

**INDEPENDENT TESTING LAB**

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

Company: LAMBDA ENERGY RESOURCES, LLC

Name:

ClientProj: 2018100106.01

GTA ProjNo: 080819-15

Site Addr: HAYES 22 CPF

Sampled By: JOSHUA GERRIE/GCES

Date Rec: 8/8/2019

Time Rec: 4:30 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	MW-201	8/8/2019	1:48 PM	WATER
2	MW-202	8/8/2019	12:30 PM	WATER
3	MW-203	8/8/2019	11:44 AM	WATER
4	MW-204	8/8/2019	9:54 AM	WATER
5	MW-205	8/8/2019	1:05 PM	WATER
6	MW-206	8/8/2019	10:42 AM	WATER
7	MW-207S	8/8/2019	2:29 PM	WATER
8	MW-207D	8/8/2019	2:57 PM	WATER

ELECTRONIC SIGNATURE REPORT. This is a final report for the following pages of data for the samples specified above. All analysis was performed by the methods stated and all quality control measures required were completed. All quality control information is available upon request.

Kirk L Chase

Kirk L. Chase/Chemist
Grand Traverse Analytical
830 Robinwood Court
Traverse City, MI 49686
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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLE MATRIX: WATER
SAMPLE ID: MW-201

GTA PROJECT NO: 080819-15
GTA SAMPLE NO: 1
DATE SAMPLED: 8/8/2019
TIME SAMPLED: 1:48 PM
DATE RECEIVED: 8/8/2019
TIME RECEIVED: 4:30 PM
SAMPLED BY: JOSHUA GERRIE/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		8/9/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLE MATRIX: WATER
SAMPLE ID: MW-202

GTA PROJECT NO: 080819-15
GTA SAMPLE NO: 2
DATE SAMPLED: 8/8/2019
TIME SAMPLED: 12:30 PM
DATE RECEIVED: 8/8/2019
TIME RECEIVED: 4:30 PM
SAMPLED BY: JOSHUA GERRIE/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		8/9/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLE MATRIX: WATER
SAMPLE ID: MW-203

GTA PROJECT NO: 080819-15
GTA SAMPLE NO: 3
DATE SAMPLED: 8/8/2019
TIME SAMPLED: 11:44 AM
DATE RECEIVED: 8/8/2019
TIME RECEIVED: 4:30 PM
SAMPLED BY: JOSHUA GERRIE/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		8/9/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLE MATRIX: WATER
SAMPLE ID: MW-204

GTA PROJECT NO: 080819-15
GTA SAMPLE NO: 4
DATE SAMPLED: 8/8/2019
TIME SAMPLED: 9:54 AM
DATE RECEIVED: 8/8/2019
TIME RECEIVED: 4:30 PM
SAMPLED BY: JOSHUA GERRIE/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		8/9/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					

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LOD = LIMIT OF DETECTION

COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLE MATRIX: WATER
SAMPLE ID: MW-205

GTA PROJECT NO: 080819-15
GTA SAMPLE NO: 5
DATE SAMPLED: 8/8/2019
TIME SAMPLED: 1:05 PM
DATE RECEIVED: 8/8/2019
TIME RECEIVED: 4:30 PM
SAMPLED BY: JOSHUA GERRIE/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		8/9/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.

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LOD = LIMIT OF DETECTION

COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLE MATRIX: WATER
SAMPLE ID: MW-206
GTA PROJECT NO: 080819-15
GTA SAMPLE NO: 6
DATE SAMPLED: 8/8/2019
TIME SAMPLED: 10:42 AM
DATE RECEIVED: 8/8/2019
TIME RECEIVED: 4:30 PM
SAMPLED BY: JOSHUA GERRIE/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		8/9/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLE MATRIX: WATER
SAMPLE ID: MW-207S

GTA PROJECT NO: 080819-15
GTA SAMPLE NO: 7
DATE SAMPLED: 8/8/2019
TIME SAMPLED: 2:29 PM
DATE RECEIVED: 8/8/2019
TIME RECEIVED: 4:30 PM
SAMPLED BY: JOSHUA GERRIE/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		8/9/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLE MATRIX: WATER
SAMPLE ID: MW-207D

GTA PROJECT NO: 080819-15
GTA SAMPLE NO: 8
DATE SAMPLED: 8/8/2019
TIME SAMPLED: 2:57 PM
DATE RECEIVED: 8/8/2019
TIME RECEIVED: 4:30 PM
SAMPLED BY: JOSHUA GERRIE/GCES

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		8/9/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.

