



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: 102419-6

Site Addr: HAYES 22 CPF

Sampled By: JOSHUA GERRIE/GCES

Date Rec: 10/24/2019

Time Rec: 4:15 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	RW-101 BLDG	10/24/2019		WATER
2	RW-102 BLDG	10/24/2019		WATER
3	RW-103 BLDG	10/24/2019		WATER
4	RW-104 BLDG	10/24/2019		WATER
5	RW-105 BLDG	10/24/2019		WATER
6	TOWER EFF.	10/24/2019		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
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830 Robinwood Court
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COMPANY:	LAMBDA ENERGY RESOURCES, LLC	GTA PROJECT NO:	102419-6
PROJECT NO:	2018100136.02	GTA SAMPLE NO:	1
LOCATION:	HAYES 22 CPF	DATE SAMPLED:	10/24/2019
		TIME SAMPLED:	
		DATE RECEIVED:	10/24/2019
	MI	TIME RECEIVED:	4:15 PM
SAMPLE MATRIX:	WATER		
SAMPLE ID:	RW-101 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	ND	1.0	ug/L (PPB)	MR		10/28/2019	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

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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: 102419-6
GTA SAMPLE NO: 2
DATE SAMPLED: 10/24/2019
TIME SAMPLED:
DATE RECEIVED: 10/24/2019
TIME RECEIVED: 4:15 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		10/28/2019	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: 2018100136.02
LOCATION: HAYES 22 CPF
MI
SAMPLE MATRIX: WATER
SAMPLE ID: RW-103 BLDG

GTA PROJECT NO: 102419-6
GTA SAMPLE NO: 3
DATE SAMPLED: 10/24/2019
TIME SAMPLED:
DATE RECEIVED: 10/24/2019
TIME RECEIVED: 4:15 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	23	1.0	ug/L (PPB)	MR		10/28/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	20	1.0					
Xylene(Total)	17	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: 102419-6
GTA SAMPLE NO: 4
DATE SAMPLED: 10/24/2019
TIME SAMPLED:
DATE RECEIVED: 10/24/2019
TIME RECEIVED: 4:15 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	8.5	1.0	ug/L (PPB)	MR		10/28/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	44	1.0					
Xylene(Total)	48	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
SAMPLE MATRIX: WATER
SAMPLE ID: RW-105 BLDG
GTA PROJECT NO: 102419-6
GTA SAMPLE NO: 5
DATE SAMPLED: 10/24/2019
TIME SAMPLED:
DATE RECEIVED: 10/24/2019
TIME RECEIVED: 4:15 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	7.1	1.0	ug/L (PPB)	MR		10/28/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	30	1.0					
Xylene(Total)	49	3.0					

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COMPANY:	LAMBDA ENERGY RESOURCES, LLC	GTA PROJECT NO:	102419-6
PROJECT NO:	2018100136.02	GTA SAMPLE NO:	6
LOCATION:	HAYES 22 CPF	DATE SAMPLED:	10/24/2019
		TIME SAMPLED:	
	MI	DATE RECEIVED:	10/24/2019
		TIME RECEIVED:	4:15 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		10/28/2019	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: 2018100136.02
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES
SAMPLE ID: RW-101 BLDG

GTA PROJECT NO: 102419-6
GTA SAMPLE NO: 1
DATE SAMPLED: 10/24/2019
TIME SAMPLED:
DATE RECEIVED: 10/24/2019
TIME RECEIVED: 4:15 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	10/25/2019	EPA 3005A
IRON DISS EPA 200.8	0.018	0.010	mg/L (PPM)	MR	10/25/2019	EPA 3005A
MANGANESE DISS EPA 200.8	0.17	0.0010	mg/L (PPM)	MR	10/25/2019	EPA 3005A

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COMPANY: LAMBDA ENERGY RESOURCES, LLC

GTA PROJECT NO: 102419-6

PROJECT NO: 2018100136.02

GTA SAMPLE NO: 2

LOCATION: HAYES 22 CPF

DATE SAMPLED: 10/24/2019

TIME SAMPLED:

DATE RECEIVED: 10/24/2019

TIME RECEIVED: 4:15 PM

MI

SAMPLED BY: JOSHUA GERRIE/GCES

SAMPLE MATRIX: WATER

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	0.0036	0.0010	mg/L (PPM)	MR	10/25/2019	EPA 3005A
IRON DISS EPA 200.8	1.2	0.010	mg/L (PPM)	MR	10/25/2019	EPA 3005A
MANGANESE DISS EPA 200.8	0.11	0.0010	mg/L (PPM)	MR	10/25/2019	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: RW-103 BLDG

