



INDEPENDENT TESTING LAB

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

Company: MACKINAC ENVIRONMENTAL
Name:
ClientProj: M19-3096
GTA ProjNo: 081619-4

Site Addr: 1470 DERBY ROAD

Sampled By: BRAD JEFFERS/MET
Date Rec: 8/16/2019
Time Rec: 11:15 AM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	B-3	8/14/2019		WATER
2	B-4	8/14/2019		WATER
3	B-7	8/14/2019		WATER
4	B-1 @ 0-1'	8/14/2019		SOIL
5	B-1 @ 5-6'	8/14/2019		SOIL
6	B-1 @ 8-10'	8/14/2019		SOIL
7	B-2 @ 0-1'	8/14/2019		SOIL
8	B-2 @ 8-10'	8/14/2019		SOIL
9	B-3 @ 0-1'	8/14/2019		SOIL
10	B-5 @ 0-1'	8/14/2019		SOIL
11	B-5 @ 10-12'	8/14/2019		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 L Chase

Kirk L. Chase/Chemist
Grand Traverse Analytical
830 Robinwood Court
Traverse City, MI 49686
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INDEPENDENT TESTING LAB

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3096
 LOCATION: 1470 DERBY ROAD

GTA PROJECT NO: 081619-4
 GTA SAMPLE NO: 1
 DATE SAMPLED: 8/14/2019
 TIME SAMPLED:
 DATE RECEIVED: 8/16/2019
 TIME RECEIVED: 11:15 AM

SAMPLED BY: BRAD JEFFERS/MET

SAMPLE MATRIX: WATER

SAMPLE ID: B-3

EPA 8260B VOLATILE ORGANICS

Units= ug/L (PPB)

Analyst= MR

Date

Date Completed= 8/21/2019

Prep

EPA 5030B

Analyte	Concentration	LOD
ACETONE	ND	25
ALLYL CHLORIDE	ND	10
BENZENE	ND	1.0
BROMOBENZENE	ND	1.0
BROMOCHLOROMETHANE	ND	1.0
BROMODICHLOROMETHANE	ND	1.0
BROMOFORM	ND	1.0
BROMOMETHANE	ND	1.0
n-BUTYLBENZENE	ND	1.0
s-BUTYLBENZENE	ND	1.0
t-BUTYLBENZENE	ND	1.0
CARBON DISULFIDE	ND	5.0
CARBON TETRACHLORIDE	ND	1.0
CHLOROENZENE	ND	1.0
1-CHLOROBUTANE	ND	1.0
CHLOROFORM	ND	1.0
CHLOROETHANE	ND	1.0
CHLOROMETHANE	ND	1.0
2-CHLOROTOLUENE	ND	1.0
4-CHLOROTOLUENE	ND	1.0
DIBROMOCHLOROMETHANE	ND	1.0
DIBROMOMETHANE	ND	1.0
1,2-DIBROMOETHANE	ND	1.0
1,2-DICHLOROENZENE	ND	1.0
1,3-DICHLOROENZENE	ND	1.0
1,4-DICHLOROENZENE	ND	1.0
t-1,4-DICHLORO-2-BUTENE	ND	10
DICHLORODIFLUOROMETHANE	ND	1.0
1,1-DICHLOROETHANE	ND	1.0
1,2-DICHLOROETHANE	ND	1.0
1,1-DICHLOROETHENE	ND	1.0
cis-1,2-DICHLOROETHENE	ND	1.0
trans-1,2-DICHLOROETHENE	ND	1.0
1,2-DICHLOROPROPANE	ND	1.0
1,3-DICHLOROPROPANE	ND	1.0
2,2-DICHLOROPROPANE	ND	1.0
1,1-DICHLOROPROPENE	ND	1.0

Analyte	Concentration	LOD
cis-1,3-DICHLOROPROPENE	ND	1.0
trans-1,3-DICHLOROPROPENE	ND	1.0
DIETHYL ETHER	ND	10
ETHYLBENZENE	ND	1.0
ETHYL METHACRYLATE	ND	10
HEXACHLOROBUTADIENE	ND	1.0
HEXACHLOROETHANE	ND	10
2-HEXANONE	ND	10
IDOMETHANE	ND	10
ISOPROPYLBENZENE	ND	1.0
ISOPROPYLTOLUENE	ND	1.0
METHYL ACRYLATE	ND	10
METHYL ETHYL KETONE	ND	10
METHYL-t-BUTYL ETHER	ND	5.0
METHYLENE CHLORIDE	ND	1.0
METHYL METHACRYLATE	ND	10
MIBK	ND	10
2-METHYLNAPHTHALENE	ND	5.0
NAPHTHALENE	ND	5.0
PENTACHLOROETHANE	ND	10
n-PROPYLBENZENE	ND	1.0
STYRENE	ND	1.0
1,1,1,2-TETRACHLOROETHANE	ND	1.0
1,1,2,2-TETRACHLOROETHANE	ND	1.0
TETRACHLOROETHENE	ND	1.0
TOLUENE	ND	1.0
1,2,3-TRICHLOROENZENE	ND	1.0
1,2,4-TRICHLOROENZENE	ND	1.0
1,1,1-TRICHLOROETHANE	ND	1.0
1,1,2-TRICHLOROETHANE	ND	1.0
TRICHLOROETHENE	ND	1.0
TRICHLORFLUOROMETHANE	ND	1.0
1,2,3-TRICHLOROPROPANE	ND	1.0
1,2,4-TRIMETHYLBENZENE	ND	1.0
1,3,5-TRIMETHYLBENZENE	ND	1.0
VINYL CHLORIDE	ND	1.0
XYLENE (TOTAL)	ND	3.0

ND = NOT DETECTED, RESULT IS <LOD.
 LOD = LIMIT OF DETECTION.



