



**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: BREITBURN OPERATING  
Name:  
ClientProj: 20-157  
GTA ProjNo: 101620-5

Site Addr: JOSEPH #1

Sampled By: SEAN CLARK/OMPC  
Date Rec: 10/16/2020  
Time Rec: 10:30 AM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	MW-3D	10/15/2020	11:30 AM	WATER
2	MW-2	10/15/2020	12:10 PM	WATER
3	MW-1D	10/15/2020	1:10 PM	WATER
4	MW-8	10/15/2020	2:15 PM	WATER
5	MW-4	10/15/2020	2:30 PM	WATER
6	MW-9	10/15/2020	3:00 PM	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  
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COMPANY: BREITBURN OPERATING  
PROJECT NO: 20-157  
LOCATION: JOSEPH #1  
MI  
SAMPLE MATRIX: WATER  
SAMPLE ID: MW-3D  
GTA PROJECT NO: 101620-5  
GTA SAMPLE NO: 1  
DATE SAMPLED: 10/15/2020  
TIME SAMPLED: 11:30 AM  
DATE RECEIVED: 10/16/2020  
TIME RECEIVED: 10:30 AM  
SAMPLED BY: SEAN CLARK/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	1.0	ug/L (PPB)	MR		10/17/2020	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: BREITBURN OPERATING  
 PROJECT NO: 20-157  
 LOCATION: JOSEPH #1  
 MI  
 SAMPLE MATRIX: WATER  
 SAMPLE ID: MW-2

GTA PROJECT NO: 101620-5  
 GTA SAMPLE NO: 2  
 DATE SAMPLED: 10/15/2020  
 TIME SAMPLED: 12:10 PM  
 DATE RECEIVED: 10/16/2020  
 TIME RECEIVED: 10:30 AM

SAMPLED BY: SEAN CLARK/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	1.0	ug/L (PPB)	MR		10/17/2020	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: BREITBURN OPERATING  
PROJECT NO: 20-157  
LOCATION: JOSEPH #1  
MI  
SAMPLE MATRIX: WATER  
SAMPLE ID: MW-1D  
GTA PROJECT NO: 101620-5  
GTA SAMPLE NO: 3  
DATE SAMPLED: 10/15/2020  
TIME SAMPLED: 1:10 PM  
DATE RECEIVED: 10/16/2020  
TIME RECEIVED: 10:30 AM  
SAMPLED BY: SEAN CLARK/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	1,300	25	ug/L (PPB)	MR		10/19/2020	EPA 5030B
Toluene	1.1	1.0					
Ethylbenzene	300	25					
Xylene(Total)	720	51					

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COMPANY: BREITBURN OPERATING  
 PROJECT NO: 20-157  
 LOCATION: JOSEPH #1  
 MI  
 SAMPLE MATRIX: WATER  
 SAMPLE ID: MW-8

GTA PROJECT NO: 101620-5  
 GTA SAMPLE NO: 4  
 DATE SAMPLED: 10/15/2020  
 TIME SAMPLED: 2:15 PM  
 DATE RECEIVED: 10/16/2020  
 TIME RECEIVED: 10:30 AM

SAMPLED BY: SEAN CLARK/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	1.0	ug/L (PPB)	MR		10/17/2020	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: BREITBURN OPERATING  
PROJECT NO: 20-157  
LOCATION: JOSEPH #1  
MI  
SAMPLE MATRIX: WATER  
SAMPLE ID: MW-4  
GTA PROJECT NO: 101620-5  
GTA SAMPLE NO: 5  
DATE SAMPLED: 10/15/2020  
TIME SAMPLED: 2:30 PM  
DATE RECEIVED: 10/16/2020  
TIME RECEIVED: 10:30 AM  
SAMPLED BY: SEAN CLARK/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	1.0	ug/L (PPB)	MR		10/17/2020	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: BREITBURN OPERATING  
PROJECT NO: 20-157  
LOCATION: JOSEPH #1

GTA PROJECT NO: 101620-5  
GTA SAMPLE NO: 1  
DATE SAMPLED: 10/15/2020  
TIME SAMPLED: 11:30 AM  
DATE RECEIVED: 10/16/2020  
TIME RECEIVED: 10:30 AM

MI  
SAMPLED BY: SEAN CLARK/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: MW-3D						
	CHLORIDE EPA 300.0	ND	10	mg/L (PPM)	LV	10/20/2020	WATER
	CONDUCTIVITY SM2510-B	940	1.0	uS/cm@25C	LV	10/20/2020	WATER

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



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COMPANY: BREITBURN OPERATING  
PROJECT NO: 20-157  
LOCATION: JOSEPH #1

GTA PROJECT NO: 101620-5  
GTA SAMPLE NO: 2  
DATE SAMPLED: 10/15/2020  
TIME SAMPLED: 12:10 PM  
DATE RECEIVED: 10/16/2020  
TIME RECEIVED: 10:30 AM

