project: B1407105

Batch ID: EX140729-2-1

Instrument ID HPSV1

Method: SW8270SIMPAH

LCS		Sample ID: EX140729-2			Units: UG/KG			Analysis Date: 7/30/2014 17:17			
Client ID:		Run ID: SV140730-4			Prep Date: 7/29/2014			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual	
NAPHTHALENE	54.9	3.33	66.7		82	40-107			30		
ACENAPHTHENE	54.7	3.33	66.7		82	46-108			30		
FLUORENE	57	3.33	66.7		86	49-108			30		
ANTHRACENE	60.8	3.33	66.7		91	53-107			30		
FLUORANTHENE	56.4	3.33	66.7		85	54-114			30		
PYRENE	56.3	3.33	66.7		85	46-123			30		
BENZO(A)ANTHRACENE	54.3	3.33	66.7		81	52-111			30		
CHRYSENE	53	3.33	66.7		79	53-112			30		
BENZO(B)FLUORANTHENE	58.6	3.33	66.7		88	45-114			30		
BENZO(K)FLUORANTHENE	54.2	3.33	66.7		81	45-123			30		
BENZO(A)PYRENE	55.5	3.33	66.7		83	50-111			30		
INDENO(1,2,3-CD)PYRENE	47.2	3.33	66.7		71	38-121			30		
DIBENZO(A,H)ANTHRACENE	44.9	3.33	66.7		67	41-125			30		
Surr: NITROBENZENE-D5	62.5		66.7		94	28-113					
Surr: 2-FLUOROBIPHENYL	55.4		66.7		83	41-106					
Surr: TERPHENYL-D14	49.5		66.7		74	25-147					

MB		Sample ID: EX140729-2			Units: UG/KG			Analysis Date: 7/30/2014 16:59			
Client ID:		Run ID: SV140730-4			Prep Date: 7/29/2014			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual	
NAPHTHALENE	ND	3.3									
ACENAPHTHENE	ND	3.3									
FLUORENE	ND	3.3									
ANTHRACENE	ND	3.3									
FLUORANTHENE	ND	3.3									
PYRENE	ND	3.3									
BENZO(A)ANTHRACENE	ND	3.3									
CHRYSENE	ND	3.3									
BENZO(B)FLUORANTHENE	ND	3.3									
BENZO(K)FLUORANTHENE	ND	3.3									
BENZO(A)PYRENE	ND	3.3									
INDENO(1,2,3-CD)PYRENE	ND	3.3									
DIBENZO(A,H)ANTHRACENE	ND	3.3									
Surr: NITROBENZENE-D5	54.2		66.7		81	28-113					
Surr: 2-FLUOROBIPHENYL	46.6		66.7		70	41-106					
Surr: TERPHENYL-D14	39		66.7		59	25-147					

Client: Analytica Environmental Laboratories

QC BATCH REPORT

Work Order: 1407478

Project: B1407105

Batch ID: EX140729-2-1

Instrument ID HPSV1

Method: SW8270SIMPAH

MS		Sample ID: 1407478-1			Units: UG/KG			Analysis Date: 7/30/2014 19:04			
Client ID: B1407105-01D		Run ID: SV140730-4			Prep Date: 7/29/2014			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual	
NAPHTHALENE	51.6	3.71	74.1	3.7	70	40-107			30		
ACENAPHTHENE	58.4	3.71	74.1	3.7	79	46-108			30		
FLUORENE	64.6	3.71	74.1	3.7	87	49-108			30		
ANTHRACENE	69.8	3.71	74.1	3.7	94	53-107			30		
FLUORANTHENE	66.4	3.71	74.1	3.7	90	54-114			30		
PYRENE	55.7	3.71	74.1	3.7	75	46-123			30		
BENZO(A)ANTHRACENE	62.5	3.71	74.1	3.7	84	52-111			30		
CHRYSENE	59.7	3.71	74.1	3.7	80	53-112			30		
BENZO(B)FLUORANTHENE	62.4	3.71	74.1	3.7	84	45-114			30		
BENZO(K)FLUORANTHENE	60.5	3.71	74.1	3.7	82	45-123			30		
BENZO(A)PYRENE	68.3	3.71	74.1	3.7	92	50-111			30		
INDENO(1,2,3-CD)PYRENE	76.3	3.71	74.1	3.7	103	38-121			30		
DIBENZO(A,H)ANTHRACENE	78	3.71	74.1	3.7	105	41-125			30		
Surr: NITROBENZENE-D5	60.7		74.1		82	28-113					
Surr: 2-FLUOROBIPHENYL	55.5		74.1		75	41-106					
Surr: TERPHENYL-D14	50.2		74.1		68	25-147					