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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3096
 LOCATION: 1470 DERBY ROAD

GTA PROJECT NO: 081619-4
 GTA SAMPLE NO: 2
 DATE SAMPLED: 8/14/2019
 TIME SAMPLED:
 DATE RECEIVED: 8/16/2019
 TIME RECEIVED: 11:15 AM

SAMPLED BY: BRAD JEFFERS/MET
 SAMPLE MATRIX: WATER
 SAMPLE ID: B-4

EPA 8260B VOLATILE ORGANICS

Units= ug/L (PPB)

Analyst= MR

Date

Date Completed= 8/21/2019

Prep

EPA 5030B

Analyte	Concentration	LOD
ACETONE	ND	25
ALLYL CHLORIDE	ND	10
BENZENE	ND	1.0
BROMOBENZENE	ND	1.0
BROMOCHLOROMETHANE	ND	1.0
BROMODICHLOROMETHANE	ND	1.0
BROMOFORM	ND	1.0
BROMOMETHANE	ND	1.0
n-BUTYLBENZENE	ND	1.0
s-BUTYLBENZENE	ND	1.0
t-BUTYLBENZENE	ND	1.0
CARBON DISULFIDE	ND	5.0
CARBON TETRACHLORIDE	ND	1.0
CHLOROENZENE	ND	1.0
1-CHLOROBUTANE	ND	1.0
CHLOROFORM	ND	1.0
CHLOROETHANE	ND	1.0
CHLOROMETHANE	ND	1.0
2-CHLOROTOLUENE	ND	1.0
4-CHLOROTOLUENE	ND	1.0
DIBROMOCHLOROMETHANE	ND	1.0
DIBROMOMETHANE	ND	1.0
1,2-DIBROMOETHANE	ND	1.0
1,2-DICHLOROENZENE	ND	1.0
1,3-DICHLOROENZENE	ND	1.0
1,4-DICHLOROENZENE	ND	1.0
t-1,4-DICHLORO-2-BUTENE	ND	10
DICHLORODIFLUOROMETHANE	ND	1.0
1,1-DICHLOROETHANE	ND	1.0
1,2-DICHLOROETHANE	ND	1.0
1,1-DICHLOROETHENE	ND	1.0
cis-1,2-DICHLOROETHENE	ND	1.0
trans-1,2-DICHLOROETHENE	ND	1.0
1,2-DICHLOROPROPANE	ND	1.0
1,3-DICHLOROPROPANE	ND	1.0
2,2-DICHLOROPROPANE	ND	1.0
1,1-DICHLOROPROPENE	ND	1.0

Analyte	Concentration	LOD
cis-1,3-DICHLOROPROPENE	ND	1.0
trans-1,3-DICHLOROPROPENE	ND	1.0
DIETHYL ETHER	ND	10
ETHYLBENZENE	ND	1.0
ETHYL METHACRYLATE	ND	10
HEXACHLOROBUTADIENE	ND	1.0
HEXACHLOROETHANE	ND	10
2-HEXANONE	ND	10
IDOMETHANE	ND	10
ISOPROPYLBENZENE	ND	1.0
ISOPROPYLTOLUENE	ND	1.0
METHYL ACRYLATE	ND	10
METHYL ETHYL KETONE	ND	10
METHYL-t-BUTYL ETHER	ND	5.0
METHYLENE CHLORIDE	ND	1.0
METHYL METHACRYLATE	ND	10
MIBK	ND	10
2-METHYLNAPHTHALENE	ND	5.0
NAPHTHALENE	ND	5.0
PENTACHLOROETHANE	ND	10
n-PROPYLBENZENE	ND	1.0
STYRENE	ND	1.0
1,1,1,2-TETRACHLOROETHANE	ND	1.0
1,1,2,2-TETRACHLOROETHANE	ND	1.0
TETRACHLOROETHENE	ND	1.0
TOLUENE	ND	1.0
1,2,3-TRICHLOROENZENE	ND	1.0
1,2,4-TRICHLOROENZENE	ND	1.0
1,1,1-TRICHLOROETHANE	ND	1.0
1,1,2-TRICHLOROETHANE	ND	1.0
TRICHLOROETHENE	ND	1.0
TRICHLORFLUOROMETHANE	ND	1.0
1,2,3-TRICHLOROPROPANE	ND	1.0
1,2,4-TRIMETHYLBENZENE	ND	1.0
1,3,5-TRIMETHYLBENZENE	ND	1.0
VINYL CHLORIDE	ND	1.0
XYLENE (TOTAL)	ND	3.0

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 LOD = LIMIT OF DETECTION.



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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3096
 LOCATION: 1470 DERBY ROAD

GTA PROJECT NO: 081619-4
 GTA SAMPLE NO: 3

DATE SAMPLED: 8/14/2019
 TIME SAMPLED:

DATE RECEIVED: 8/16/2019
 TIME RECEIVED: 11:15 AM

SAMPLED BY: BRAD JEFFERS/MET

SAMPLE MATRIX: WATER

SAMPLE ID: B-7

EPA 8260B VOLATILE ORGANICS

Units= ug/L (PPB)

Analyst= MR

Date

Date Completed= 8/21/2019

Prep

EPA 5030B

Analyte	Concentration	LOD
ACETONE	ND	25
ALLYL CHLORIDE	ND	10
BENZENE	ND	1.0
BROMOBENZENE	ND	1.0
BROMOCHLOROMETHANE	ND	1.0
BROMODICHLOROMETHANE	ND	1.0
BROMOFORM	ND	1.0
BROMOMETHANE	ND	1.0
n-BUTYLBENZENE	ND	1.0
s-BUTYLBENZENE	ND	1.0
t-BUTYLBENZENE	ND	1.0
CARBON DISULFIDE	ND	5.0
CARBON TETRACHLORIDE	ND	1.0
CHLOROENZENE	ND	1.0
1-CHLOROBUTANE	ND	1.0
CHLOROFORM	ND	1.0
CHLOROETHANE	ND	1.0
CHLOROMETHANE	ND	1.0
2-CHLOROTOLUENE	ND	1.0
4-CHLOROTOLUENE	ND	1.0
DIBROMOCHLOROMETHANE	ND	1.0
DIBROMOMETHANE	ND	1.0
1,2-DIBROMOETHANE	ND	1.0
1,2-DICHLOROENZENE	ND	1.0
1,3-DICHLOROENZENE	ND	1.0
1,4-DICHLOROENZENE	ND	1.0
t-1,4-DICHLORO-2-BUTENE	ND	10
DICHLORODIFLUOROMETHANE	ND	1.0
1,1-DICHLOROETHANE	ND	1.0
1,2-DICHLOROETHANE	ND	1.0
1,1-DICHLOROETHENE	ND	1.0
cis-1,2-DICHLOROETHENE	ND	1.0
trans-1,2-DICHLOROETHENE	ND	1.0
1,2-DICHLOROPROPANE	ND	1.0
1,3-DICHLOROPROPANE	ND	1.0
2,2-DICHLOROPROPANE	ND	1.0
1,1-DICHLOROPROPENE	ND	1.0

