



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: 20-280
GTA ProjNo: 081020-1

Site Addr: BEAVER CREEK K5 FLOWLINE
Sampled By: MARK COLLISON/OMPC
Date Rec: 8/10/2020
Time Rec: 12:25 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	VSR-1@6'	8/7/2020		SOIL
2	VSR-2@16'	8/7/2020		SOIL
3	VSR-3@12'	8/7/2020		SOIL
4	VSR-4@6'	8/7/2020		SOIL
5	VSR-5@12'	8/7/2020		SOIL
6	VSR-6@16'	8/7/2020		SOIL
7	VSR-7@12'	8/7/2020		SOIL
8	VSR-8@19'	8/7/2020		SOIL
9	VSR-8@21'	8/7/2020		SOIL
10	VSR-9@19'	8/7/2020		SOIL
11	VSR-10@19'	8/7/2020		SOIL

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



INDEPENDENT TESTING LAB

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

COMPANY:	BREITBURN OPERATING	GTA PROJECT NO:	081020-1
PROJECT NO:	20-280	GTA SAMPLE NO:	1
LOCATION:	BEAVER CREEK K5 FLOWLINE	DATE SAMPLED:	8/7/2020
		TIME SAMPLED:	
	MI	DATE RECEIVED:	8/10/2020
		TIME RECEIVED:	12:25 PM
SAMPLE MATRIX:	SOIL	SAMPLED BY:	MARK COLLISON/OMPC
SAMPLE ID:	VSR-1@6'	**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.	

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	ND	50	ug/Kg (PPB)	MR	8/7/2020	8/10/2020	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
 ND = NOT DETECTED, RESULT < LOD
 LOD = LIMIT OF DETECTION

COMPANY: BREITBURN OPERATING
PROJECT NO: 20-280
LOCATION: BEAVER CREEK K5 FLOWLINE
MI
SAMPLE MATRIX: SOIL
SAMPLE ID: VSR-2@16'

GTA PROJECT NO: 081020-1
GTA SAMPLE NO: 2
DATE SAMPLED: 8/7/2020
TIME SAMPLED:
DATE RECEIVED: 8/10/2020
TIME RECEIVED: 12:25 PM

SAMPLED BY: MARK COLLISON/OMPC
**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	ND	50	ug/Kg (PPB)	MR	8/7/2020	8/10/2020	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
ND = NOT DETECTED, RESULT < LOD
LOD = LIMIT OF DETECTION

COMPANY: BREITBURN OPERATING
PROJECT NO: 20-280
LOCATION: BEAVER CREEK K5 FLOWLINE
MI
SAMPLE MATRIX: SOIL
SAMPLE ID: VSR-3@12'

GTA PROJECT NO: 081020-1
GTA SAMPLE NO: 3
DATE SAMPLED: 8/7/2020
TIME SAMPLED:
DATE RECEIVED: 8/10/2020
TIME RECEIVED: 12:25 PM

SAMPLED BY: MARK COLLISON/OMPC
**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	ND	50	ug/Kg (PPB)	MR	8/7/2020	8/10/2020	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
ND = NOT DETECTED, RESULT < LOD
LOD = LIMIT OF DETECTION

COMPANY: BREITBURN OPERATING
 PROJECT NO: 20-280
 LOCATION: BEAVER CREEK K5 FLOWLINE
 MI
 SAMPLE MATRIX: SOIL
 SAMPLE ID: VSR-4@6'

GTA PROJECT NO: 081020-1
 GTA SAMPLE NO: 4
 DATE SAMPLED: 8/7/2020
 TIME SAMPLED:
 DATE RECEIVED: 8/10/2020
 TIME RECEIVED: 12:25 PM

SAMPLED BY: MARK COLLISON/OMPC

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	ND	50	ug/Kg (PPB)	MR	8/7/2020	8/10/2020	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

