



INDEPENDENT TESTING LAB

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

Company: MILLER ENERGY COMPANY II, LLC
Name:
ClientProj: ANNUAL INJECTION FLUID ANALYSIS-
GTA ProjNo: 112222-19

Site Addr: EPA-UIC ANNUAL SAMPLES
Sampled By: LOWELL MEIHLS/MECH
Date Rec: 11/22/2022
Time Rec: 4:34 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	WILLIAMS KEEF 3	11/10/2022	12:06 PM	WATER
2	ST. ADAMS 1-14	11/10/2022	8:15 AM	WATER
3	L. SHEPARD A-1 (Q4)	11/10/2022	10:05 AM	WATER
4	O. YENIOR 1	11/10/2022	8:34 AM	WATER
5	J.W. DUBEY 1	11/10/2022	7:54 AM	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
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COMPANY:	MILLER ENERGY COMPANY II, LLC	GTA PROJECT NO:	112222-19
PROJECT NO:	ANNUAL INJECTION FLUID ANALYSIS-	GTA SAMPLE NO:	1
LOCATION:	EPA-UIC ANNUAL SAMPLES	DATE RECEIVED:	11/22/2022
		TIME RECEIVED:	4:34 PM
	MI	DATE SAMPLED:	11/10/2022
SAMPLED BY:	LOWELL MEIHLS/MECII	TIME SAMPLED:	12:06 PM
SAMPLE ID:	WILLIAMS KEEF 3	SAMPLE MATRIX:	WATER

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	22	10	mg/L (PPM)	TR	12/14/2022
ALKALINITY SM 4500CO2D (CARBONATE)	ND	10	mg/L (PPM)	TR	12/14/2022
CHLORIDE EPA 300.0	260,000	2,000	mg/L (PPM)	KC/TR	12/21/2022
pH EPA 150.1 - LAB	6.3	0.10	s.u.	TR	12/14/2022
RESISTIVITY SM 2510A	9.0	-	ohms x cm	AS	12/1/2022
SPECIFIC GRAVITY SM 2710F	1.036	-	-	TR	12/14/2022
SULFATE EPA 300.0	410	50	mg/L (PPM)	KC/TR	12/21/2022
SULFIDE SM 4500S D	ND	1.0	mg/L (PPM)	KC	11/25/2022
TOTAL DISSOLVED SOLIDS EPA 160.1	300,000	5.0	mg/L (PPM)	TR	12/16/2022

ND = NOT DETECTED, RESULT < LOD
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COMPANY:	MILLER ENERGY COMPANY II, LLC	GTA PROJECT NO:	112222-19
PROJECT NO:	ANNUAL INJECTION FLUID ANALYSIS-	GTA SAMPLE NO:	2
LOCATION:	EPA-UIC ANNUAL SAMPLES	DATE SAMPLED:	11/10/2022
		TIME SAMPLED:	8:15 AM
		DATE RECEIVED:	11/22/2022
	MI	TIME RECEIVED:	4:34 PM
SAMPLED BY:	LOWELL MEIHLS/MECII	SAMPLE MATRIX:	WATER
SAMPLE ID:	ST. ADAMS 1-14		

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
BARIUM DISS EPA 6020A	ND	1.0	mg/L (PPM)	MR	12/7/2022	EPA 3005A
CALCIUM DISS EPA 6020A	24,000	100	mg/L (PPM)	MR	12/7/2022	EPA 3005A
IRON TOTAL EPA 6020A	ND	10	mg/L (PPM)	MR	12/7/2022	EPA 3020A
MAGNESIUM DISS EPA 6020A	6,500	100	mg/L (PPM)	MR	12/7/2022	EPA 3020A
SODIUM DISS EPA 6020A	86,000	100	mg/L (PPM)	MR	12/7/2022	EPA 3020A

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COMPANY: MILLER ENERGY COMPANY II, LLC
 PROJECT NO: ANNUAL INJECTION FLUID ANALYSIS-
 LOCATION: EPA-UIC ANNUAL SAMPLES
 MI
 SAMPLED BY: LOWELL MEIHLS/MECII
 SAMPLE ID: ST. ADAMS 1-14

GTA PROJECT NO: 112222-19
 GTA SAMPLE NO: 2
 DATE RECEIVED: 11/22/2022
 TIME RECEIVED: 4:34 PM
 DATE SAMPLED: 11/10/2022
 TIME SAMPLED: 8:15 AM
 SAMPLE MATRIX: WATER

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	44	10	mg/L (PPM)	TR	12/14/2022
ALKALINITY SM 4500CO2D (CARBONATE)	ND	10	mg/L (PPM)	TR	12/14/2022
CHLORIDE EPA 300.0	250,000	2,000	mg/L (PPM)	KC/TR	12/21/2022
pH EPA 150.1 - LAB	6.3	0.10	s.u.	TR	12/14/2022
RESISTIVITY SM 2510A	8.5	-	ohms x cm	AS	12/1/2022
SPECIFIC GRAVITY SM 2710F	1.105	-	-	TR	12/14/2022
SULFATE EPA 300.0	480	50	mg/L (PPM)	KC/TR	12/21/2022
SULFIDE SM 4500S D	ND	1.0	mg/L (PPM)	KC	11/25/2022
TOTAL DISSOLVED SOLIDS EPA 160.1	280,000	5.0	mg/L (PPM)	TR	12/16/2022