MSD		Sample ID: 1407478-1			Units: UG/KG			Analysis Date: 7/30/2014 19:22			
Client ID: B1407105-01D		Run ID: SV140730-4			Prep Date: 7/29/2014			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual	
NAPHTHALENE	52.6	3.75	74.9	3.7	70	40-107	51.6	2	30		
ACENAPHTHENE	57.3	3.75	74.9	3.7	76	46-108	58.4	2	30		
FLUORENE	61.5	3.75	74.9	3.7	82	49-108	64.6	5	30		
ANTHRACENE	68.3	3.75	74.9	3.7	91	53-107	69.8	2	30		
FLUORANTHENE	63.6	3.75	74.9	3.7	85	54-114	66.4	4	30		
PYRENE	55.6	3.75	74.9	3.7	74	46-123	55.7	0	30		
BENZO(A)ANTHRACENE	61.9	3.75	74.9	3.7	83	52-111	62.5	1	30		
CHRYSENE	58.3	3.75	74.9	3.7	78	53-112	59.7	2	30		
BENZO(B)FLUORANTHENE	62.8	3.75	74.9	3.7	84	45-114	62.4	1	30		
BENZO(K)FLUORANTHENE	61.9	3.75	74.9	3.7	83	45-123	60.5	2	30		
BENZO(A)PYRENE	66.4	3.75	74.9	3.7	89	50-111	68.3	3	30		
INDENO(1,2,3-CD)PYRENE	66.7	3.75	74.9	3.7	89	38-121	76.3	13	30		
DIBENZO(A,H)ANTHRACENE	67.1	3.75	74.9	3.7	90	41-125	78	15	30		
Surr: NITROBENZENE-D5	61.3		74.9		82	28-113		1			
Surr: 2-FLUOROBIPHENYL	55.8		74.9		74	41-106		1			
Surr: TERPHENYL-D14	50.2		74.9		67	25-147		0			

The following samples were analyzed in this batch:

1407478-1 1407478-5 1407478-7

Client: Analytica Environmental Laboratories
 Work Order: 1407478
 Project: B1407105

QC BATCH REPORT

Batch ID: **WC140729-1-1** Instrument ID **Spec** Method: **SW7196**

LCS		Sample ID: WC140729-1			Units: MG/KG			Analysis Date: 7/29/2014		
Client ID:		Run ID: CR140729-1A1			Prep Date: 7/29/2014			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
CHROMIUM VI	3.05	0.1	3		102	80-120			20	

MB		Sample ID: WC140729-1			Units: MG/KG			Analysis Date: 7/29/2014		
Client ID:		Run ID: CR140729-1A1			Prep Date: 7/29/2014			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
CHROMIUM VI	ND	0.1								

MS		Sample ID: 1407478-1			Units: MG/KG			Analysis Date: 7/29/2014		
Client ID: B1407105-01D		Run ID: CR140729-1A1			Prep Date: 7/29/2014			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
CHROMIUM VI	1.1	0.112	1.12	0.11	98	75-125			20	

MSD		Sample ID: 1407478-1			Units: MG/KG			Analysis Date: 7/29/2014		
Client ID: B1407105-01D		Run ID: CR140729-1A1			Prep Date: 7/29/2014			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
CHROMIUM VI	1.07	0.112	1.12	0.11	95	75-125	1.1	3	20	

The following samples were analyzed in this batch: 1407478-1 1407478-5 1407478-7



12189 Pennsylvania St.
Thornton, CO 80241
(303) 469-8868
(303) 469-5254 fax

4307 Arctic Boulevard
Anchorage, AK 99503
(907) 258-2155
(907) 258-6634 fax

475 Hall St.
Fairbanks, AK 99701
(907) 456-3116
(907) 456-3125 fax

701 E. Parks Hwy., Suite 203
Wasilla, AK 99654
(907) 373-5440

Chain of Custody No: **087244**

Analytica Chain of Custody Form

Client Name & Address:

ESTI

Public Water System (PWS) ID#:

Roan Creek Evap Pond

Section to be Completed by Analytica

Quote ID: **61407105**

Account #:

Check Credit Card

Invoice to Name & Address:

**Jim Graves
Marelex Inc**

Report to:

Heidenberg

Turnaround Time for Results (TAT)

Phone No: **970 948-8978**

Fax No: _____

E-mail: **es.craig@sonris.wspri.s.wa.gov**

Special Instructions/Comments:

P.O. or Contract No:

Requested Analysis/Method

Kit Prep/Shipping Charge: \$

Client Sample Identification / Location

Client Sample Identification / Location	Date Sampled	Time Sampled	Matrix (S-DW-WW-Other)	No. of Containers	Lot #: Pres:	Lot #: Pres:	Lot #: Pres:	Lot #: Pres:	Lot #: Pres:	Lot #: Pres:	Field Preserved	Field Filtered	MS/MSD ?
a) Sump	7/17/14	7:45			X								
Outside Sump		8:24											
Outside Fence		8:35											
P-1		9:00											
P-2		9:12											
P-3		9:28											
P-4		9:35											
P-5		9:45											
a) Tank		10:10											

Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____

Relinquished by: **DCI** Date: **7/17/14** Time: **17:00** Received by: **AL** Date: **7/18/14** Time: **09:50**

Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____

Name of Sampler: (printed) **Heidenberg**

Condition of Custody Seal? **THO** **ANC** **FBKS** **WAS**

Temp/Loc: **42**

Thermo ID#: _____

Shipped Via: **F**