

**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: 091819-6

Site Addr: HAYES 22 CPF

Sampled By: JOSHUA GERRIE/GCES

Date Rec: 9/19/2019

Time Rec: 4:05 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	MW-110D	9/18/2019		WATER
2	MW-110S	9/18/2019		WATER
3	MW-117S	9/18/2019		WATER
4	MW-117D	9/18/2019		WATER
5	MW-116S	9/18/2019		WATER
6	MW-116D	9/18/2019		WATER
7	MW-118D2	9/18/2019		WATER
8	MW-118D3	9/18/2019		WATER
9	MW-108S	9/18/2019		WATER
10	MW-108D	9/18/2019		WATER
11	MW-1	9/18/2019		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
Grand Traverse Analytical
830 Robinwood Court
Traverse City, MI 49686
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SP: 231-590-0291
kirk@gtanalytical.com

COMPANY: LAMBDA ENERGY RESOURCES, LLC
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLE MATRIX: WATER
SAMPLE ID: MW-110D

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 1
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 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		9/19/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	1.1	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: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLE MATRIX: WATER
SAMPLE ID: MW-110S

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 2
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 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		9/19/2019	EPA 5030B
Toluene	3.7	1.0					
Ethylbenzene	130	1.0					
Xylene(Total)	430	3.0					

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COMPANY:	LAMBDA ENERGY RESOURCES, LLC	GTA PROJECT NO:	091819-6
PROJECT NO:	2018100106.01	GTA SAMPLE NO:	3
LOCATION:	HAYES 22 CPF	DATE SAMPLED:	9/18/2019
		TIME SAMPLED:	
	MI	DATE RECEIVED:	9/19/2019
		TIME RECEIVED:	4:05 PM
SAMPLE MATRIX:	WATER		
SAMPLE ID:	MW-117S	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		9/19/2019	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-117D

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 4
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 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		9/19/2019	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-116S

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 5
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 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		9/19/2019	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	GTA PROJECT NO:	091819-6
PROJECT NO:	2018100106.01	GTA SAMPLE NO:	6
LOCATION:	HAYES 22 CPF	DATE SAMPLED:	9/18/2019
		TIME SAMPLED:	
	MI	DATE RECEIVED:	9/19/2019
		TIME RECEIVED:	4:05 PM
SAMPLE MATRIX:	WATER		
SAMPLE ID:	MW-116D	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		9/19/2019	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-118D2

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 7
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 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		9/19/2019	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-118D3

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 8
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 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		9/19/2019	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-108S

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 9
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 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		9/19/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					

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COMPANY:	LAMBDA ENERGY RESOURCES, LLC	GTA PROJECT NO:	091819-6
PROJECT NO:	2018100106.01	GTA SAMPLE NO:	10
LOCATION:	HAYES 22 CPF	DATE SAMPLED:	9/18/2019
		TIME SAMPLED:	
	MI	DATE RECEIVED:	9/19/2019
		TIME RECEIVED:	4:05 PM
SAMPLE MATRIX:	WATER		
SAMPLE ID:	MW-108D	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		9/19/2019	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-1
GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 11
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 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		9/19/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					

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PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 1
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 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: MW-110D							
CHLORIDE EPA 300.0		20	10	mg/L (PPM)	LV	9/23/2019	WATER

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

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
NAME:
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 2
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 PM

ORGANICS

<u>No:</u>	<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>
SAMPLE ID: MW-110S								
SAMPLE MATRIX: WATER								
	GASOLINE RANGE ORGANICS (GRO) EPA 8015M	4,100	200	ug/L (PPB)	MR		9/22/2019	EPA 5030B
	METHANE RSK-175	36	5.0	ug/L (PPB)	ALS		9/25/2019	RSK-175

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PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 PM
SAMPLE MATRIX: WATER
SAMPLED BY: MI
JOSHUA GERRIE/GCES
SAMPLE ID: MW-110S

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
IRON DISS EPA 200.8	4.4	0.010	mg/L (PPM)	MR	9/23/2019	EPA 3005A
IRON TOTAL EPA 200.8	6.2	0.010	mg/L (PPM)	MR	9/23/2019	EPA 3005A

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DISS = DISSOLVED

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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-110S

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 2
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 PM
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
SAMPLE MATRIX: WATER

