

**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: 2018100136.02

GTA ProjNo: 011321-8

Site Addr: HAYES 22 CPF

Sampled By: JOSHUA GERRIE/GCES

Date Rec: 1/13/2021

Time Rec: 4:30 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	RW-101 BLDG.	1/13/2021		WATER
2	RW-102 BLDG.	1/13/2021		WATER
3	RW-103 BLDG.	1/13/2021		WATER
4	RW-104 BLDG.	1/13/2021		WATER
5	RW-105 BLDG.	1/13/2021		WATER
6	TOWER EFF.	1/13/2021		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 Chase

Kirk L. Chase/Chemist
Grand Traverse Analytical
830 Robinwood Court
Traverse City, MI 49686
Ph: 231-929-0905
Fx: 231-929-0894
SP: 231-590-0291
kirk@gtanalytical.com

COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100136.02
LOCATION: HAYES 22 CPF
MI
SAMPLE MATRIX: WATER
SAMPLE ID: RW-101 BLDG.
GTA PROJECT NO: 011321-8
GTA SAMPLE NO: 1
DATE SAMPLED: 1/13/2021
TIME SAMPLED:
DATE RECEIVED: 1/13/2021
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		1/15/2021	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

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100136.02
LOCATION: HAYES 22 CPF
MI
SAMPLE MATRIX: WATER
SAMPLE ID: RW-102 BLDG.

GTA PROJECT NO: 011321-8
GTA SAMPLE NO: 2
DATE SAMPLED: 1/13/2021
TIME SAMPLED:
DATE RECEIVED: 1/13/2021
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	1.3	1.0	ug/L (PPB)	MR		1/15/2021	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: 2018100136.02
LOCATION: HAYES 22 CPF
MI
SAMPLE MATRIX: WATER
SAMPLE ID: RW-103 BLDG.

GTA PROJECT NO: 011321-8
GTA SAMPLE NO: 3
DATE SAMPLED: 1/13/2021
TIME SAMPLED:
DATE RECEIVED: 1/13/2021
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	90	1.0	ug/L (PPB)	MR		1/15/2021	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	46	1.0					
Xylene(Total)	34	3.0					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100136.02
LOCATION: HAYES 22 CPF
MI
SAMPLE MATRIX: WATER
SAMPLE ID: RW-104 BLDG.

GTA PROJECT NO: 011321-8
GTA SAMPLE NO: 4
DATE SAMPLED: 1/13/2021
TIME SAMPLED:
DATE RECEIVED: 1/13/2021
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	31	1.0	ug/L (PPB)	MR		1/15/2021	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	70	1.0					
Xylene(Total)	82	3.0					

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

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COMPANY:	LAMBDA ENERGY RESOURCES, LLC	GTA PROJECT NO:	011321-8
PROJECT NO:	2018100136.02	GTA SAMPLE NO:	5
LOCATION:	HAYES 22 CPF	DATE SAMPLED:	1/13/2021
		TIME SAMPLED:	
	MI	DATE RECEIVED:	1/13/2021
		TIME RECEIVED:	4:30 PM
SAMPLE MATRIX:	WATER		
SAMPLE ID:	RW-105 BLDG.	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	180	1.0	ug/L (PPB)	MR		1/15/2021	EPA 5030B
Toluene	11	1.0					
Ethylbenzene	62	1.0					
Xylene(Total)	100	3.0					

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

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COMPANY:	LAMBDA ENERGY RESOURCES, LLC	GTA PROJECT NO:	011321-8
PROJECT NO:	2018100136.02	GTA SAMPLE NO:	6
LOCATION:	HAYES 22 CPF	DATE SAMPLED:	1/13/2021
		TIME SAMPLED:	
	MI	DATE RECEIVED:	1/13/2021
		TIME RECEIVED:	4:30 PM
SAMPLE MATRIX:	WATER		
SAMPLE ID:	TOWER EFF.	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		1/15/2021	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: 2018100136.02
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES
SAMPLE ID: RW-101 BLDG.

GTA PROJECT NO: 011321-8
GTA SAMPLE NO: 1
DATE SAMPLED: 1/13/2021
TIME SAMPLED:
DATE RECEIVED: 1/13/2021
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	0.0010	mg/L (PPM)	MR	1/14/2021	EPA 3005A
IRON DISS EPA 200.8	ND	0.010	mg/L (PPM)	MR	1/14/2021	EPA 3005A
MANGANESE DISS EPA 200.8	0.18	0.0010	mg/L (PPM)	MR	1/14/2021	EPA 3005A

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100136.02
LOCATION: HAYES 22 CPF
DATE SAMPLED: 1/13/2021
TIME SAMPLED:
DATE RECEIVED: 1/13/2021
TIME RECEIVED: 4:30 PM
SAMPLE MATRIX: WATER
SAMPLED BY: MI
JOSHUA GERRIE/GCES
SAMPLE ID: RW-102 BLDG.

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	0.0010	mg/L (PPM)	MR	1/14/2021	EPA 3005A
IRON DISS EPA 200.8	0.30	0.010	mg/L (PPM)	MR	1/14/2021	EPA 3005A
MANGANESE DISS EPA 200.8	0.098	0.0010	mg/L (PPM)	MR	1/14/2021	EPA 3005A

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PROJECT NO: 2018100136.02
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES
SAMPLE ID: RW-103 BLDG.

