



**INDEPENDENT TESTING LAB**

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

[www.gtanalytical.com](http://www.gtanalytical.com)

Company: LAMBDA ENERGY RESOURCES, LLC  
Name:  
ClientProj: 22-148  
GTA ProjNo: 103122-12

Site Addr: STATE UNION Y 1-10  
Sampled By: DBB/OMPC  
Date Rec: 10/31/2022  
Time Rec: 4:00 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	VSR-1	10/31/2022	2:00 PM	SOIL
2	VSR-2	10/31/2022	2:05 PM	SOIL
3	VSR-3	10/31/2022	2:10 PM	SOIL
4	VSR-4	10/31/2022	2:15 PM	SOIL
5	VSR-5	10/31/2022	2:20 PM	SOIL
6	VSR-6	10/31/2022	2:30 PM	SOIL
7	VSR-1B - HOLD	10/31/2022	2:25 PM	SOIL
8	VSR-6B - HOLD	10/31/2022	2:35 PM	SOIL
9	SP-1 - HOLD	10/31/2022		SOIL
10	SP-2 - HOLD	10/31/2022		SOIL
11	SP-3 - HOLD	10/31/2022		SOIL
12	SP-4 - HOLD	10/31/2022		SOIL

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  
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[kirk@gtanalytical.com](mailto:kirk@gtanalytical.com)



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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
 PROJECT NO: 22-148  
 LOCATION: STATE UNION Y 1-10  
 MI  
 SAMPLE MATRIX: SOIL  
 SAMPLE ID: VSR-1

GTA PROJECT NO: 103122-12  
 GTA SAMPLE NO: 1  
 DATE SAMPLED: 10/31/2022  
 TIME SAMPLED: 2:00 PM  
 DATE RECEIVED: 10/31/2022  
 TIME RECEIVED: 4:00 PM

SAMPLED BY: DBB/OMPC

**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	50	ug/Kg (PPB)	MR	10/31/2022	10/31/2022	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

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	GTA PROJECT NO:	103122-12
PROJECT NO:	22-148	GTA SAMPLE NO:	2
LOCATION:	STATE UNION Y 1-10	DATE SAMPLED:	10/31/2022
		TIME SAMPLED:	2:05 PM
		DATE RECEIVED:	10/31/2022
	MI	TIME RECEIVED:	4:00 PM
SAMPLE MATRIX:	SOIL		
SAMPLE ID:	VSR-2	SAMPLED BY:	DBB/OMPC

**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	50	ug/Kg (PPB)	MR	10/31/2022	10/31/2022	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
 PROJECT NO: 22-148  
 LOCATION: STATE UNION Y 1-10  
 MI  
 SAMPLE MATRIX: SOIL  
 SAMPLE ID: VSR-3

GTA PROJECT NO: 103122-12  
 GTA SAMPLE NO: 3  
 DATE SAMPLED: 10/31/2022  
 TIME SAMPLED: 2:10 PM  
 DATE RECEIVED: 10/31/2022  
 TIME RECEIVED: 4:00 PM

SAMPLED BY: DBB/OMPC

**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	58	50	ug/Kg (PPB)	MR	10/31/2022	10/31/2022	EPA 5035A
Toluene	260	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	81	50					
1,3,5-Trimethylbenzene	59	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

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COMPANY:	LAMBDA ENERGY RESOURCES, LLC	GTA PROJECT NO:	103122-12
PROJECT NO:	22-148	GTA SAMPLE NO:	4
LOCATION:	STATE UNION Y 1-10	DATE SAMPLED:	10/31/2022
		TIME SAMPLED:	2:15 PM
		DATE RECEIVED:	10/31/2022
	MI	TIME RECEIVED:	4:00 PM
SAMPLE MATRIX:	SOIL		
SAMPLE ID:	VSR-4	SAMPLED BY:	DBB/OMPC