COMPANY: BREITBURN OPERATING
PROJECT NO: 20-280
LOCATION: BEAVER CREEK K5 FLOWLINE

MI
SAMPLE MATRIX: SOIL
SAMPLE ID: VSR-5@12'

GTA PROJECT NO: 081020-1
GTA SAMPLE NO: 5
DATE SAMPLED: 8/7/2020
TIME SAMPLED:
DATE RECEIVED: 8/10/2020
TIME RECEIVED: 12:25 PM

SAMPLED BY: MARK COLLISON/OMPC

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	ND	50	ug/Kg (PPB)	MR	8/7/2020	8/11/2020	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

COMPANY: BREITBURN OPERATING
PROJECT NO: 20-280
LOCATION: BEAVER CREEK K5 FLOWLINE
MI
SAMPLE MATRIX: SOIL
SAMPLE ID: VSR-6@16'

GTA PROJECT NO: 081020-1
GTA SAMPLE NO: 6
DATE SAMPLED: 8/7/2020
TIME SAMPLED:
DATE RECEIVED: 8/10/2020
TIME RECEIVED: 12:25 PM

SAMPLED BY: MARK COLLISON/OMPC
**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	ND	50	ug/Kg (PPB)	MR	8/7/2020	8/11/2020	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
ND = NOT DETECTED, RESULT < LOD
LOD = LIMIT OF DETECTION



INDEPENDENT TESTING LAB

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

COMPANY: BREITBURN OPERATING
 PROJECT NO: 20-280
 LOCATION: BEAVER CREEK K5 FLOWLINE
 MI
 SAMPLE MATRIX: SOIL
 SAMPLE ID: VSR-7@12'

GTA PROJECT NO: 081020-1
 GTA SAMPLE NO: 7
 DATE SAMPLED: 8/7/2020
 TIME SAMPLED:
 DATE RECEIVED: 8/10/2020
 TIME RECEIVED: 12:25 PM

SAMPLED BY: MARK COLLISON/OMPC
 **THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	ND	50	ug/Kg (PPB)	MR	8/7/2020	8/11/2020	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
 ND = NOT DETECTED, RESULT < LOD
 LOD = LIMIT OF DETECTION



INDEPENDENT TESTING LAB

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

COMPANY: BREITBURN OPERATING
 PROJECT NO: 20-280
 LOCATION: BEAVER CREEK K5 FLOWLINE
 MI
 SAMPLE MATRIX: SOIL
 SAMPLE ID: VSR-8@19'

GTA PROJECT NO: 081020-1
 GTA SAMPLE NO: 8
 DATE SAMPLED: 8/7/2020
 TIME SAMPLED:
 DATE RECEIVED: 8/10/2020
 TIME RECEIVED: 12:25 PM

SAMPLED BY: MARK COLLISON/OMPC
 **THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	ND	50	ug/Kg (PPB)	MR	8/7/2020	8/11/2020	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
 ND = NOT DETECTED, RESULT < LOD
 LOD = LIMIT OF DETECTION

COMPANY: BREITBURN OPERATING
 PROJECT NO: 20-280
 LOCATION: BEAVER CREEK K5 FLOWLINE
 MI
 SAMPLE MATRIX: SOIL
 SAMPLE ID: VSR-8@21'

GTA PROJECT NO: 081020-1
 GTA SAMPLE NO: 9
 DATE SAMPLED: 8/7/2020
 TIME SAMPLED:
 DATE RECEIVED: 8/10/2020
 TIME RECEIVED: 12:25 PM

SAMPLED BY: MARK COLLISON/OMPC

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	ND	50	ug/Kg (PPB)	MR	8/7/2020	8/11/2020	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION



INDEPENDENT TESTING LAB

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

COMPANY:	BREITBURN OPERATING	GTA PROJECT NO:	081020-1
PROJECT NO:	20-280	GTA SAMPLE NO:	10
LOCATION:	BEAVER CREEK K5 FLOWLINE	DATE SAMPLED:	8/7/2020
		TIME SAMPLED:	
	MI	DATE RECEIVED:	8/10/2020
		TIME RECEIVED:	12:25 PM
SAMPLE MATRIX:	SOIL	SAMPLED BY:	MARK COLLISON/OMPC
SAMPLE ID:	VSR-9@19'	**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.	