Analyte	Concentration	LOD
cis-1,3-DICHLOROPROPENE	ND	1.0
trans-1,3-DICHLOROPROPENE	ND	1.0
DIETHYL ETHER	ND	10
ETHYLBENZENE	ND	1.0
ETHYL METHACRYLATE	ND	10
HEXACHLOROBUTADIENE	ND	1.0
HEXACHLOROETHANE	ND	10
2-HEXANONE	ND	10
IDOMETHANE	ND	10
ISOPROPYLBENZENE	ND	1.0
ISOPROPYLTOLUENE	ND	1.0
METHYL ACRYLATE	ND	10
METHYL ETHYL KETONE	ND	10
METHYL-t-BUTYL ETHER	ND	5.0
METHYLENE CHLORIDE	ND	1.0
METHYL METHACRYLATE	ND	10
MIBK	ND	10
2-METHYLNAPHTHALENE	ND	5.0
NAPHTHALENE	ND	5.0
PENTACHLOROETHANE	ND	10
n-PROPYLBENZENE	ND	1.0
STYRENE	ND	1.0
1,1,1,2-TETRACHLOROETHANE	ND	1.0
1,1,2,2-TETRACHLOROETHANE	ND	1.0
TETRACHLOROETHENE	ND	1.0
TOLUENE	ND	1.0
1,2,3-TRICHLOROENZENE	ND	1.0
1,2,4-TRICHLOROENZENE	ND	1.0
1,1,1-TRICHLOROETHANE	ND	1.0
1,1,2-TRICHLOROETHANE	ND	1.0
TRICHLOROETHENE	ND	1.0
TRICHLORFLUOROMETHANE	ND	1.0
1,2,3-TRICHLOROPROPANE	ND	1.0
1,2,4-TRIMETHYLBENZENE	ND	1.0
1,3,5-TRIMETHYLBENZENE	ND	1.0
VINYL CHLORIDE	ND	1.0
XYLENE (TOTAL)	ND	3.0

ND = NOT DETECTED, RESULT IS <LOD.
 LOD = LIMIT OF DETECTION.



INDEPENDENT TESTING LAB

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3096
 LOCATION: 1470 DERBY ROAD
 SAMPLED BY: BRAD JEFFERS/MET
 SAMPLE MATRIX: SOIL

GTA PROJECT NO: 081619-4
 GTA SAMPLE NO: 5
 DATE SAMPLED: 8/14/2019
 TIME SAMPLED:
 DATE RECEIVED: 8/16/2019
 TIME RECEIVED: 11:15 AM

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

SAMPLE ID: B-1 @ 5-6'

EPA 8260B VOLATILE ORGANICS

<u>Units=</u> ug/Kg (PPB)	<u>Analyst=</u> MR	<u>Date</u>	8/14/2019	<u>Date Completed=</u> 8/21/2019	<u>Prep</u>	EPA 5035A
<u>Analyte</u>	<u>Concentration</u>	<u>LOD</u>	<u>Analyte</u>	<u>Concentration</u>	<u>LOD</u>	
ACETONE	ND	1,000	cis-1,3-DICHLOROPROPENE	ND	50	
ALLYL CHLORIDE	ND	250	trans-1,3-DICHLOROPROPENE	ND	50	
BENZENE	ND	50	DIETHYL ETHER	ND	200	
BROMOBENZENE	ND	100	ETHYLBENZENE	ND	50	
BROMOCHLOROMETHANE	ND	100	ETHYL METHACRYLATE	ND	250	
BROMODICHLOROMETHANE	ND	50	HEXACHLOROBUTADIENE	ND	50	
BROMOFORM	ND	100	HEXACHLOROETHANE	ND	250	
BROMOMETHANE	ND	200	2-HEXANONE	ND	2,500	
n-BUTYLBENZENE	ND	50	IDOMETHANE	ND	250	
s-BUTYLBENZENE	ND	50	ISOPROPYLBENZENE	ND	50	
t-BUTYLBENZENE	ND	50	ISOPROPYLTOLUENE	ND	50	
CARBON DISULFIDE	ND	250	METHYL ACRYLATE	ND	250	
CARBON TETRACHLORIDE	ND	50	METHYL ETHYL KETONE	ND	750	
CHLOROBENZENE	ND	50	METHYL-t-BUTYL ETHER	ND	250	
1-CHLOROBUTANE	ND	100	METHYLENE CHLORIDE	ND	100	
CHLOROFORM	ND	50	METHYL METHACRYLATE	ND	250	
CHLOROETHANE	ND	250	MIBK	ND	2,500	
CHLOROMETHANE	ND	250	2-METHYLNAPHTHALENE	ND	250	
2-CHLOROTOLUENE	ND	50	NAPHTHALENE	ND	250	
4-CHLOROTOLUENE	ND	50	PENTACHLOROETHANE	ND	250	
DIBROMOCHLOROMETHANE	ND	100	n-PROPYLBENZENE	ND	50	
DIBROMOMETHANE	ND	250	STYRENE	ND	50	
1,2-DIBROMOETHANE	ND	20	1,1,1,2-TETRACHLOROETHANE	ND	100	
1,2-DICHLOROBENZENE	ND	50	1,1,2,2-TETRACHLOROETHANE	ND	50	
1,3-DICHLOROBENZENE	ND	50	TETRACHLOROETHENE	ND	50	
1,4-DICHLOROBENZENE	ND	50	TOLUENE	ND	50	
t-1,4-DICHLORO-2-BUTENE	ND	50	1,2,3-TRICHLOROBENZENE	ND	50	
DICHLORODIFLUOROMETHANE	ND	250	1,2,4-TRICHLOROBENZENE	ND	250	
1,1-DICHLOROETHANE	ND	50	1,1,1-TRICHLOROETHANE	ND	50	
1,2-DICHLOROETHANE	ND	50	1,1,2-TRICHLOROETHANE	ND	50	
1,1-DICHLOROETHENE	ND	50	TRICHLOROETHENE	330	50	
cis-1,2-DICHLOROETHENE	ND	50	TRICHLORFLUOROMETHANE	ND	100	
trans-1,2-DICHLOROETHENE	ND	50	1,2,3-TRICHLOROPROPANE	ND	100	
1,2-DICHLOROPROPANE	ND	50	1,2,4-TRIMETHYLBENZENE	ND	50	
1,3-DICHLOROPROPANE	ND	50	1,3,5-TRIMETHYLBENZENE	ND	50	
2,2-DICHLOROPROPANE	ND	50	VINYL CHLORIDE	ND	40	
1,1-DICHLOROPROPENE	ND	50	XYLENE (TOTAL)	ND	150	

ND = NOT DETECTED, RESULT IS <LOD.
 LOD = LIMIT OF DETECTION.



