



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: 06-133
GTA ProjNo: 053019-8

Site Addr: LOGAN C1-22

Sampled By: STEVEN HEMSTREET/OMPC
Date Rec: 5/30/2019
Time Rec: 9:01 AM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	MW-1S	5/29/2019	12:00 PM	WATER
2	MW-1D	5/29/2019	12:00 PM	WATER
3	MW-1DD	5/29/2019	12:00 PM	WATER
4	MW-2	5/29/2019	12:00 PM	WATER
5	MW-3	5/29/2019	12:00 PM	WATER
6	GP-11	5/29/2019	12:00 PM	WATER
7	GP-12	5/29/2019	12:00 PM	WATER
8	GP-13	5/29/2019	12:00 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 L Chase

Kirk L. Chase/Chemist
Grand Traverse Analytical
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COMPANY: BREITBURN OPERATING
 PROJECT NO: 06-133
 LOCATION: LOGAN C1-22

GTA PROJECT NO: 053019-8
 GTA SAMPLE NO: 1
 DATE SAMPLED: 5/29/2019
 TIME SAMPLED: 12:00 PM
 DATE RECEIVED: 5/30/2019
 TIME RECEIVED: 9:01 AM

MI
 SAMPLED BY: STEVEN HEMSTREET/OMPC

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
SAMPLE ID: MW-1S	CHLORIDE EPA 300.0	240	10	mg/L (PPM)	LV	6/5/2019	WATER

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

COMPANY: BREITBURN OPERATING
 PROJECT NO: 06-133
 LOCATION: LOGAN C1-22

GTA PROJECT NO: 053019-8
 GTA SAMPLE NO: 2
 DATE SAMPLED: 5/29/2019
 TIME SAMPLED: 12:00 PM
 DATE RECEIVED: 5/30/2019
 TIME RECEIVED: 9:01 AM

MI
 SAMPLED BY: STEVEN HEMSTREET/OMPC

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
SAMPLE ID: MW-1D	CHLORIDE EPA 300.0	320	20	mg/L (PPM)	LV	6/5/2019	WATER

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

COMPANY: BREITBURN OPERATING
 PROJECT NO: 06-133
 LOCATION: LOGAN C1-22

GTA PROJECT NO: 053019-8
 GTA SAMPLE NO: 3
 DATE SAMPLED: 5/29/2019
 TIME SAMPLED: 12:00 PM
 DATE RECEIVED: 5/30/2019
 TIME RECEIVED: 9:01 AM

MI
 SAMPLED BY: STEVEN HEMSTREET/OMPC

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
SAMPLE ID: MW-1DD	CHLORIDE EPA 300.0	ND	10	mg/L (PPM)	LV	6/5/2019	WATER

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

COMPANY: BREITBURN OPERATING
PROJECT NO: 06-133
LOCATION: LOGAN C1-22
MI
SAMPLED BY: STEVEN HEMSTREET/OMPC

GTA PROJECT NO: 053019-8
GTA SAMPLE NO: 4
DATE SAMPLED: 5/29/2019
TIME SAMPLED: 12:00 PM
DATE RECEIVED: 5/30/2019
TIME RECEIVED: 9:01 AM

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
SAMPLE ID: MW-2	CHLORIDE EPA 300.0	110	10	mg/L (PPM)	LV	6/5/2019	WATER

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

COMPANY: BREITBURN OPERATING
 PROJECT NO: 06-133
 LOCATION: LOGAN C1-22
 MI
 SAMPLED BY: STEVEN HEMSTREET/OMPC

GTA PROJECT NO: 053019-8
 GTA SAMPLE NO: 5
 DATE SAMPLED: 5/29/2019
 TIME SAMPLED: 12:00 PM
 DATE RECEIVED: 5/30/2019
 TIME RECEIVED: 9:01 AM

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
	SAMPLE ID: MW-3 CHLORIDE EPA 300.0	27	10	mg/L (PPM)	LV	6/5/2019	WATER

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

COMPANY: BREITBURN OPERATING

PROJECT NO: 06-133

LOCATION: LOGAN C1-22

GTA PROJECT NO: 053019-8

GTA SAMPLE NO: 6

DATE SAMPLED: 5/29/2019

TIME SAMPLED: 12:00 PM

DATE RECEIVED: 5/30/2019

TIME RECEIVED: 9:01 AM

MI

SAMPLED BY: STEVEN HEMSTREET/OMPC

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
SAMPLE ID: GP-11	CHLORIDE EPA 300.0	99	10	mg/L (PPM)	LV	6/5/2019	WATER

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

COMPANY: BREITBURN OPERATING
 PROJECT NO: 06-133
 LOCATION: LOGAN C1-22

GTA PROJECT NO: 053019-8
 GTA SAMPLE NO: 7
 DATE SAMPLED: 5/29/2019
 TIME SAMPLED: 12:00 PM
 DATE RECEIVED: 5/30/2019
 TIME RECEIVED: 9:01 AM

MI
 SAMPLED BY: STEVEN HEMSTREET/OMPC

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
SAMPLE ID: GP-12	CHLORIDE EPA 300.0	140	10	mg/L (PPM)	LV	6/5/2019	WATER

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

COMPANY: BREITBURN OPERATING
 PROJECT NO: 06-133
 LOCATION: LOGAN C1-22

GTA PROJECT NO: 053019-8
 GTA SAMPLE NO: 8
 DATE SAMPLED: 5/29/2019
 TIME SAMPLED: 12:00 PM
 DATE RECEIVED: 5/30/2019
 TIME RECEIVED: 9:01 AM

MI
 SAMPLED BY: STEVEN HEMSTREET/OMPC

SAMPLE ANALYSIS

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u>	<u>Sample</u>
SAMPLE ID: GP-13	CHLORIDE EPA 300.0	160	10	mg/L (PPM)	LV	6/5/2019	WATER

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

CHAIN OF CUSTODY

PROJECT NUMBER 06-133	SITE NAME/ADDRESS Logan Ct-22	COMPANY/NAME Breitburn
SAMPLED BY Steven Hemstreet	COMPANY Otnell Mawby	GTA PROJECT # 053019-8

SAMPLE INFORMATION

#	SAMPLE ID	DATE SAMPLED	TIME	MATRIX	ANALYSIS
1	MW-1S	5-29-19	12:00pm	H ₂ O	Chlorides
2	MW-1D	↓	↓	↓	↓
3	MW-1DD				
4	MW-2				
5	MW-3				
6	GP-11				
7	GP-12				
8	GP-13				

BILL TO: Breitburn	REPORT TO: Otnell Mawby
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RELEASED BY <i>Matthew Sutt</i>	DATE/TIME 5/30/19 9:01 am	RECEIVED BY <i>[Signature]</i>	DATE/TIME 5/30/19 9:01 a
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REQUESTED TAT STANDARD 1 BUSINESS DAY 2 BUSINESS DAYS 3 BUSINESS DAYS