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	ND	50	ug/Kg (PPB)	MR	8/7/2020	8/11/2020	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
 ND = NOT DETECTED, RESULT < LOD
 LOD = LIMIT OF DETECTION

COMPANY: BREITBURN OPERATING
 PROJECT NO: 20-280
 LOCATION: BEAVER CREEK K5 FLOWLINE
 MI
 SAMPLE MATRIX: SOIL
 SAMPLE ID: VSR-10@19'

GTA PROJECT NO: 081020-1
 GTA SAMPLE NO: 11
 DATE SAMPLED: 8/7/2020
 TIME SAMPLED:
 DATE RECEIVED: 8/10/2020
 TIME RECEIVED: 12:25 PM

SAMPLED BY: MARK COLLISON/OMPC
 **THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	ND	50	ug/Kg (PPB)	MR	8/7/2020	8/11/2020	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
 ND = NOT DETECTED, RESULT < LOD
 LOD = LIMIT OF DETECTION

COMPANY: BREITBURN OPERATING
PROJECT NO: 20-280
LOCATION: BEAVER CREEK K5 FLOWLINE
MI
SAMPLED BY: MARK COLLISON/OMPC

GTA PROJECT NO: 081020-1
GTA SAMPLE NO: 1
DATE SAMPLED: 8/7/2020
TIME SAMPLED:
DATE RECEIVED: 8/10/2020
TIME RECEIVED: 12:25 PM

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: VSR-1@6' CHLORIDE EPA 300.0	3,400	110	mg/Kg (PPM)	LV	8/10/2020	SOIL

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

COMPANY: BREITBURN OPERATING
PROJECT NO: 20-280
LOCATION: BEAVER CREEK K5 FLOWLINE
MI
SAMPLED BY: MARK COLLISON/OMPC

GTA PROJECT NO: 081020-1
GTA SAMPLE NO: 2
DATE SAMPLED: 8/7/2020
TIME SAMPLED:
DATE RECEIVED: 8/10/2020
TIME RECEIVED: 12:25 PM

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: VSR-2@16' CHLORIDE EPA 300.0	7,300	530	mg/Kg (PPM)	LV	8/10/2020	SOIL

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

COMPANY: BREITBURN OPERATING
PROJECT NO: 20-280
LOCATION: BEAVER CREEK K5 FLOWLINE
MI
SAMPLED BY: MARK COLLISON/OMPC

GTA PROJECT NO: 081020-1
GTA SAMPLE NO: 3
DATE SAMPLED: 8/7/2020
TIME SAMPLED:
DATE RECEIVED: 8/10/2020
TIME RECEIVED: 12:25 PM

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: VSR-3@12' CHLORIDE EPA 300.0	12,000	560	mg/Kg (PPM)	LV	8/10/2020	SOIL

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

COMPANY:	BREITBURN OPERATING	GTA PROJECT NO:	081020-1
PROJECT NO:	20-280	GTA SAMPLE NO:	4
LOCATION:	BEAVER CREEK K5 FLOWLINE	DATE SAMPLED:	8/7/2020
		TIME SAMPLED:	
		DATE RECEIVED:	8/10/2020
		TIME RECEIVED:	12:25 PM
	MI		
SAMPLED BY:	MARK COLLISON/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: VSR-4@6' CHLORIDE EPA 300.0	ND	110	mg/Kg (PPM)	LV	8/10/2020	SOIL

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

COMPANY: BREITBURN OPERATING
PROJECT NO: 20-280
LOCATION: BEAVER CREEK K5 FLOWLINE
MI
SAMPLED BY: MARK COLLISON/OMPC

GTA PROJECT NO: 081020-1
GTA SAMPLE NO: 5
DATE SAMPLED: 8/7/2020
TIME SAMPLED:
DATE RECEIVED: 8/10/2020
TIME RECEIVED: 12:25 PM