GTA PROJECT NO: 102419-6
GTA SAMPLE NO: 3
DATE SAMPLED: 10/24/2019
TIME SAMPLED:
DATE RECEIVED: 10/24/2019
TIME RECEIVED: 4:15 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	0.0038	0.0010	mg/L (PPM)	MR	10/25/2019	EPA 3005A
IRON DISS EPA 200.8	2.2	0.010	mg/L (PPM)	MR	10/25/2019	EPA 3005A
MANGANESE DISS EPA 200.8	0.084	0.0010	mg/L (PPM)	MR	10/25/2019	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: 102419-6
GTA SAMPLE NO: 4
DATE SAMPLED: 10/24/2019
TIME SAMPLED:
DATE RECEIVED: 10/24/2019
TIME RECEIVED: 4:15 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	0.0030	0.0010	mg/L (PPM)	MR	10/25/2019	EPA 3005A
IRON DISS EPA 200.8	2.4	0.010	mg/L (PPM)	MR	10/25/2019	EPA 3005A
MANGANESE DISS EPA 200.8	0.081	0.0010	mg/L (PPM)	MR	10/25/2019	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: 102419-6
GTA SAMPLE NO: 5
DATE SAMPLED: 10/24/2019
TIME SAMPLED:
DATE RECEIVED: 10/24/2019
TIME RECEIVED: 4:15 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	0.0028	0.0010	mg/L (PPM)	MR	10/25/2019	EPA 3005A
IRON DISS EPA 200.8	1.8	0.010	mg/L (PPM)	MR	10/25/2019	EPA 3005A
MANGANESE DISS EPA 200.8	0.12	0.0010	mg/L (PPM)	MR	10/25/2019	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: 102419-6
GTA SAMPLE NO: 6
DATE SAMPLED: 10/24/2019
TIME SAMPLED:
DATE RECEIVED: 10/24/2019
TIME RECEIVED: 4:15 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	10/25/2019	EPA 3005A
IRON DISS EPA 200.8	ND	0.010	mg/L (PPM)	MR	10/25/2019	EPA 3005A
MANGANESE DISS EPA 200.8	ND	0.0010	mg/L (PPM)	MR	10/25/2019	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: 102419-6
GTA SAMPLE NO: 1
DATE SAMPLED: 10/24/2019
TIME SAMPLED:
DATE RECEIVED: 10/24/2019
TIME RECEIVED: 4:15 PM

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
SAMPLE ID: RW-101 BLDG							
CHLORIDE EPA 300.0		13	10	mg/L (PPM)	LV	11/4/2019	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: 102419-6

PROJECT NO: 2018100136.02

GTA SAMPLE NO: 2

LOCATION: HAYES 22 CPF

DATE SAMPLED: 10/24/2019

TIME SAMPLED:

DATE RECEIVED: 10/24/2019

TIME RECEIVED: 4:15 PM

MI

SAMPLED BY: JOSHUA GERRIE/GCES

SAMPLE ANALYSIS

No: Analysis

SAMPLE ID: RW-102 BLDG

CHLORIDE EPA 300.0

Concentration

28

LOD

10

Units

mg/L (PPM)

Analyst

LV

Date

11/4/2019

Sample

WATER

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LOD = LIMIT OF DETECTION

s.u. = STANDARD pH UNITS REPORTED AT 25 C

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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: 102419-6
GTA SAMPLE NO: 3
DATE SAMPLED: 10/24/2019
TIME SAMPLED:
DATE RECEIVED: 10/24/2019
TIME RECEIVED: 4:15 PM

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
	SAMPLE ID: RW-103 BLDG CHLORIDE EPA 300.0	20	10	mg/L (PPM)	LV	11/4/2019	WATER

ND = NOT DETECTED, RESULT < LOD
LOD = LIMIT OF DETECTION
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: 102419-6
GTA SAMPLE NO: 4
DATE SAMPLED: 10/24/2019
TIME SAMPLED:
DATE RECEIVED: 10/24/2019
TIME RECEIVED: 4:15 PM

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
	SAMPLE ID: RW-104 BLDG CHLORIDE EPA 300.0	33	10	mg/L (PPM)	LV	11/4/2019	WATER

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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: 102419-6
GTA SAMPLE NO: 5
DATE SAMPLED: 10/24/2019
TIME SAMPLED:
DATE RECEIVED: 10/24/2019
TIME RECEIVED: 4:15 PM

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
	SAMPLE ID: RW-105 BLDG CHLORIDE EPA 300.0	20	10	mg/L (PPM)	LV	11/4/2019	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: 102419-6

PROJECT NO: 2018100136.02

GTA SAMPLE NO: 6

LOCATION: HAYES 22 CPF

DATE SAMPLED: 10/24/2019

TIME SAMPLED:

DATE RECEIVED: 10/24/2019

TIME RECEIVED: 4:15 PM

MI

SAMPLED BY: JOSHUA GERRIE/GCES

SAMPLE ANALYSIS

No: Analysis

SAMPLE ID: TOWER EFF.

CHLORIDE EPA 300.0

Concentration

29

LOD

10

Units

mg/L (PPM)

Analyst

LV

Date

11/4/2019

Sample

WATER

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

s.u. = STANDARD pH UNITS REPORTED AT 25 C

