



**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: 20-032  
GTA ProjNo: 040221-3

Site Addr: ST. KALKASKA 1-27

Sampled By: SEAN CLARK/OMPC  
Date Rec: 4/2/2021  
Time Rec: 4:15 PM

| Sample No. | Sample ID | Date Sampled | Time Sampled | Sample Matrix |
|------------|-----------|--------------|--------------|---------------|
| 1          | MW-1      | 4/2/2021     | 2:00 PM      | WATER         |
| 2          | MW-1D     | 4/2/2021     | 2:38 PM      | WATER         |
| 3          | MW-2      | 4/2/2021     | 1:46 PM      | WATER         |
| 4          | MW-3      | 4/2/2021     | 1:23 PM      | WATER         |
| 5          | MW-4      | 4/2/2021     | 1:00 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  
Ph: 231-929-0905  
Fx: 231-929-0894  
SP: 231-590-0291  
[kirk@gtanalytical.com](mailto:kirk@gtanalytical.com)



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COMPANY: BREITBURN OPERATING  
PROJECT NO: 20-032  
LOCATION: ST. KALKASKA 1-27  
MI  
SAMPLE MATRIX: WATER  
SAMPLE ID: MW-1  
GTA PROJECT NO: 040221-3  
GTA SAMPLE NO: 1  
DATE SAMPLED: 4/2/2021  
TIME SAMPLED: 2:00 PM  
DATE RECEIVED: 4/2/2021  
TIME RECEIVED: 4:15 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<br/>Extracted</u> | <u>Date<br/>Complete</u> | <u>Prep Method</u> |
|-----------------|----------------------|------------|--------------|----------------|---------------------------|--------------------------|--------------------|
| Benzene         | ND                   | 1.0        | ug/L (PPB)   | MR             |                           | 4/5/2021                 | 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.  
ND = NOT DETECTED, RESULT < LOD  
LOD = LIMIT OF DETECTION



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COMPANY: BREITBURN OPERATING  
 PROJECT NO: 20-032  
 LOCATION: ST. KALKASKA 1-27  
 MI  
 SAMPLE MATRIX: WATER  
 SAMPLE ID: MW-1D

GTA PROJECT NO: 040221-3  
 GTA SAMPLE NO: 2  
 DATE SAMPLED: 4/2/2021  
 TIME SAMPLED: 2:38 PM  
 DATE RECEIVED: 4/2/2021  
 TIME RECEIVED: 4:15 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<br/>Extracted</u> | <u>Date<br/>Complete</u> | <u>Prep Method</u> |
|-----------------|----------------------|------------|--------------|----------------|---------------------------|--------------------------|--------------------|
| Benzene         | ND                   | 1.0        | ug/L (PPB)   | MR             |                           | 4/5/2021                 | EPA 5030B          |
| Toluene         | ND                   | 1.0        |              |                |                           |                          |                    |
| Ethylbenzene    | ND                   | 1.0        |              |                |                           |                          |                    |
| Xylene(Total)   | ND                   | 3.0        |              |                |                           |                          |                    |