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COMPANY:	MILLER ENERGY COMPANY II, LLC	GTA PROJECT NO:	112222-19
PROJECT NO:	ANNUAL INJECTION FLUID ANALYSIS-	GTA SAMPLE NO:	4
LOCATION:	EPA-UIC ANNUAL SAMPLES	DATE SAMPLED:	11/10/2022
		TIME SAMPLED:	8:34 AM
		DATE RECEIVED:	11/22/2022
	MI	TIME RECEIVED:	4:34 PM
SAMPLED BY:	LOWELL MEIHLS/MECII	SAMPLE MATRIX:	WATER
SAMPLE ID:	O. YENIOR 1		

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
BARIUM DISS EPA 6020A	ND	1.0	mg/L (PPM)	MR	12/7/2022	EPA 3005A
CALCIUM DISS EPA 6020A	17,000	100	mg/L (PPM)	MR	12/7/2022	EPA 3005A
IRON TOTAL EPA 6020A	ND	10	mg/L (PPM)	MR	12/7/2022	EPA 3020A
MAGNESIUM DISS EPA 6020A	4,900	100	mg/L (PPM)	MR	12/7/2022	EPA 3020A
SODIUM DISS EPA 6020A	120,000	100	mg/L (PPM)	MR	12/7/2022	EPA 3020A

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COMPANY: MILLER ENERGY COMPANY II, LLC
PROJECT NO: ANNUAL INJECTION FLUID ANALYSIS-
LOCATION: EPA-UIC ANNUAL SAMPLES
MI
SAMPLED BY: LOWELL MEIHLS/MECII
SAMPLE ID: O. YENIOR 1

GTA PROJECT NO: 112222-19
GTA SAMPLE NO: 4
DATE RECEIVED: 11/22/2022
TIME RECEIVED: 4:34 PM
DATE SAMPLED: 11/10/2022
TIME SAMPLED: 8:34 AM
SAMPLE MATRIX: WATER

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	44	10	mg/L (PPM)	TR	12/14/2022
ALKALINITY SM 4500CO2D (CARBONATE)	ND	10	mg/L (PPM)	TR	12/14/2022
CHLORIDE EPA 300.0	260,000	2,000	mg/L (PPM)	KC/TR	12/21/2022
pH EPA 150.1 - LAB	6.6	0.10	s.u.	TR	12/14/2022
RESISTIVITY SM 2510A	9.2	-	ohms x cm	AS	12/1/2022
SPECIFIC GRAVITY SM 2710F	1.122	-	-	TR	12/14/2022
SULFATE EPA 300.0	470	50	mg/L (PPM)	KC/TR	12/21/2022
SULFIDE SM 4500S D	ND	1.0	mg/L (PPM)	KC	11/25/2022
TOTAL DISSOLVED SOLIDS EPA 160.1	290,000	5.0	mg/L (PPM)	TR	12/16/2022

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COMPANY: MILLER ENERGY COMPANY II, LLC
PROJECT NO: ANNUAL INJECTION FLUID ANALYSIS-
LOCATION: EPA-UIC ANNUAL SAMPLES
MI
SAMPLED BY: LOWELL MEIHLS/MECII
SAMPLE ID: J.W. DUBEY 1

GTA PROJECT NO: 112222-19
GTA SAMPLE NO: 5
DATE SAMPLED: 11/10/2022
TIME SAMPLED: 7:54 AM
DATE RECEIVED: 11/22/2022
TIME RECEIVED: 4:34 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>
BARIUM DISS EPA 6020A	ND	1.0	mg/L (PPM)	MR	12/7/2022	EPA 3005A
CALCIUM DISS EPA 6020A	33,000	100	mg/L (PPM)	MR	12/7/2022	EPA 3005A
IRON TOTAL EPA 6020A	69	10	mg/L (PPM)	MR	12/7/2022	EPA 3020A
MAGNESIUM DISS EPA 6020A	8,800	100	mg/L (PPM)	MR	12/7/2022	EPA 3020A
SODIUM DISS EPA 6020A	89,000	100	mg/L (PPM)	MR	12/7/2022	EPA 3020A

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COMPANY:	MILLER ENERGY COMPANY II, LLC	GTA PROJECT NO:	112222-19
PROJECT NO:	ANNUAL INJECTION FLUID ANALYSIS-	GTA SAMPLE NO:	5
LOCATION:	EPA-UIC ANNUAL SAMPLES	DATE RECEIVED:	11/22/2022
		TIME RECEIVED:	4:34 PM
	MI	DATE SAMPLED:	11/10/2022
SAMPLED BY:	LOWELL MEIHLS/MECII	TIME SAMPLED:	7:54 AM
SAMPLE ID:	J.W. DUBEY 1	SAMPLE MATRIX:	WATER

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	ND	10	mg/L (PPM)	TR	12/14/2022
ALKALINITY SM 4500CO2D (CARBONATE)	ND	10	mg/L (PPM)	TR	12/14/2022
CHLORIDE EPA 300.0	270,000	2,000	mg/L (PPM)	KC/TR	12/21/2022
pH EPA 150.1 - LAB	4.2	0.10	s.u.	TR	12/14/2022
RESISTIVITY SM 2510A	8.3	-	ohms x cm	AS	12/1/2022
SPECIFIC GRAVITY SM 2710F	1.145	-	-	TR	12/14/2022
SULFATE EPA 300.0	ND	50	mg/L (PPM)	KC/TR	12/21/2022
SULFIDE SM 4500S D	ND	1.0	mg/L (PPM)	KC	11/25/2022
TOTAL DISSOLVED SOLIDS EPA 160.1	370,000	5.0	mg/L (PPM)	TR	12/16/2022

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