**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	50	ug/Kg (PPB)	MR	10/31/2022	10/31/2022	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.  
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COMPANY:	LAMBDA ENERGY RESOURCES, LLC	GTA PROJECT NO:	103122-12
PROJECT NO:	22-148	GTA SAMPLE NO:	5
LOCATION:	STATE UNION Y 1-10	DATE SAMPLED:	10/31/2022
		TIME SAMPLED:	2:20 PM
		DATE RECEIVED:	10/31/2022
	MI	TIME RECEIVED:	4:00 PM
SAMPLE MATRIX:	SOIL		
SAMPLE ID:	VSR-5	SAMPLED BY:	DBB/OMPC

**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	50	ug/Kg (PPB)	MR	10/31/2022	10/31/2022	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.  
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 LOD = LIMIT OF DETECTION



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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
 PROJECT NO: 22-148  
 LOCATION: STATE UNION Y 1-10  
 MI  
 SAMPLE MATRIX: SOIL  
 SAMPLE ID: VSR-6

GTA PROJECT NO: 103122-12  
 GTA SAMPLE NO: 6  
 DATE SAMPLED: 10/31/2022  
 TIME SAMPLED: 2:30 PM  
 DATE RECEIVED: 10/31/2022  
 TIME RECEIVED: 4:00 PM

SAMPLED BY: DBB/OMPC

**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	50	ug/Kg (PPB)	MR	10/31/2022	10/31/2022	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.  
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COMPANY: LAMBDA ENERGY RESOURCES, LLC  
PROJECT NO: 22-148  
LOCATION: STATE UNION Y 1-10

GTA PROJECT NO: 103122-12  
GTA SAMPLE NO: 1

DATE SAMPLED: 10/31/2022  
TIME SAMPLED: 2:00 PM  
DATE RECEIVED: 10/31/2022  
TIME RECEIVED: 4:00 PM

SAMPLED BY: MI  
DBB/OMPC

**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 Matrix</u>
SAMPLE ID:	VSR-1	160	96	mg/Kg (PPM)	KC/AS	11/1/2022	SOIL
	CHLORIDE EPA 300.0						

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: 22-148  
 LOCATION: STATE UNION Y 1-10

GTA PROJECT NO: 103122-12  
 GTA SAMPLE NO: 2  
 DATE SAMPLED: 10/31/2022  
 TIME SAMPLED: 2:05 PM  
 DATE RECEIVED: 10/31/2022  
 TIME RECEIVED: 4:00 PM

SAMPLED BY: MI  
 DBB/OMPC

**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 Matrix</u>
SAMPLE ID:	VSR-2	140	87	mg/Kg (PPM)	KC/AS	11/1/2022	SOIL
	CHLORIDE EPA 300.0						

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: 22-148  
 LOCATION: STATE UNION Y 1-10

GTA PROJECT NO: 103122-12  
 GTA SAMPLE NO: 3  
 DATE SAMPLED: 10/31/2022  
 TIME SAMPLED: 2:10 PM  
 DATE RECEIVED: 10/31/2022  
 TIME RECEIVED: 4:00 PM

SAMPLED BY: MI  
 DBB/OMPC

**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 Matrix</u>
SAMPLE ID:	VSR-3	180	95	mg/Kg (PPM)	KC/AS	11/1/2022	SOIL
	CHLORIDE EPA 300.0						

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: 22-148  
 LOCATION: STATE UNION Y 1-10

GTA PROJECT NO: 103122-12  
 GTA SAMPLE NO: 4

DATE SAMPLED: 10/31/2022  
 TIME SAMPLED: 2:15 PM  
 DATE RECEIVED: 10/31/2022  
 TIME RECEIVED: 4:00 PM

SAMPLED BY: MI  
 DBB/OMPC

**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 Matrix</u>
SAMPLE ID:	VSR-4	150	92	mg/Kg (PPM)	KC/AS	11/1/2022	SOIL
	CHLORIDE EPA 300.0						

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: 22-148  
 LOCATION: STATE UNION Y 1-10

GTA PROJECT NO: 103122-12  
 GTA SAMPLE NO: 6

DATE SAMPLED: 10/31/2022  
 TIME SAMPLED: 2:30 PM  
 DATE RECEIVED: 10/31/2022  
 TIME RECEIVED: 4:00 PM

SAMPLED BY: MI  
 DBB/OMPC

**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 Matrix</u>
SAMPLE ID:	VSR-6	170	97	mg/Kg (PPM)	KC/AS	11/1/2022	SOIL
	CHLORIDE EPA 300.0						

