



INDEPENDENT TESTING LAB

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

Company: BREITBURN OPERATING
Name:
ClientProj: 20-157
GTA ProjNo: 040821-12

Site Addr: JOSEPH #1

Sampled By: SEAN CLARK/OMPC
Date Rec: 4/8/2021
Time Rec: 5:01 PM

| Sample No. | Sample ID | Date Sampled | Time Sampled | Sample Matrix |
|------------|-----------|--------------|--------------|---------------|
| 1 | MW-1D | 4/8/2021 | 12:12 PM | WATER |
| 2 | MW-2 | 4/7/2021 | 4:10 PM | WATER |
| 3 | MW-3D | 4/7/2021 | 3:48 PM | WATER |
| 4 | MW-4 | 4/7/2021 | 3:29 PM | WATER |
| 5 | MW-8 | 4/7/2021 | 2:50 PM | WATER |
| 6 | MW-9 | 4/7/2021 | 2:12 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
Ph: 231-929-0905
Fx: 231-929-0894
SP: 231-590-0291
kirk@gtanalytical.com



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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: 040821-12
GTA SAMPLE NO: 1
DATE SAMPLED: 4/8/2021
TIME SAMPLED: 12:12 PM
DATE RECEIVED: 4/8/2021
TIME RECEIVED: 5:01 PM
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</u> <u>Extracted</u> | <u>Date</u> <u>Complete</u> | <u>Prep Method</u> |
|-----------------|----------------------|------------|--------------|----------------|---------------------------------|--------------------------------|--------------------|
| Benzene | 5,000 | 20 | ug/L (PPB) | MR | | 4/9/2021 | EPA 5030B |
| Toluene | 4.4 | 4.0 | | | | | |
| Ethylbenzene | 880 | 20 | | | | | |
| Xylene(Total) | 2,300 | 44 | | | | | |

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: 040821-12
GTA SAMPLE NO: 2
DATE SAMPLED: 4/7/2021
TIME SAMPLED: 4:10 PM
DATE RECEIVED: 4/8/2021
TIME RECEIVED: 5:01 PM
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 | | 4/9/2021 | 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-3D

GTA PROJECT NO: 040821-12
 GTA SAMPLE NO: 3
 DATE SAMPLED: 4/7/2021
 TIME SAMPLED: 3:48 PM
 DATE RECEIVED: 4/8/2021
 TIME RECEIVED: 5:01 PM

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 | | 4/9/2021 | EPA 5030B |
| Toluene | ND | 1.0 | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | |
| Xylene(Total) | ND | 3.0 | | | | | |

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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: 040821-12
GTA SAMPLE NO: 4
DATE SAMPLED: 4/7/2021
TIME SAMPLED: 3:29 PM
DATE RECEIVED: 4/8/2021
TIME RECEIVED: 5:01 PM
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 | 1.2 | 1.0 | ug/L (PPB) | MR | | 4/9/2021 | EPA 5030B |
| Toluene | ND | 1.0 | | | | | |
| Ethylbenzene | 2.2 | 1.0 | | | | | |
| Xylene(Total) | ND | 3.0 | | | | | |

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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: 040821-12
GTA SAMPLE NO: 5
DATE SAMPLED: 4/7/2021
TIME SAMPLED: 2:50 PM
DATE RECEIVED: 4/8/2021
TIME RECEIVED: 5:01 PM
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 | | 4/9/2021 | EPA 5030B |
| Toluene | ND | 1.0 | | | | | |
| Ethylbenzene | 1.9 | 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

GTA PROJECT NO: 040821-12
 GTA SAMPLE NO: 1
 DATE SAMPLED: 4/8/2021
 TIME SAMPLED: 12:12 PM
 DATE RECEIVED: 4/8/2021
 TIME RECEIVED: 5:01 PM

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 | ND | 10 | mg/L (PPM) | TR | 4/9/2021 | WATER |
| | CONDUCTIVITY SM2510-B | 740 | 1.0 | uS/cm@25C | TR | 4/9/2021 | WATER |

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 DISS = DISSOLVED



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

GTA PROJECT NO: 040821-12
GTA SAMPLE NO: 2
DATE SAMPLED: 4/7/2021
TIME SAMPLED: 4:10 PM
DATE RECEIVED: 4/8/2021
TIME RECEIVED: 5:01 PM

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) | TR | 4/9/2021 | WATER |
| | CONDUCTIVITY SM2510-B | 840 | 1.0 | uS/cm@25C | TR | 4/9/2021 | WATER |

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

GTA PROJECT NO: 040821-12
GTA SAMPLE NO: 3
DATE SAMPLED: 4/7/2021
TIME SAMPLED: 3:48 PM
DATE RECEIVED: 4/8/2021
TIME RECEIVED: 5:01 PM

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) | TR | 4/9/2021 | WATER |
| | CONDUCTIVITY SM2510-B | 220 | 1.0 | uS/cm@25C | TR | 4/9/2021 | WATER |

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

GTA PROJECT NO: 040821-12
GTA SAMPLE NO: 4
DATE SAMPLED: 4/7/2021
TIME SAMPLED: 3:29 PM
DATE RECEIVED: 4/8/2021
TIME RECEIVED: 5:01 PM

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) | TR | 4/9/2021 | WATER |
| | CONDUCTIVITY SM2510-B | 670 | 1.0 | uS/cm@25C | TR | 4/9/2021 | WATER |

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

GTA PROJECT NO: 040821-12
GTA SAMPLE NO: 5
DATE SAMPLED: 4/7/2021
TIME SAMPLED: 2:50 PM
DATE RECEIVED: 4/8/2021
TIME RECEIVED: 5:01 PM

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-8 | | | | | | |
| | CHLORIDE EPA 300.0 | 14 | 10 | mg/L (PPM) | TR | 4/9/2021 | WATER |
| | CONDUCTIVITY SM2510-B | 750 | 1.0 | uS/cm@25C | TR | 4/9/2021 | WATER |

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

GTA PROJECT NO: 040821-12
GTA SAMPLE NO: 6
DATE SAMPLED: 4/7/2021
TIME SAMPLED: 2:12 PM
DATE RECEIVED: 4/8/2021
TIME RECEIVED: 5:01 PM

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) | TR | 4/9/2021 | WATER |
| | CONDUCTIVITY SM2510-B | 660 | 1.0 | uS/cm@25C | TR | 4/9/2021 | WATER |

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DISS = DISSOLVED