GTA PROJECT NO: 011321-8
GTA SAMPLE NO: 3
DATE SAMPLED: 1/13/2021
TIME SAMPLED:
DATE RECEIVED: 1/13/2021
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	0.0010	mg/L (PPM)	MR	1/14/2021	EPA 3005A
IRON DISS EPA 200.8	1.4	0.010	mg/L (PPM)	MR	1/14/2021	EPA 3005A
MANGANESE DISS EPA 200.8	0.082	0.0010	mg/L (PPM)	MR	1/14/2021	EPA 3005A

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PROJECT NO: 2018100136.02
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES
SAMPLE ID: RW-104 BLDG.

GTA PROJECT NO: 011321-8
GTA SAMPLE NO: 4
DATE SAMPLED: 1/13/2021
TIME SAMPLED:
DATE RECEIVED: 1/13/2021
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	0.0010	mg/L (PPM)	MR	1/14/2021	EPA 3005A
IRON DISS EPA 200.8	1.8	0.010	mg/L (PPM)	MR	1/14/2021	EPA 3005A
MANGANESE DISS EPA 200.8	0.092	0.0010	mg/L (PPM)	MR	1/14/2021	EPA 3005A

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PROJECT NO: 2018100136.02
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES
SAMPLE ID: RW-105 BLDG.

GTA PROJECT NO: 011321-8
GTA SAMPLE NO: 5
DATE SAMPLED: 1/13/2021
TIME SAMPLED:
DATE RECEIVED: 1/13/2021
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	0.0010	mg/L (PPM)	MR	1/14/2021	EPA 3005A
IRON DISS EPA 200.8	1.4	0.010	mg/L (PPM)	MR	1/14/2021	EPA 3005A
MANGANESE DISS EPA 200.8	0.15	0.0010	mg/L (PPM)	MR	1/14/2021	EPA 3005A

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100136.02
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES
SAMPLE ID: TOWER EFF.

GTA PROJECT NO: 011321-8
GTA SAMPLE NO: 6
DATE SAMPLED: 1/13/2021
TIME SAMPLED:
DATE RECEIVED: 1/13/2021
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	0.0010	mg/L (PPM)	MR	1/14/2021	EPA 3005A
IRON DISS EPA 200.8	ND	0.010	mg/L (PPM)	MR	1/14/2021	EPA 3005A
MANGANESE DISS EPA 200.8	ND	0.0010	mg/L (PPM)	MR	1/14/2021	EPA 3005A

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100136.02
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES

GTA PROJECT NO: 011321-8
GTA SAMPLE NO: 1
DATE SAMPLED: 1/13/2021
TIME SAMPLED:
DATE RECEIVED: 1/13/2021
TIME RECEIVED: 4:30 PM

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Sample</u>
	SAMPLE ID: RW-101 BLDG. CHLORIDE EPA 300.0	ND	10	mg/L (PPM)	LV	1/14/2021	WATER

ND = NOT DETECTED, RESULT < LOD
LOD = LIMIT OF DETECTION
s.u. = STANDARD pH UNITS REPORTED AT 25 C

COMPANY: LAMBDA ENERGY RESOURCES, LLC

GTA PROJECT NO: 011321-8

PROJECT NO: 2018100136.02

GTA SAMPLE NO: 2

LOCATION: HAYES 22 CPF

DATE SAMPLED: 1/13/2021

TIME SAMPLED:

DATE RECEIVED: 1/13/2021

TIME RECEIVED: 4:30 PM

MI

SAMPLED BY: JOSHUA GERRIE/GCES

SAMPLE ANALYSIS

No: Analysis

SAMPLE ID: RW-102 BLDG.

CHLORIDE EPA 300.0

<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Sample</u>
21	10	mg/L (PPM)	LV	1/14/2021	WATER

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100136.02
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES

GTA PROJECT NO: 011321-8
GTA SAMPLE NO: 3
DATE SAMPLED: 1/13/2021
TIME SAMPLED:
DATE RECEIVED: 1/13/2021
TIME RECEIVED: 4:30 PM

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Sample</u>
	SAMPLE ID: RW-103 BLDG. CHLORIDE EPA 300.0	18	10	mg/L (PPM)	LV	1/14/2021	WATER

ND = NOT DETECTED, RESULT < LOD
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s.u. = STANDARD pH UNITS REPORTED AT 25 C

COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100136.02
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES

GTA PROJECT NO: 011321-8
GTA SAMPLE NO: 4
DATE SAMPLED: 1/13/2021
TIME SAMPLED:
DATE RECEIVED: 1/13/2021
TIME RECEIVED: 4:30 PM

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Sample</u>
	SAMPLE ID: RW-104 BLDG. CHLORIDE EPA 300.0	36	10	mg/L (PPM)	LV	1/14/2021	WATER

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100136.02
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES

GTA PROJECT NO: 011321-8
GTA SAMPLE NO: 5
DATE SAMPLED: 1/13/2021
TIME SAMPLED:
DATE RECEIVED: 1/13/2021
TIME RECEIVED: 4:30 PM

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Sample</u>
	SAMPLE ID: RW-105 BLDG. CHLORIDE EPA 300.0	18	10	mg/L (PPM)	LV	1/14/2021	WATER

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100136.02
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES

GTA PROJECT NO: 011321-8
GTA SAMPLE NO: 6
DATE SAMPLED: 1/13/2021
TIME SAMPLED:
DATE RECEIVED: 1/13/2021
TIME RECEIVED: 4:30 PM

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Sample</u>
	SAMPLE ID: TOWER EFF. CHLORIDE EPA 300.0	30	10	mg/L (PPM)	LV	1/14/2021	WATER

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