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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3096
 LOCATION: 1470 DERBY ROAD
 SAMPLED BY: BRAD JEFFERS/MET
 SAMPLE MATRIX: SOIL

GTA PROJECT NO: 081619-4
 GTA SAMPLE NO: 6
 DATE SAMPLED: 8/14/2019
 TIME SAMPLED:
 DATE RECEIVED: 8/16/2019
 TIME RECEIVED: 11:15 AM

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

SAMPLE ID: B-1 @ 8-10'

EPA 8260B VOLATILE ORGANICS

Units= ug/Kg (PPB)

Analyst= MR

Date

8/14/2019

Date Completed= 8/21/2019

Prep

EPA 5035A

Analyte	Concentration	LOD	Analyte	Concentration	LOD
ACETONE	ND	1,000	cis-1,3-DICHLOROPROPENE	ND	50
ALLYL CHLORIDE	ND	250	trans-1,3-DICHLOROPROPENE	ND	50
BENZENE	ND	50	DIETHYL ETHER	ND	200
BROMOBENZENE	ND	100	ETHYLBENZENE	ND	50
BROMOCHLOROMETHANE	ND	100	ETHYL METHACRYLATE	ND	250
BROMODICHLOROMETHANE	ND	50	HEXACHLOROBUTADIENE	ND	50
BROMOFORM	ND	100	HEXACHLOROETHANE	ND	250
BROMOMETHANE	ND	200	2-HEXANONE	ND	2,500
n-BUTYLBENZENE	ND	50	IDOMETHANE	ND	250
s-BUTYLBENZENE	ND	50	ISOPROPYLBENZENE	ND	50
t-BUTYLBENZENE	ND	50	ISOPROPYLTOLUENE	ND	50
CARBON DISULFIDE	ND	250	METHYL ACRYLATE	ND	250
CARBON TETRACHLORIDE	ND	50	METHYL ETHYL KETONE	ND	750
CHLOROBENZENE	ND	50	METHYL-t-BUTYL ETHER	ND	250
1-CHLOROBUTANE	ND	100	METHYLENE CHLORIDE	ND	100
CHLOROFORM	ND	50	METHYL METHACRYLATE	ND	250
CHLOROETHANE	ND	250	MIBK	ND	2,500
CHLOROMETHANE	ND	250	2-METHYLNAPHTHALENE	ND	250
2-CHLOROTOLUENE	ND	50	NAPHTHALENE	ND	250
4-CHLOROTOLUENE	ND	50	PENTACHLOROETHANE	ND	250
DIBROMOCHLOROMETHANE	ND	100	n-PROPYLBENZENE	ND	50
DIBROMOMETHANE	ND	250	STYRENE	ND	50
1,2-DIBROMOETHANE	ND	20	1,1,1,2-TETRACHLOROETHANE	ND	100
1,2-DICHLOROBENZENE	ND	50	1,1,2,2-TETRACHLOROETHANE	ND	50
1,3-DICHLOROBENZENE	ND	50	TETRACHLOROETHENE	ND	50
1,4-DICHLOROBENZENE	ND	50	TOLUENE	ND	50
t-1,4-DICHLORO-2-BUTENE	ND	50	1,2,3-TRICHLOROBENZENE	ND	50
DICHLORODIFLUOROMETHANE	ND	250	1,2,4-TRICHLOROBENZENE	ND	250
1,1-DICHLOROETHANE	ND	50	1,1,1-TRICHLOROETHANE	ND	50
1,2-DICHLOROETHANE	ND	50	1,1,2-TRICHLOROETHANE	ND	50
1,1-DICHLOROETHENE	ND	50	TRICHLOROETHENE	ND	50
cis-1,2-DICHLOROETHENE	ND	50	TRICHLORFLUOROMETHANE	ND	100
trans-1,2-DICHLOROETHENE	ND	50	1,2,3-TRICHLOROPROPANE	ND	100
1,2-DICHLOROPROPANE	ND	50	1,2,4-TRIMETHYLBENZENE	ND	50
1,3-DICHLOROPROPANE	ND	50	1,3,5-TRIMETHYLBENZENE	ND	50
2,2-DICHLOROPROPANE	ND	50	VINYL CHLORIDE	ND	40
1,1-DICHLOROPROPENE	ND	50	XYLENE (TOTAL)	ND	150

ND = NOT DETECTED, RESULT IS <LOD.

LOD = LIMIT OF DETECTION.



INDEPENDENT TESTING LAB

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

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FAX: 231-929-0894

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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3096
 LOCATION: 1470 DERBY ROAD
 SAMPLED BY: BRAD JEFFERS/MET
 SAMPLE MATRIX: SOIL

GTA PROJECT NO: 081619-4
 GTA SAMPLE NO: 8
 DATE SAMPLED: 8/14/2019
 TIME SAMPLED:
 DATE RECEIVED: 8/16/2019
 TIME RECEIVED: 11:15 AM

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

SAMPLE ID: B-2 @ 8-10'

EPA 8260B VOLATILE ORGANICS

Units= ug/Kg (PPB)