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COMPANY: BREITBURN OPERATING  
PROJECT NO: 20-032  
LOCATION: ST. KALKASKA 1-27  
MI  
SAMPLE MATRIX: WATER  
SAMPLE ID: MW-2  
GTA PROJECT NO: 040221-3  
GTA SAMPLE NO: 3  
DATE SAMPLED: 4/2/2021  
TIME SAMPLED: 1:46 PM  
DATE RECEIVED: 4/2/2021  
TIME RECEIVED: 4:15 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<br/>Extracted</u> | <u>Date<br/>Complete</u> | <u>Prep Method</u> |
|-----------------|----------------------|------------|--------------|----------------|---------------------------|--------------------------|--------------------|
| Benzene         | ND                   | 1.0        | ug/L (PPB)   | MR             |                           | 4/5/2021                 | 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.  
ND = NOT DETECTED, RESULT < LOD  
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COMPANY: BREITBURN OPERATING  
PROJECT NO: 20-032  
LOCATION: ST. KALKASKA 1-27  
MI  
SAMPLE MATRIX: WATER  
SAMPLE ID: MW-3  
GTA PROJECT NO: 040221-3  
GTA SAMPLE NO: 4  
DATE SAMPLED: 4/2/2021  
TIME SAMPLED: 1:23 PM  
DATE RECEIVED: 4/2/2021  
TIME RECEIVED: 4:15 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<br/>Extracted</u> | <u>Date<br/>Complete</u> | <u>Prep Method</u> |
|-----------------|----------------------|------------|--------------|----------------|---------------------------|--------------------------|--------------------|
| Benzene         | ND                   | 1.0        | ug/L (PPB)   | MR             |                           | 4/5/2021                 | 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.  
ND = NOT DETECTED, RESULT < LOD  
LOD = LIMIT OF DETECTION



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COMPANY: BREITBURN OPERATING  
 PROJECT NO: 20-032  
 LOCATION: ST. KALKASKA 1-27  
 MI  
 SAMPLE MATRIX: WATER  
 SAMPLE ID: MW-4

GTA PROJECT NO: 040221-3  
 GTA SAMPLE NO: 5  
 DATE SAMPLED: 4/2/2021  
 TIME SAMPLED: 1:00 PM  
 DATE RECEIVED: 4/2/2021  
 TIME RECEIVED: 4:15 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<br/>Extracted</u> | <u>Date<br/>Complete</u> | <u>Prep Method</u> |
|-----------------|----------------------|------------|--------------|----------------|---------------------------|--------------------------|--------------------|
| Benzene         | ND                   | 1.0        | ug/L (PPB)   | MR             |                           | 4/5/2021                 | 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.  
 ND = NOT DETECTED, RESULT < LOD  
 LOD = LIMIT OF DETECTION

COMPANY: BREITBURN OPERATING  
 PROJECT NO: 20-032  
 LOCATION: ST. KALKASKA 1-27

GTA PROJECT NO: 040221-3  
 GTA SAMPLE NO: 1

DATE SAMPLED: 4/2/2021  
 TIME SAMPLED: 2:00 PM  
 DATE RECEIVED: 4/2/2021  
 TIME RECEIVED: 4:15 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</u> |
|-----------------|--------------------|----------------------|------------|--------------|----------------|-----------------------|---------------|
| SAMPLE ID: MW-1 | CHLORIDE EPA 300.0 | 220                  | 10         | mg/L (PPM)   | TR             | 4/2/2021              | WATER         |

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

COMPANY: BREITBURN OPERATING  
PROJECT NO: 20-032  
LOCATION: ST. KALKASKA 1-27  
MI  
SAMPLED BY: SEAN CLARK/OMPC

GTA PROJECT NO: 040221-3  
GTA SAMPLE NO: 2  
DATE SAMPLED: 4/2/2021  
TIME SAMPLED: 2:38 PM  
DATE RECEIVED: 4/2/2021  
TIME RECEIVED: 4:15 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</u> |
|------------------|--------------------|----------------------|------------|--------------|----------------|-----------------------|---------------|
| SAMPLE ID: MW-1D | CHLORIDE EPA 300.0 | 35                   | 10         | mg/L (PPM)   | TR             | 4/2/2021              | WATER         |

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

COMPANY: BREITBURN OPERATING  
 PROJECT NO: 20-032  
 LOCATION: ST. KALKASKA 1-27

GTA PROJECT NO: 040221-3  
 GTA SAMPLE NO: 3

DATE SAMPLED: 4/2/2021  
 TIME SAMPLED: 1:46 PM  
 DATE RECEIVED: 4/2/2021  
 TIME RECEIVED: 4:15 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</u> |
|-----------------|--------------------|----------------------|------------|--------------|----------------|-----------------------|---------------|
| SAMPLE ID: MW-2 | CHLORIDE EPA 300.0 | 52                   | 10         | mg/L (PPM)   | TR             | 4/2/2021              | WATER         |