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: VSR-5@12' CHLORIDE EPA 300.0	10,000	570	mg/Kg (PPM)	LV	8/10/2020	SOIL

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

COMPANY: BREITBURN OPERATING
 PROJECT NO: 20-280
 LOCATION: BEAVER CREEK K5 FLOWLINE
 MI
 SAMPLED BY: MARK COLLISON/OMPC

GTA PROJECT NO: 081020-1
 GTA SAMPLE NO: 6
 DATE SAMPLED: 8/7/2020
 TIME SAMPLED:
 DATE RECEIVED: 8/10/2020
 TIME RECEIVED: 12:25 PM

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: VSR-6@16' CHLORIDE EPA 300.0	4,100	110	mg/Kg (PPM)	LV	8/10/2020	SOIL

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

COMPANY: BREITBURN OPERATING
PROJECT NO: 20-280
LOCATION: BEAVER CREEK K5 FLOWLINE
MI
SAMPLED BY: MARK COLLISON/OMPC

GTA PROJECT NO: 081020-1
GTA SAMPLE NO: 7
DATE SAMPLED: 8/7/2020
TIME SAMPLED:
DATE RECEIVED: 8/10/2020
TIME RECEIVED: 12:25 PM

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: VSR-7@12' CHLORIDE EPA 300.0	6,600	550	mg/Kg (PPM)	LV	8/10/2020	SOIL

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

COMPANY: BREITBURN OPERATING
PROJECT NO: 20-280
LOCATION: BEAVER CREEK K5 FLOWLINE
MI
SAMPLED BY: MARK COLLISON/OMPC

GTA PROJECT NO: 081020-1
GTA SAMPLE NO: 8
DATE SAMPLED: 8/7/2020
TIME SAMPLED:
DATE RECEIVED: 8/10/2020
TIME RECEIVED: 12:25 PM

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: VSR-8@19' CHLORIDE EPA 300.0	5,700	530	mg/Kg (PPM)	LV	8/10/2020	SOIL

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

COMPANY: BREITBURN OPERATING
 PROJECT NO: 20-280
 LOCATION: BEAVER CREEK K5 FLOWLINE
 MI
 SAMPLED BY: MARK COLLISON/OMPC

GTA PROJECT NO: 081020-1
 GTA SAMPLE NO: 9
 DATE SAMPLED: 8/7/2020
 TIME SAMPLED:
 DATE RECEIVED: 8/10/2020
 TIME RECEIVED: 12:25 PM

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: VSR-8@21' CHLORIDE EPA 300.0	5,200	530	mg/Kg (PPM)	LV	8/10/2020	SOIL

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

COMPANY: BREITBURN OPERATING
PROJECT NO: 20-280
LOCATION: BEAVER CREEK K5 FLOWLINE
MI
SAMPLED BY: MARK COLLISON/OMPC

GTA PROJECT NO: 081020-1
GTA SAMPLE NO: 10
DATE SAMPLED: 8/7/2020
TIME SAMPLED:
DATE RECEIVED: 8/10/2020
TIME RECEIVED: 12:25 PM

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: VSR-9@19' CHLORIDE EPA 300.0	5,500	100	mg/Kg (PPM)	LV	8/10/2020	SOIL

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

COMPANY: BREITBURN OPERATING
 PROJECT NO: 20-280
 LOCATION: BEAVER CREEK K5 FLOWLINE
 MI
 SAMPLED BY: MARK COLLISON/OMPC

GTA PROJECT NO: 081020-1
 GTA SAMPLE NO: 11
 DATE SAMPLED: 8/7/2020
 TIME SAMPLED:
 DATE RECEIVED: 8/10/2020
 TIME RECEIVED: 12:25 PM