Analyst= MR

Date

8/14/2019

Date Completed= 8/21/2019

Prep

EPA 5035A

Analyte	Concentration	LOD	Analyte	Concentration	LOD
ACETONE	ND	1,000	cis-1,3-DICHLOROPROPENE	ND	50
ALLYL CHLORIDE	ND	250	trans-1,3-DICHLOROPROPENE	ND	50
BENZENE	ND	50	DIETHYL ETHER	ND	200
BROMOBENZENE	ND	100	ETHYLBENZENE	ND	50
BROMOCHLOROMETHANE	ND	100	ETHYL METHACRYLATE	ND	250
BROMODICHLOROMETHANE	ND	50	HEXACHLOROBUTADIENE	ND	50
BROMOFORM	ND	100	HEXACHLOROETHANE	ND	250
BROMOMETHANE	ND	200	2-HEXANONE	ND	2,500
n-BUTYLBENZENE	ND	50	IDOMETHANE	ND	250
s-BUTYLBENZENE	ND	50	ISOPROPYLBENZENE	ND	50
t-BUTYLBENZENE	ND	50	ISOPROPYLTOLUENE	ND	50
CARBON DISULFIDE	ND	250	METHYL ACRYLATE	ND	250
CARBON TETRACHLORIDE	ND	50	METHYL ETHYL KETONE	ND	750
CHLOROBENZENE	ND	50	METHYL-t-BUTYL ETHER	ND	250
1-CHLOROBUTANE	ND	100	METHYLENE CHLORIDE	ND	100
CHLOROFORM	ND	50	METHYL METHACRYLATE	ND	250
CHLOROETHANE	ND	250	MIBK	ND	2,500
CHLOROMETHANE	ND	250	2-METHYLNAPHTHALENE	ND	250
2-CHLOROTOLUENE	ND	50	NAPHTHALENE	ND	250
4-CHLOROTOLUENE	ND	50	PENTACHLOROETHANE	ND	250
DIBROMOCHLOROMETHANE	ND	100	n-PROPYLBENZENE	ND	50
DIBROMOMETHANE	ND	250	STYRENE	ND	50
1,2-DIBROMOETHANE	ND	20	1,1,1,2-TETRACHLOROETHANE	ND	100
1,2-DICHLOROBENZENE	ND	50	1,1,2,2-TETRACHLOROETHANE	ND	50
1,3-DICHLOROBENZENE	ND	50	TETRACHLOROETHENE	ND	50
1,4-DICHLOROBENZENE	ND	50	TOLUENE	ND	50
t-1,4-DICHLORO-2-BUTENE	ND	50	1,2,3-TRICHLOROBENZENE	ND	50
DICHLORODIFLUOROMETHANE	ND	250	1,2,4-TRICHLOROBENZENE	ND	250
1,1-DICHLOROETHANE	ND	50	1,1,1-TRICHLOROETHANE	ND	50
1,2-DICHLOROETHANE	ND	50	1,1,2-TRICHLOROETHANE	ND	50
1,1-DICHLOROETHENE	ND	50	TRICHLOROETHENE	ND	50
cis-1,2-DICHLOROETHENE	ND	50	TRICHLORFLUOROMETHANE	ND	100
trans-1,2-DICHLOROETHENE	ND	50	1,2,3-TRICHLOROPROPANE	ND	100
1,2-DICHLOROPROPANE	ND	50	1,2,4-TRIMETHYLBENZENE	ND	50
1,3-DICHLOROPROPANE	ND	50	1,3,5-TRIMETHYLBENZENE	ND	50
2,2-DICHLOROPROPANE	ND	50	VINYL CHLORIDE	ND	40
1,1-DICHLOROPROPENE	ND	50	XYLENE (TOTAL)	ND	150

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LOD = LIMIT OF DETECTION.



INDEPENDENT TESTING LAB

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PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M19-3096
LOCATION: 1470 DERBY ROAD

GTA PROJECT NO: 081619-4
GTA SAMPLE NO: 11

DATE SAMPLED: 8/14/2019
TIME SAMPLED:

DATE RECEIVED: 8/16/2019
TIME RECEIVED: 11:15 AM

SAMPLED BY: BRAD JEFFERS/MET

SAMPLE MATRIX: SOIL

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

SAMPLE ID: B-5 @ 10-12'

EPA 8260B VOLATILE ORGANICS

Units= ug/Kg (PPB)

Analyst= MR

Date

8/14/2019

Date Completed= 8/21/2019

Prep

EPA 5035A

Analyte	Concentration	LOD	Analyte	Concentration	LOD
ACETONE	ND	1,000	cis-1,3-DICHLOROPROPENE	ND	50
ALLYL CHLORIDE	ND	250	trans-1,3-DICHLOROPROPENE	ND	50
BENZENE	ND	50	DIETHYL ETHER	ND	200
BROMOBENZENE	ND	100	ETHYLBENZENE	ND	50
BROMOCHLOROMETHANE	ND	100	ETHYL METHACRYLATE	ND	250
BROMODICHLOROMETHANE	ND	50	HEXACHLOROBUTADIENE	ND	50
BROMOFORM	ND	100	HEXACHLOROETHANE	ND	250
BROMOMETHANE	ND	200	2-HEXANONE	ND	2,500
n-BUTYLBENZENE	ND	50	IDOMETHANE	ND	250
s-BUTYLBENZENE	ND	50	ISOPROPYLBENZENE	ND	50
t-BUTYLBENZENE	ND	50	ISOPROPYLTOLUENE	ND	50
CARBON DISULFIDE	ND	250	METHYL ACRYLATE	ND	250
CARBON TETRACHLORIDE	ND	50	METHYL ETHYL KETONE	ND	750
CHLOROBENZENE	ND	50	METHYL-t-BUTYL ETHER	ND	250
1-CHLOROBUTANE	ND	100	METHYLENE CHLORIDE	ND	100
CHLOROFORM	ND	50	METHYL METHACRYLATE	ND	250
CHLOROETHANE	ND	250	MIBK	ND	2,500
CHLOROMETHANE	ND	250	2-METHYLNAPHTHALENE	ND	250
2-CHLOROTOLUENE	ND	50	NAPHTHALENE	ND	250
4-CHLOROTOLUENE	ND	50	PENTACHLOROETHANE	ND	250
DIBROMOCHLOROMETHANE	ND	100	n-PROPYLBENZENE	ND	50
DIBROMOMETHANE	ND	250	STYRENE	ND	50
1,2-DIBROMOETHANE	ND	20	1,1,1,2-TETRACHLOROETHANE	ND	100
1,2-DICHLOROBENZENE	ND	50	1,1,2,2-TETRACHLOROETHANE	ND	50
1,3-DICHLOROBENZENE	ND	50	TETRACHLOROETHENE	ND	50
1,4-DICHLOROBENZENE	ND	50	TOLUENE	ND	50
t-1,4-DICHLORO-2-BUTENE	ND	50	1,2,3-TRICHLOROBENZENE	ND	50
DICHLORODIFLUOROMETHANE	ND	250	1,2,4-TRICHLOROBENZENE	ND	250
1,1-DICHLOROETHANE	ND	50	1,1,1-TRICHLOROETHANE	ND	50
1,2-DICHLOROETHANE	ND	50	1,1,2-TRICHLOROETHANE	ND	50
1,1-DICHLOROETHENE	ND	50	TRICHLOROETHENE	ND	50
cis-1,2-DICHLOROETHENE	ND	50	TRICHLORFLUOROMETHANE	ND	100
trans-1,2-DICHLOROETHENE	ND	50	1,2,3-TRICHLOROPROPANE	ND	100
1,2-DICHLOROPROPANE	ND	50	1,2,4-TRIMETHYLBENZENE	ND	50
1,3-DICHLOROPROPANE	ND	50	1,3,5-TRIMETHYLBENZENE	ND	50
2,2-DICHLOROPROPANE	ND	50	VINYL CHLORIDE	ND	40
1,1-DICHLOROPROPENE	ND	50	XYLENE (TOTAL)	ND	150