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



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COMPANY: BREITBURN OPERATING  
PROJECT NO: 20-032  
LOCATION: ST. KALKASKA 1-27

GTA PROJECT NO: 040221-3  
GTA SAMPLE NO: 4

DATE SAMPLED: 4/2/2021  
TIME SAMPLED: 1:23 PM  
DATE RECEIVED: 4/2/2021  
TIME RECEIVED: 4:15 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</u> |
|-----------------|--------------------|----------------------|------------|--------------|----------------|-----------------------|---------------|
| SAMPLE ID: MW-3 | CHLORIDE EPA 300.0 | ND                   | 10         | mg/L (PPM)   | TR             | 4/2/2021              | WATER         |

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

COMPANY: BREITBURN OPERATING  
 PROJECT NO: 20-032  
 LOCATION: ST. KALKASKA 1-27

GTA PROJECT NO: 040221-3  
 GTA SAMPLE NO: 5

DATE SAMPLED: 4/2/2021  
 TIME SAMPLED: 1:00 PM  
 DATE RECEIVED: 4/2/2021  
 TIME RECEIVED: 4:15 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</u> |
|-----------------|--------------------|----------------------|------------|--------------|----------------|-----------------------|---------------|
| SAMPLE ID: MW-4 | CHLORIDE EPA 300.0 | ND                   | 10         | mg/L (PPM)   | TR             | 4/2/2021              | WATER         |

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

**CHAIN OF CUSTODY**

|                                 |   |                                   |
|---------------------------------|---|-----------------------------------|
| PROJECT NUMBER<br><i>20-032</i> | SITE NAME/ADDRESS<br><i>St. Kalkaska 1-27</i> | COMPANY/NAME<br><i>Breitburn</i>  |
| SAMPLED BY<br><i>Sean Clark</i> | COMPANY<br><i>Otwell Mowby</i>                | GTA PROJECT #<br><i>04/0221-3</i> |

**SAMPLE INFORMATION**

| #        | SAMPLE ID    | DATE SAMPLED  | TIME           | MATRIX                | ANALYSIS                |
|----------|--------------|---------------|----------------|-----------------------|-------------------------|
| <i>1</i> | <i>MW-1</i>  | <i>4/2/21</i> | <i>2:00 pm</i> | <i>H<sub>2</sub>O</i> | <i>BTEX + Chlorides</i> |
| <i>2</i> | <i>MW-1D</i> | <i>4/2/21</i> | <i>2:38 pm</i> | <i>H<sub>2</sub>O</i> | <i>BTEX + Chlorides</i> |
| <i>3</i> | <i>MW-2</i>  | <i>4/2/21</i> | <i>1:46 pm</i> | <i>H<sub>2</sub>O</i> | <i>BTEX + Cl</i>        |
| <i>4</i> | <i>MW-3</i>  | <i>4/2/21</i> | <i>1:23 pm</i> | <i>H<sub>2</sub>O</i> | <i>BTEX + Cl</i>        |
| <i>5</i> | <i>MW-4</i>  | <i>4/2/21</i> | <i>1:00 pm</i> | <i>H<sub>2</sub>O</i> | <i>BTEX + Cl</i>        |
|          |              |               |                |                       |                         |
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|                                     |  |
|-------------------------------------|--|
| <b>BILL TO:</b><br><i>Breitburn</i> | <b>REPORT TO:</b><br><i>Otwell Mowby</i> |
|-------------------------------------|--|

|  |   |  |  |
|--|---|--|--|
| <b>RELEASED BY</b><br><i>[Signature]</i> | <b>DATE/TIME</b><br><i>4/2/21 @ 4:15 pm</i> | <b>RECEIVED BY</b><br><i>[Signature]</i> | <b>DATE/TIME</b><br><i>4/2/21 4:15 pm</i><br><i>rec 4:00c on ice</i> |
|--|---|--|--|

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