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



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COMPANY: LAMBDA ENERGY RESOURCES, LLC

NAME:  
PROJECT NO: 22-148

LOCATION: STATE UNION Y 1-10  
  
MI

GTA PROJECT NO: 103122-  
SAMPLED BY: DBB/OMPC

DATE SAMPLED: 10/31/2022

SAMPLE MATRIX: SOILS

DATE RECEIVED: 10/31/2022  
TIME RECEIVED: 4:00 PM

**MOISTURE**

<u>No:</u> <u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
SAMPLE ID: VSR-1 % MOISTURE EPA 3550C	4.5	0.10	% OF SAMPL	AS	10/31/2022
SAMPLE ID: VSR-2 % MOISTURE EPA 3550C	3.8	0.10	% OF SAMPL	AS	10/31/2022
SAMPLE ID: VSR-3 % MOISTURE EPA 3550C	3.9	0.10	% OF SAMPL	AS	10/31/2022
SAMPLE ID: VSR-4 % MOISTURE EPA 3550C	4.0	0.10	% OF SAMPL	AS	10/31/2022
SAMPLE ID: VSR-5 % MOISTURE EPA 3550C	3.5	0.10	% OF SAMPL	AS	10/31/2022
SAMPLE ID: VSR-6 % MOISTURE EPA 3550C	4.0	0.10	% OF SAMPL	AS	10/31/2022
SAMPLE ID: VSR-1B - HOLD % MOISTURE EPA 3550C	5.7	0.10	% OF SAMPL	AS	10/31/2022
SAMPLE ID: VSR-6B - HOLD % MOISTURE EPA 3550C	5.1	0.10	% OF SAMPL	AS	10/31/2022
SAMPLE ID: SP-1 - HOLD % MOISTURE EPA 3550C	4.4	0.10	% OF SAMPL	AS	10/31/2022
SAMPLE ID: SP-2 - HOLD % MOISTURE EPA 3550C	4.0	0.10	% OF SAMPL	AS	10/31/2022
SAMPLE ID: SP-3 - HOLD % MOISTURE EPA 3550C	4.2	0.10	% OF SAMPL	AS	10/31/2022
SAMPLE ID: SP-4 - HOLD % MOISTURE EPA 3550C	6.3	0.10	% OF SAMPL	AS	10/31/2022

**CHAIN OF CUSTODY**

PROJECT NUMBER <b>22-148</b>	SITE NAME/ADDRESS <b>State Union Y 1-10</b>	COMPANY/NAME <b>Lambda</b>
SAMPLED BY <b>DBB</b>	COMPANY <b>OMPC</b>	GTA PROJECT # <b>103122-12</b>

**SAMPLE INFORMATION**

#	SAMPLE ID	DATE SAMPLED	TIME	MATRIX	ANALYSIS
1	VSR-1	10/31/22	1400	Soil	HIPs + Chlorides
2	VSR-2	↓	1405	↓	↓
3	VSR-3	↓	1410	↓	↓
4	VSR-4	↓	1415	↓	↓
5	VSR-5	↓	1420	↓	↓
6	VSR-6	↓	1430	↓	↓
7	VSR-1B	↓	1425	↓	Hold ↓
8	VSR-6B	↓	1435	↓	Hold ↓
9	SP-1	↓	PM	↓	Hold HIPs + Chlorides ↓
10	SP-2	↓	PM	↓	↓
11	SP-3	↓	PM	↓	↓
12	SP-4	↓	PM	↓	↓

**BILL TO:** **Lambda**

**REPORT TO:**  
**Dan Barton**

**RELEASED BY** **DATE/TIME**  
*[Signature]* **10/31/22 16:00**

**RECEIVED BY** **DATE/TIME**  
*[Signature]* **10/31/22 1600**  
**rec 1.2°**  
**omic**

**REQUESTED TAT**  STANDARD  1 BUSINESS DAY  2 BUSINESS DAYS  3 BUSINESS DAYS