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INDEPENDENT TESTING LAB

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COMPANY:	MACKINAC ENVIRONMENTAL	GTA PROJECT NO:	081619-4
PROJECT NO:	M19-3096	GTA SAMPLE NO:	1
LOCATION:	1470 DERBY ROAD	DATE SAMPLED:	8/14/2019
		TIME SAMPLED:	
SAMPLED BY:	MI BRAD JEFFERS/MET	DATE RECEIVED:	8/16/2019
		TIME RECEIVED:	11:15 AM
SAMPLE MATRIX:	WATER		
SAMPLE ID:	B-3		

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	5.0	ug/L (PPB)	KC/TR	8/21/2019	8/21/2019	EPA 3511
Acenaphthylene	ND	5.0					
Anthracene	ND	5.0					
Benzo(a)anthracene	ND	1.0					
Benzo(b)fluoranthene	ND	1.0					
Benzo(k)fluoranthene	ND	1.0					
Benzo(a)pyrene	ND	1.0					
Benzo(ghi)perylene	ND	2.0					
2-Chloronaphthalene	ND	5.0					
Chrysene	ND	1.0					
Dibenz(ah)anthracene	ND	2.0					
Fluoranthene	ND	1.0					
Fluorene	ND	5.0					
Indeno(123-cd)pyrene	ND	2.0					
Phenanthrene	ND	2.0					
Pyrene	ND	5.0					

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

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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3096
 LOCATION: 1470 DERBY ROAD

GTA PROJECT NO: 081619-4
 GTA SAMPLE NO: 2

DATE SAMPLED: 8/14/2019
 TIME SAMPLED:

SAMPLED BY: MI
 BRAD JEFFERS/MET

DATE RECEIVED: 8/16/2019
 TIME RECEIVED: 11:15 AM

SAMPLE MATRIX: WATER
 SAMPLE ID: B-4

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	5.0	ug/L (PPB)	KC/TR	8/21/2019	8/21/2019	EPA 3511
Acenaphthylene	ND	5.0					
Anthracene	ND	5.0					
Benzo(a)anthracene	ND	1.0					
Benzo(b)fluoranthene	ND	1.0					
Benzo(k)fluoranthene	ND	1.0					
Benzo(a)pyrene	ND	1.0					
Benzo(ghi)perylene	ND	2.0					
2-Chloronaphthalene	ND	5.0					
Chrysene	ND	1.0					
Dibenz(ah)anthracene	ND	2.0					
Fluoranthene	ND	1.0					
Fluorene	ND	5.0					
Indeno(123-cd)pyrene	ND	2.0					
Phenanthrene	ND	2.0					
Pyrene	ND	5.0					

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INDEPENDENT TESTING LAB

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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3096
 LOCATION: 1470 DERBY ROAD

GTA PROJECT NO: 081619-4
 GTA SAMPLE NO: 3

DATE SAMPLED: 8/14/2019
 TIME SAMPLED:

SAMPLED BY: MI
 BRAD JEFFERS/MET

DATE RECEIVED: 8/16/2019
 TIME RECEIVED: 11:15 AM

SAMPLE MATRIX: WATER
 SAMPLE ID: B-7

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	5.0	ug/L (PPB)	KC/TR	8/21/2019	8/21/2019	EPA 3511
Acenaphthylene	ND	5.0					
Anthracene	ND	5.0					
Benzo(a)anthracene	ND	1.0					
Benzo(b)fluoranthene	ND	1.0					
Benzo(k)fluoranthene	ND	1.0					
Benzo(a)pyrene	ND	1.0					
Benzo(ghi)perylene	ND	2.0					
2-Chloronaphthalene	ND	5.0					
Chrysene	ND	1.0					
Dibenz(ah)anthracene	ND	2.0					
Fluoranthene	ND	1.0					
Fluorene	ND	5.0					
Indeno(123-cd)pyrene	ND	2.0					
Phenanthrene	ND	2.0					
Pyrene	ND	5.0					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3096
 LOCATION: 1470 DERBY ROAD
 MI
 SAMPLED BY: BRAD JEFFERS/MET
 SAMPLE MATRIX: SOIL
 SAMPLE ID: B-1 @ 5-6'

GTA PROJECT NO: 081619-4
 GTA SAMPLE NO: 5
 DATE SAMPLED: 8/14/2019
 TIME SAMPLED:
 DATE RECEIVED: 8/16/2019
 TIME RECEIVED: 11:15 AM

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	330	ug/Kg (PPB)	KC/TR	8/22/2019	8/22/2019	EPA 3550B
Acenaphthylene	ND	330					
Anthracene	ND	330					
Benzo(a)anthracene	ND	330					
Benzo(b)fluoranthene	ND	330					
Benzo(k)fluoranthene	ND	330					
Benzo(a)pyrene	ND	330					
Benzo(ghi)perylene	ND	330					
2-Chloronaphthalene	ND	330					
Chrysene	ND	330					
Dibenz(ah)anthracene	ND	330					
Fluoranthene	ND	330					
Fluorene	ND	330					
Indeno(123-cd)pyrene	ND	330					
Phenanthrene	ND	330					
Pyrene	ND	330					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3096
 LOCATION: 1470 DERBY ROAD
 MI
 SAMPLED BY: BRAD JEFFERS/MET
 SAMPLE MATRIX: SOIL
 SAMPLE ID: B-1 @ 8-10'

GTA PROJECT NO: 081619-4
 GTA SAMPLE NO: 6
 DATE SAMPLED: 8/14/2019
 TIME SAMPLED:
 DATE RECEIVED: 8/16/2019
 TIME RECEIVED: 11:15 AM

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	330	ug/Kg (PPB)	KC/TR	8/22/2019	8/22/2019	EPA 3550B
Acenaphthylene	ND	330					
Anthracene	ND	330					
Benzo(a)anthracene	ND	330					
Benzo(b)fluoranthene	ND	330					
Benzo(k)fluoranthene	ND	330					
Benzo(a)pyrene	ND	330					
Benzo(ghi)perylene	ND	330					
2-Chloronaphthalene	ND	330					
Chrysene	ND	330					
Dibenz(ah)anthracene	ND	330					
Fluoranthene	ND	330					
Fluorene	ND	330					
Indeno(123-cd)pyrene	ND	330					
Phenanthrene	ND	330					
Pyrene	ND	330					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
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COMPANY: MACKINAC ENVIRONMENTAL
PROJECT NO: M19-3096
LOCATION: 1470 DERBY ROAD
MI
SAMPLED BY: BRAD JEFFERS/MET
SAMPLE MATRIX: SOIL
SAMPLE ID: B-2 @ 8-10'