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	260	10	mg/L (PPM)	TR	9/20/2019
ALKALINITY SM 4500CO2D (CARBONATE)	ND	10	mg/L (PPM)	TR	9/20/2019
AMMONIA-N EPA 350.1	0.046	0.015	mg/L (PPM)	KC	9/30/2019
BIOLOGICAL OXYGEN DEMAN EPA 405.1	5.3	5.0	mg/L (PPM)	LV	9/23/2019
CHEMICAL OXYGEN DEMAND SM5220D	56	5.0	mg/L (PPM)	LV	10/2/2019
CHLORIDE EPA 300.0	22	10	mg/L (PPM)	KC	9/19/2019
NITRATE-N EPA 300.0	ND	0.10	mg/L (PPM)	KC	9/19/2019
NITRITE-N EPA 300.0	ND	0.10	mg/L (PPM)	KC	9/19/2019
SULFATE EPA 300.0	3.1	1.0	mg/L (PPM)	KC	9/19/2019

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DISS = DISSOLVED



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

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 3
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 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: MW-117S CHLORIDE EPA 300.0	ND	10	mg/L (PPM)	LV	9/23/2019	WATER

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COMPANY: LAMBDA ENERGY RESOURCES, LLC

GTA PROJECT NO: 091819-6

GTA SAMPLE NO: 4

PROJECT NO: 2018100106.01

LOCATION: HAYES 22 CPF

DATE SAMPLED: 9/18/2019

TIME SAMPLED:

DATE RECEIVED: 9/19/2019

TIME RECEIVED: 4:05 PM

MI

SAMPLED BY: JOSHUA GERRIE/GCES

SAMPLE ANALYSIS

No: Analysis

SAMPLE ID: MW-117D

CHLORIDE EPA 300.0

Concentration

12

LOD

10

Units

mg/L (PPM)

Analyst

LV

Date

9/23/2019

Sample

WATER

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

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 5
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 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: MW-116S CHLORIDE EPA 300.0	14	10	mg/L (PPM)	LV	9/23/2019	WATER

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

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 6
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 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: MW-116D						
	CHLORIDE EPA 300.0	53	10	mg/L (PPM)	LV	9/23/2019	WATER

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

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 7
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 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: MW-118D2 CHLORIDE EPA 300.0	ND	10	mg/L (PPM)	LV	9/23/2019	WATER

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
NAME:
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 8
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 PM

ORGANICS

<u>No:</u>	<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>
SAMPLE ID:	MW-118D3							
SAMPLE MATRIX:	WATER							
GASOLINE RANGE ORGANICS (GRO) EPA 8015M		ND	200	ug/L (PPB)	MR		9/22/2019	EPA 5030B
METHANE RSK-175		110	5.0	ug/L (PPB)	ALS		9/25/2019	RSK-175

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LOD = LIMIT OF DETECTION

**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
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 PM
SAMPLED BY: MI
JOSHUA GERRIE/GCES
SAMPLE MATRIX: WATER
SAMPLE ID: MW-118D3

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
IRON DISS EPA 200.8	2.4	0.010	mg/L (PPM)	MR	9/23/2019	EPA 3005A
IRON TOTAL EPA 200.8	2.9	0.010	mg/L (PPM)	MR	9/23/2019	EPA 3005A

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DISS = DISSOLVED

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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-118D3

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 8
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 PM
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
SAMPLE MATRIX: WATER

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	590	10	mg/L (PPM)	TR	9/20/2019
ALKALINITY SM 4500CO2D (CARBONATE)	ND	10	mg/L (PPM)	TR	9/20/2019
AMMONIA-N EPA 350.1	ND	0.015	mg/L (PPM)	KC	9/30/2019
BIOLOGICAL OXYGEN DEMAN EPA 405.1	ND	5.0	mg/L (PPM)	LV	9/23/2019
CHEMICAL OXYGEN DEMAND SM5220D	ND	5.0	mg/L (PPM)	LV	10/2/2019
CHLORIDE EPA 300.0	ND	10	mg/L (PPM)	KC	9/19/2019
NITRATE-N EPA 300.0	ND	0.10	mg/L (PPM)	KC	9/19/2019
NITRITE-N EPA 300.0	ND	0.10	mg/L (PPM)	KC	9/19/2019
SULFATE EPA 300.0	6.6	1.0	mg/L (PPM)	KC	9/19/2019

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

DISS = DISSOLVED

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

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 9
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 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: MW-108S							
CHLORIDE EPA 300.0		27	10	mg/L (PPM)	LV	9/23/2019	WATER

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**INDEPENDENT TESTING LAB**

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COMPANY: LAMBDA ENERGY RESOURCES, LLC