MI  
SAMPLED BY: SEAN CLARK/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: MW-2						
	CHLORIDE EPA 300.0	ND	10	mg/L (PPM)	LV	10/20/2020	WATER
	CONDUCTIVITY SM2510-B	790	1.0	uS/cm@25C	LV	10/20/2020	WATER

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COMPANY: BREITBURN OPERATING  
PROJECT NO: 20-157  
LOCATION: JOSEPH #1

GTA PROJECT NO: 101620-5  
GTA SAMPLE NO: 3  
DATE SAMPLED: 10/15/2020  
TIME SAMPLED: 1:10 PM  
DATE RECEIVED: 10/16/2020  
TIME RECEIVED: 10:30 AM

MI  
SAMPLED BY: SEAN CLARK/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: MW-1D						
	CHLORIDE EPA 300.0	16	10	mg/L (PPM)	LV	10/20/2020	WATER
	CONDUCTIVITY SM2510-B	850	1.0	uS/cm@25C	LV	10/20/2020	WATER

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COMPANY: BREITBURN OPERATING  
PROJECT NO: 20-157  
LOCATION: JOSEPH #1  
MI  
SAMPLED BY: SEAN CLARK/OMPC

GTA PROJECT NO: 101620-5  
GTA SAMPLE NO: 4  
DATE SAMPLED: 10/15/2020  
TIME SAMPLED: 2:15 PM  
DATE RECEIVED: 10/16/2020  
TIME RECEIVED: 10:30 AM

**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: MW-8						
	CHLORIDE EPA 300.0	ND	10	mg/L (PPM)	LV	10/20/2020	WATER
	CONDUCTIVITY SM2510-B	810	1.0	uS/cm@25C	LV	10/20/2020	WATER

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

COMPANY: BREITBURN OPERATING  
 PROJECT NO: 20-157  
 LOCATION: JOSEPH #1

GTA PROJECT NO: 101620-5  
 GTA SAMPLE NO: 5  
 DATE SAMPLED: 10/15/2020  
 TIME SAMPLED: 2:30 PM  
 DATE RECEIVED: 10/16/2020  
 TIME RECEIVED: 10:30 AM

MI  
 SAMPLED BY: SEAN CLARK/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: MW-4						
	CHLORIDE EPA 300.0	ND	10	mg/L (PPM)	LV	10/20/2020	WATER
	CONDUCTIVITY SM2510-B	250	1.0	uS/cm@25C	LV	10/20/2020	WATER

ND = NOT DETECTED, RESULT < LOD  
 LOD = LIMIT OF DETECTION  
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 DISS = DISSOLVED



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COMPANY: BREITBURN OPERATING  
PROJECT NO: 20-157  
LOCATION: JOSEPH #1

GTA PROJECT NO: 101620-5  
GTA SAMPLE NO: 6  
DATE SAMPLED: 10/15/2020  
TIME SAMPLED: 3:00 PM  
DATE RECEIVED: 10/16/2020  
TIME RECEIVED: 10:30 AM

MI  
SAMPLED BY: SEAN CLARK/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: MW-9						
	CHLORIDE EPA 300.0	16	10	mg/L (PPM)	LV	10/20/2020	WATER
	CONDUCTIVITY SM2510-B	610	1.0	uS/cm@25C	LV	10/20/2020	WATER

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


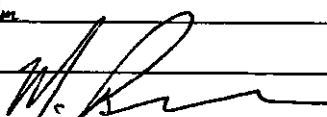
**CHAIN OF CUSTODY**

PROJECT NUMBER <b>20-157</b>	SITE NAME/ADDRESS <b>Joseph #1</b>	COMPANY/NAME <b>Breitburn</b>
SAMPLED BY <b>Sean Clark</b>	COMPANY <b>Otwell Mawby</b>	GTA PROJECT # <b>10/620-5</b>

**SAMPLE INFORMATION**

#	SAMPLE ID	DATE SAMPLED	TIME	MATRIX	ANALYSIS
	MW-3D	10/15/2020	11:30	GW	BTEX, chlorides, conductivity
	MW-2	10/15/2020	12:10	GW	BTEX, chlorides, conductivity
	MW-1D	10/15/2020	1:10	GW	BTEX, chlorides, conductivity
	MW-8	10/15/2020	2:15	GW	BTEX, chlorides, conductivity
	MW-4	10/15/2020	2:30	GW	BTEX, chlorides, conductivity
	MW-9	10/15/2020	3:00	GW	BTEX, chlorides, conductivity
					NOSAMPLE

BILL TO: <b>Breitburn</b>	<b>REC 2.5°C</b>	REPORT TO: <b>Otwell Mawby</b>
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RELEASED BY 	DATE/TIME <b>10/16/2020 @ 10:22am</b>	RECEIVED BY 	DATE/TIME <b>10-16-20 10:30A</b>
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REQUESTED TAT  STANDARD  1 BUSINESS DAY  2 BUSINESS DAYS  3 BUSINESS DAYS