GTA PROJECT NO: 081619-4
GTA SAMPLE NO: 8
DATE SAMPLED: 8/14/2019
TIME SAMPLED:
DATE RECEIVED: 8/16/2019
TIME RECEIVED: 11:15 AM

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	330	ug/Kg (PPB)	KC/TR	8/22/2019	8/22/2019	EPA 3550B
Acenaphthylene	ND	330					
Anthracene	ND	330					
Benzo(a)anthracene	ND	330					
Benzo(b)fluoranthene	ND	330					
Benzo(k)fluoranthene	ND	330					
Benzo(a)pyrene	ND	330					
Benzo(ghi)perylene	ND	330					
2-Chloronaphthalene	ND	330					
Chrysene	ND	330					
Dibenz(ah)anthracene	ND	330					
Fluoranthene	ND	330					
Fluorene	ND	330					
Indeno(123-cd)pyrene	ND	330					
Phenanthrene	ND	330					
Pyrene	ND	330					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3096
 LOCATION: 1470 DERBY ROAD

GTA PROJECT NO: 081619-4
 GTA SAMPLE NO: 11

DATE SAMPLED: 8/14/2019
 TIME SAMPLED:

SAMPLED BY: MI
 BRAD JEFFERS/MET

DATE RECEIVED: 8/16/2019
 TIME RECEIVED: 11:15 AM

SAMPLE MATRIX: SOIL
 SAMPLE ID: B-5 @ 10-12'

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	330	ug/Kg (PPB)	KC/TR	8/22/2019	8/22/2019	EPA 3550B
Acenaphthylene	ND	330					
Anthracene	ND	330					
Benzo(a)anthracene	ND	330					
Benzo(b)fluoranthene	ND	330					
Benzo(k)fluoranthene	ND	330					
Benzo(a)pyrene	ND	330					
Benzo(ghi)perylene	ND	330					
2-Chloronaphthalene	ND	330					
Chrysene	ND	330					
Dibenz(ah)anthracene	ND	330					
Fluoranthene	ND	330					
Fluorene	ND	330					
Indeno(123-cd)pyrene	ND	330					
Phenanthrene	ND	330					
Pyrene	ND	330					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
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COMPANY:	MACKINAC ENVIRONMENTAL	GTA PROJECT NO:	081619-4
PROJECT NO:	M19-3096	GTA SAMPLE NO:	1
LOCATION:	1470 DERBY ROAD	DATE SAMPLED:	8/14/2019
		TIME SAMPLED:	
		DATE RECEIVED:	8/16/2019
		TIME RECEIVED:	11:15 AM
SAMPLED BY:	MI BRAD JEFFERS/MET	SAMPLE MATRIX:	WATER
SAMPLE ID:	B-3		

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
ARSENIC DISS EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
BARIUM DISS EPA 6020A	0.015	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
CADMIUM DISS EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
CHROMIUM DISS EPA 6020A	0.0058	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
LEAD DISS EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
MERCURY DISS EPA 7470A	ND	0.00020	mg/L (PPM)	MR	9/3/2019	EPA 7470
SELENIUM DISS EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
SILVER DISS EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

DISS = DISSOLVED



INDEPENDENT TESTING LAB

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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3096
 LOCATION: 1470 DERBY ROAD
 MI
 SAMPLED BY: BRAD JEFFERS/MET
 SAMPLE ID: B-4

GTA PROJECT NO: 081619-4
 GTA SAMPLE NO: 2
 DATE SAMPLED: 8/14/2019
 TIME SAMPLED:
 DATE RECEIVED: 8/16/2019
 TIME RECEIVED: 11:15 AM
 SAMPLE MATRIX: WATER

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
ARSENIC DISS EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
BARIUM DISS EPA 6020A	0.029	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
CADMIUM DISS EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
CHROMIUM DISS EPA 6020A	0.0046	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
LEAD DISS EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
MERCURY DISS EPA 7470A	ND	0.00020	mg/L (PPM)	MR	9/3/2019	EPA 7470
SELENIUM DISS EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
SILVER DISS EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

DISS = DISSOLVED



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COMPANY:	MACKINAC ENVIRONMENTAL	GTA PROJECT NO:	081619-4
PROJECT NO:	M19-3096	GTA SAMPLE NO:	3
LOCATION:	1470 DERBY ROAD	DATE SAMPLED:	8/14/2019
		TIME SAMPLED:	
		DATE RECEIVED:	8/16/2019
		TIME RECEIVED:	11:15 AM
SAMPLED BY:	MI BRAD JEFFERS/MET	SAMPLE MATRIX:	WATER
SAMPLE ID:	B-7		

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
ARSENIC DISS EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
BARIUM DISS EPA 6020A	0.0075	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
CADMIUM DISS EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
CHROMIUM DISS EPA 6020A	0.0046	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
LEAD DISS EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
MERCURY DISS EPA 7470A	ND	0.00020	mg/L (PPM)	MR	9/3/2019	EPA 7470
SELENIUM DISS EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A
SILVER DISS EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/28/2019	EPA 3005A

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

DISS = DISSOLVED



INDEPENDENT TESTING LAB

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3096
 LOCATION: 1470 DERBY ROAD
 MI
 SAMPLED BY: BRAD JEFFERS/MET
 SAMPLE ID: B-1 @ 0-1'

GTA PROJECT NO: 081619-4
 GTA SAMPLE NO: 4
 DATE SAMPLED: 8/14/2019
 TIME SAMPLED:
 DATE RECEIVED: 8/16/2019
 TIME RECEIVED: 11:15 AM
 SAMPLE MATRIX: SOIL

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
ARSENIC TOTAL EPA 6020A	0.67	0.29	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
BARIUM TOTAL EPA 6020A	23	0.29	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
CADMIUM TOTAL EPA 6020A	ND	0.29	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
CHROMIUM TOTAL EPA 6020A	3.4	0.29	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
LEAD TOTAL EPA 6020A	24	0.29	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
MERCURY TOTAL EPA 7471B	0.024	0.013	mg/Kg (PPM)	MR	9/3/2019	EPA 7471
SELENIUM TOTAL EPA 6020A	0.33	0.29	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
SILVER TOTAL EPA 6020A	ND	0.29	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B

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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3096
 LOCATION: 1470 DERBY ROAD
 MI
 SAMPLED BY: BRAD JEFFERS/MET
 SAMPLE ID: B-2 @ 0-1'