GTA PROJECT NO: 091819-6

PROJECT NO: 2018100106.01

GTA SAMPLE NO: 10

LOCATION: HAYES 22 CPF

DATE SAMPLED: 9/18/2019

TIME SAMPLED:

DATE RECEIVED: 9/19/2019

TIME RECEIVED: 4:05 PM

MI

SAMPLED BY: JOSHUA GERRIE/GCES

SAMPLE ANALYSIS**No: Analysis**

SAMPLE ID: MW-108D

CHLORIDE EPA 300.0

Concentration

19

LOD

10

Units

mg/L (PPM)

Analyst

LV

Date

9/23/2019

Sample

WATER

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INDEPENDENT TESTING LAB

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FAX: 231-929-0894

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COMPANY: LAMBDA ENERGY RESOURCES, LLC
NAME:
PROJECT NO: 2018100106.01
LOCATION: HAYES 22 CPF
MI
SAMPLED BY: JOSHUA GERRIE/GCES

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 11
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 PM

ORGANICS

<u>No:</u>	<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>
SAMPLE ID:	MW-1							
SAMPLE MATRIX:	WATER							
GASOLINE RANGE ORGANICS (GRO) EPA 8015M		310	200	ug/L (PPB)	MR		9/22/2019	EPA 5030B
METHANE RSK-175		36	5.0	ug/L (PPB)	ALS		9/25/2019	RSK-175

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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-1

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 11
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 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>
IRON DISS EPA 200.8	0.46	0.010	mg/L (PPM)	MR	9/23/2019	EPA 3005A
IRON TOTAL EPA 200.8	2.4	0.010	mg/L (PPM)	MR	9/23/2019	EPA 3005A

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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-1

GTA PROJECT NO: 091819-6
GTA SAMPLE NO: 11
DATE RECEIVED: 9/19/2019
TIME RECEIVED: 4:05 PM
DATE SAMPLED: 9/18/2019
TIME SAMPLED:
SAMPLE MATRIX: WATER

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	290	10	mg/L (PPM)	TR	9/20/2019
ALKALINITY SM 4500CO2D (CARBONATE)	ND	10	mg/L (PPM)	TR	9/20/2019
AMMONIA-N EPA 350.1	0.17	0.015	mg/L (PPM)	KC	9/30/2019
BIOLOGICAL OXYGEN DEMAN EPA 405.1	ND	5.0	mg/L (PPM)	LV	9/23/2019
CHEMICAL OXYGEN DEMAND SM5220D	11	5.0	mg/L (PPM)	LV	10/2/2019
CHLORIDE EPA 300.0	ND	10	mg/L (PPM)	KC	9/19/2019
NITRATE-N EPA 300.0	0.15	0.10	mg/L (PPM)	KC	9/19/2019
NITRITE-N EPA 300.0	ND	0.10	mg/L (PPM)	KC	9/19/2019
SULFATE EPA 300.0	17	1.0	mg/L (PPM)	KC	9/19/2019

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CHAIN OF CUSTODY

PROJECT NUMBER 2018100106.01	SITE NAME/ADDRESS Hayes 22 CPF	COMPANY/NAME Lambda Energy Resources
SAMPLED BY Joshua Gervie/ Mark Stover	COMPANY Gosling Czubak	GTA PROJECT # 091819-6

SAMPLE INFORMATION

#	SAMPLE ID	DATE SAMPLED	TIME	MATRIX	ANALYSIS
1	MW-110d	9-18-19		GW	BTEX + Chloride
2	MW-110s				+ Natural Attenuation
3	MW-117s				
4	MW-117d				
5	MW-116s				
6	MW-116d				
7	MW-118d				
8	MW-118ds				+ Natural Attenuation
9	MW-108s				
10	MW-108d				
11	MW-1				+ Natural Attenuation
* Natural Attenuation = BTEX, Chloride, Methane, TPH-GRO, Carbonate, Bicarbonate, Nitrate, Nitrite, Ammonia, Sulfate, Total Iron, Dissolved Iron, BOD, & COD, (Dissolved Iron samples were field filtered)					

BILL TO:

REPORT TO:

Lambda Energy Resources

Adam Bitensan

RELEASED BY

DATE/TIME

RECEIVED BY

DATE/TIME

[Signature] 9-18-19/1605

[Signature] 9/19/19 4:05
rec 40°C

REQUESTED TAT

☒ STANDARD

☐ 1 BUSINESS DAY

☐ 2 BUSINESS DAYS

☐ 3 BUSINESS DAYS