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: VSR-10@19' CHLORIDE EPA 300.0	4,100	110	mg/Kg (PPM)	LV	8/10/2020	SOIL

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



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:
PROJECT NO: 20-280

LOCATION: BEAVER CREEK K5 FLOWLINE

MI

GTA PROJECT NO: 081020-1
SAMPLED BY: MARK COLLISON/OMPC

DATE SAMPLED: 8/7/2020
TIME SAMPLED:

SAMPLE MATRIX: SOIL

DATE RECEIVED: 8/10/2020
TIME RECEIVED: 12:25 PM

MOISTURE

<u>No:</u> <u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
SAMPLE ID: VSR-1@6' % MOISTURE EPA 3550C	6.8	0.050	% OF SAMPLE	AS	8/10/2020
SAMPLE ID: VSR-2@16' % MOISTURE EPA 3550C	6.5	0.050	% OF SAMPLE	AS	8/10/2020
SAMPLE ID: VSR-3@12' % MOISTURE EPA 3550C	10	0.050	% OF SAMPLE	AS	8/10/2020
SAMPLE ID: VSR-4@6' % MOISTURE EPA 3550C	7.1	0.050	% OF SAMPLE	AS	8/10/2020
SAMPLE ID: VSR-5@12' % MOISTURE EPA 3550C	12	0.050	% OF SAMPLE	AS	8/10/2020
SAMPLE ID: VSR-6@16' % MOISTURE EPA 3550C	5.8	0.050	% OF SAMPLE	AS	8/10/2020
SAMPLE ID: VSR-7@12' % MOISTURE EPA 3550C	11	0.050	% OF SAMPLE	AS	8/10/2020
SAMPLE ID: VSR-8@19' % MOISTURE EPA 3550C	6.9	0.050	% OF SAMPLE	AS	8/10/2020
SAMPLE ID: VSR-8@21' % MOISTURE EPA 3550C	6.8	0.050	% OF SAMPLE	AS	8/10/2020
SAMPLE ID: VSR-9@19' % MOISTURE EPA 3550C	4.5	0.050	% OF SAMPLE	AS	8/10/2020
SAMPLE ID: VSR-10@19' % MOISTURE EPA 3550C	5.8	0.050	% OF SAMPLE	AS	8/10/2020

CHAIN OF CUSTODY

PROJECT NUMBER <i>#20-280</i>	SITE NAME/ADDRESS <i>BEAVER CREEK K5 FLOWLINE</i>	COMPANY/NAME <i>BREITBURN</i>
SAMPLED BY <i>Mark Coulson</i>	COMPANY <i>Orwell Hawby</i>	GTA PROJECT # <i>081020-1</i>

SAMPLE INFORMATION

#	SAMPLE ID	DATE SAMPLED	TIME	MATRIX	ANALYSIS
1	VSR-1 @ 6'	8-7-20	PM	SOIL	Chlorides & ANALYSIS BTEX, 1,2,4 & 1,3,5
2	VSR-2 @ 16'	↓	↓		TNTBS, Napthalene, 2-Methyl-NAPthalene
3	VSR-3 @ 12'				
4	VSR-4 @ 6'				
5	VSR-5 @ 12'				
6	VSR-6 @ 16'				
7	VSR-7 @ 12'				
8	VSR-8 @ 19'				
9	VSR-8 @ 21'				
10	VSR-9 @ 19'				
11	VSR-10 @ 19'				

BILL TO: <i>BREITBURN</i>	REPORT TO: <i>MELZAR COULTER</i>
-------------------------------------	--

RELEASED BY <i>Mark Coulson</i>	DATE/TIME <i>8-7-20 5:30pm</i>	RECEIVED BY <i>Orwell Hawby</i>	DATE/TIME <i>8-7-20 5:30pm</i>
<i>Mark Coulson</i>	<i>8-10-20</i>	<i>K. Coulson</i>	<i>8/10/20 12:25p</i>

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