GTA PROJECT NO: 081619-4
 GTA SAMPLE NO: 7
 DATE SAMPLED: 8/14/2019
 TIME SAMPLED:
 DATE RECEIVED: 8/16/2019
 TIME RECEIVED: 11:15 AM
 SAMPLE MATRIX: SOIL

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
ARSENIC TOTAL EPA 6020A	0.64	0.34	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
BARIUM TOTAL EPA 6020A	22	0.34	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
CADMIUM TOTAL EPA 6020A	ND	0.34	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
CHROMIUM TOTAL EPA 6020A	4.4	0.34	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
LEAD TOTAL EPA 6020A	8.6	0.34	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
MERCURY TOTAL EPA 7471B	ND	0.015	mg/Kg (PPM)	MR	9/3/2019	EPA 7471
SELENIUM TOTAL EPA 6020A	ND	0.34	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
SILVER TOTAL EPA 6020A	ND	0.34	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B

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COMPANY:	MACKINAC ENVIRONMENTAL	GTA PROJECT NO:	081619-4
PROJECT NO:	M19-3096	GTA SAMPLE NO:	9
LOCATION:	1470 DERBY ROAD	DATE SAMPLED:	8/14/2019
		TIME SAMPLED:	
		DATE RECEIVED:	8/16/2019
		TIME RECEIVED:	11:15 AM
SAMPLED BY:	MI BRAD JEFFERS/MET	SAMPLE MATRIX:	SOIL
SAMPLE ID:	B-3 @ 0-1'		

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
ARSENIC TOTAL EPA 6020A	0.49	0.30	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
BARIUM TOTAL EPA 6020A	20	0.30	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
CADMIUM TOTAL EPA 6020A	ND	0.30	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
CHROMIUM TOTAL EPA 6020A	4.6	0.30	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
LEAD TOTAL EPA 6020A	7.6	0.30	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
MERCURY TOTAL EPA 7471B	ND	0.013	mg/Kg (PPM)	MR	9/3/2019	EPA 7471
SELENIUM TOTAL EPA 6020A	ND	0.30	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
SILVER TOTAL EPA 6020A	ND	0.30	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B

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COMPANY: MACKINAC ENVIRONMENTAL
PROJECT NO: M19-3096
LOCATION: 1470 DERBY ROAD
MI
SAMPLED BY: BRAD JEFFERS/MET
SAMPLE ID: B-5 @ 0-1'

GTA PROJECT NO: 081619-4
GTA SAMPLE NO: 10
DATE SAMPLED: 8/14/2019
TIME SAMPLED:
DATE RECEIVED: 8/16/2019
TIME RECEIVED: 11:15 AM
SAMPLE MATRIX: SOIL

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
ARSENIC TOTAL EPA 6020A	0.68	0.33	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
BARIUM TOTAL EPA 6020A	30	0.33	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
CADMIUM TOTAL EPA 6020A	ND	0.33	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
CHROMIUM TOTAL EPA 6020A	2.8	0.33	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
LEAD TOTAL EPA 6020A	28	0.33	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
MERCURY TOTAL EPA 7471B	0.017	0.014	mg/Kg (PPM)	MR	9/3/2019	EPA 7471
SELENIUM TOTAL EPA 6020A	ND	0.33	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B
SILVER TOTAL EPA 6020A	ND	0.33	mg/Kg (PPM)	MR/TR	8/28/2019	EPA 3050B

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FAX: 231-929-0894

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COMPANY: MACKINAC ENVIRONMENTAL

NAME:
PROJECT NO: M19-3096

LOCATION: 1470 DERBY ROAD

MI

GTA PROJECT NO: 081619-4
SAMPLED BY: BRAD JEFFERS/MET

DATE SAMPLED: 8/14/2019
TIME SAMPLED:

SAMPLE MATRIX: SOIL

DATE RECEIVED: 8/16/2019
TIME RECEIVED: 11:15 AM

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: B-1 @ 0-1' % MOISTURE EPA 3550C	2.4	0.050	% OF	AS	8/16/2019
SAMPLE ID: B-1 @ 5-6' % MOISTURE EPA 3550C	8.9	0.050	% OF	AS	8/16/2019
SAMPLE ID: B-1 @ 8-10' % MOISTURE EPA 3550C	2.8	0.050	% OF	AS	8/16/2019
SAMPLE ID: B-2 @ 0-1' % MOISTURE EPA 3550C	3.3	0.050	% OF	AS	8/16/2019
SAMPLE ID: B-2 @ 8-10' % MOISTURE EPA 3550C	3.7	0.050	% OF	AS	8/16/2019
SAMPLE ID: B-3 @ 0-1' % MOISTURE EPA 3550C	2.8	0.050	% OF	AS	8/16/2019
SAMPLE ID: B-5 @ 0-1' % MOISTURE EPA 3550C	1.8	0.050	% OF	AS	8/16/2019
SAMPLE ID: B-5 @ 10-12' % MOISTURE EPA 3550C	2.4	0.050	% OF	AS	8/16/2019

CHAIN OF CUSTODY

PROJECT NUMBER <i>M19-3096</i>	SITE NAME/ADDRESS <i>1470 Derby Road</i>	COMPANY/NAME
SAMPLED BY <i>Brad Jeffers</i>	COMPANY <i>MET</i>	GTA PROJECT # <i>081619-4</i>

SAMPLE INFORMATION

#	SAMPLE ID	DATE SAMPLED	TIME	MATRIX	ANALYSIS
1	B-3	8/14/19		GW	VOC, PNA, RCRA 8 metals
2	B-4			GW	"
3	B-7			GW	"
4	B-1 e 0-1'			soil	RCRA 8 metals
5	B-1 e 5-6'				VOC, PNA
6	B-1 e 8-10'				VOC, PNA
7	B-2 e 0-1'				RCRA 8 metals
8	B-2 e 8-10'				VOC, PNA
9	B-3 e 0-1'				RCRA 8 metals
10	B-5 e 0-1'				RCRA 8 metals
11	B-5 e 10-12'				VOC, PNA
					-Metals sample field filtered
					-Samples packed on ice.

BILL TO: <i>MET</i> <i>PO Box 485</i> <i>St. Ignace, MT 49781</i>	REPORT TO: <i>metesault.com</i>
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RELEASED BY <i>Brad Jeffers</i>	DATE/TIME <i>8/15/19 e 1300</i>	RECEIVED BY <i>K. M.</i>	DATE/TIME <i>8/16/19 11:15am</i>
		<i>per G. York on ice</i>	

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