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PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES
SAMPLE ID: MW-201

GTA PROJECT NO: 080819-15
GTA SAMPLE NO: 1
DATE SAMPLED: 8/8/2019
TIME SAMPLED: 1:48 PM
DATE RECEIVED: 8/8/2019
TIME RECEIVED: 4:30 PM
SAMPLE MATRIX: WATER

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
ARSENIC DISS EPA 200.8	ND	0.0020	mg/L (PPM)	MR	8/9/2019	EPA 3050B
IRON DISS EPA 200.8	ND	0.010	mg/L (PPM)	MR	8/9/2019	EPA 3050B
MANGANESE DISS EPA 200.8	ND	0.0010	mg/L (PPM)	MR	8/9/2019	EPA 3050B

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

DISS = DISSOLVED



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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
DATE SAMPLED: 8/8/2019
TIME SAMPLED: 12:30 PM
DATE RECEIVED: 8/8/2019
TIME RECEIVED: 4:30 PM
SAMPLED BY: MI
JOSHUA GERRIE/GCES
SAMPLE MATRIX: WATER
SAMPLE ID: MW-202

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
ARSENIC DISS EPA 200.8	ND	0.0020	mg/L (PPM)	MR	8/9/2019	EPA 3050B
IRON DISS EPA 200.8	ND	0.010	mg/L (PPM)	MR	8/9/2019	EPA 3050B
MANGANESE DISS EPA 200.8	ND	0.0010	mg/L (PPM)	MR	8/9/2019	EPA 3050B

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PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES
SAMPLE ID: MW-203

GTA PROJECT NO: 080819-15
GTA SAMPLE NO: 3
DATE SAMPLED: 8/8/2019
TIME SAMPLED: 11:44 AM
DATE RECEIVED: 8/8/2019
TIME RECEIVED: 4:30 PM
SAMPLE MATRIX: WATER

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
ARSENIC DISS EPA 200.8	ND	0.0020	mg/L (PPM)	MR	8/9/2019	EPA 3050B
IRON DISS EPA 200.8	ND	0.010	mg/L (PPM)	MR	8/9/2019	EPA 3050B
MANGANESE DISS EPA 200.8	ND	0.0010	mg/L (PPM)	MR	8/9/2019	EPA 3050B

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES
SAMPLE ID: MW-204

GTA PROJECT NO: 080819-15
GTA SAMPLE NO: 4
DATE SAMPLED: 8/8/2019
TIME SAMPLED: 9:54 AM
DATE RECEIVED: 8/8/2019
TIME RECEIVED: 4:30 PM
SAMPLE MATRIX: WATER

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
ARSENIC DISS EPA 200.8	ND	0.0020	mg/L (PPM)	MR	8/9/2019	EPA 3050B
IRON DISS EPA 200.8	ND	0.010	mg/L (PPM)	MR	8/9/2019	EPA 3050B
MANGANESE DISS EPA 200.8	ND	0.0010	mg/L (PPM)	MR	8/9/2019	EPA 3050B

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES
SAMPLE ID: MW-205

GTA PROJECT NO: 080819-15
GTA SAMPLE NO: 5
DATE SAMPLED: 8/8/2019
TIME SAMPLED: 1:05 PM
DATE RECEIVED: 8/8/2019
TIME RECEIVED: 4:30 PM
SAMPLE MATRIX: WATER

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
ARSENIC DISS EPA 200.8	ND	0.0020	mg/L (PPM)	MR	8/9/2019	EPA 3050B
IRON DISS EPA 200.8	0.018	0.010	mg/L (PPM)	MR	8/9/2019	EPA 3050B
MANGANESE DISS EPA 200.8	0.0012	0.0010	mg/L (PPM)	MR	8/9/2019	EPA 3050B

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES
SAMPLE ID: MW-206

GTA PROJECT NO: 080819-15
GTA SAMPLE NO: 6
DATE SAMPLED: 8/8/2019
TIME SAMPLED: 10:42 AM
DATE RECEIVED: 8/8/2019
TIME RECEIVED: 4:30 PM
SAMPLE MATRIX: WATER

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
ARSENIC DISS EPA 200.8	ND	0.0020	mg/L (PPM)	MR	8/9/2019	EPA 3050B
IRON DISS EPA 200.8	ND	0.010	mg/L (PPM)	MR	8/9/2019	EPA 3050B
MANGANESE DISS EPA 200.8	ND	0.0010	mg/L (PPM)	MR	8/9/2019	EPA 3050B

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PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES
SAMPLE ID: MW-207S

GTA PROJECT NO: 080819-15
GTA SAMPLE NO: 7
DATE SAMPLED: 8/8/2019
TIME SAMPLED: 2:29 PM
DATE RECEIVED: 8/8/2019
TIME RECEIVED: 4:30 PM
SAMPLE MATRIX: WATER

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
ARSENIC DISS EPA 200.8	ND	0.0020	mg/L (PPM)	MR	8/9/2019	EPA 3050B
IRON DISS EPA 200.8	0.014	0.010	mg/L (PPM)	MR	8/9/2019	EPA 3050B
MANGANESE DISS EPA 200.8	0.0010	0.0010	mg/L (PPM)	MR	8/9/2019	EPA 3050B

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES
SAMPLE ID: MW-207D

GTA PROJECT NO: 080819-15
GTA SAMPLE NO: 8
DATE SAMPLED: 8/8/2019
TIME SAMPLED: 2:57 PM
DATE RECEIVED: 8/8/2019
TIME RECEIVED: 4:30 PM
SAMPLE MATRIX: WATER

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
ARSENIC DISS EPA 200.8	ND	0.0020	mg/L (PPM)	MR	8/9/2019	EPA 3050B
IRON DISS EPA 200.8	ND	0.010	mg/L (PPM)	MR	8/9/2019	EPA 3050B
MANGANESE DISS EPA 200.8	ND	0.0010	mg/L (PPM)	MR	8/9/2019	EPA 3050B

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