



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: M19-3117
GTA ProjNo: 101619-4

Site Addr: BAYMILLS COMMUNITY (BMIC)

Sampled By: ER/MJR - MET
Date Rec: 10/16/2019
Time Rec: 12:05 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	MW-1	10/9/2019	10:45 AM	SOIL
2	MW-2	10/9/2019	11:30 AM	SOIL
3	MW-3	10/9/2019	11:39 AM	SOIL
4	MW-4 @ 2'	10/9/2019	10:50 AM	SOIL
5	MW-5	10/9/2019	12:15 PM	SOIL
6	SB-1	10/9/2019	11:48 AM	SOIL
7	SB-2 @ 5	10/9/2019	12:01 PM	SOIL
8	SB-2 @ 8"	10/9/2019	12:02 PM	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: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)
 SAMPLED BY: ER/MJR - MET
 SAMPLE MATRIX: SOIL

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 1
 DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 10:45 AM
 DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

SAMPLE ID: MW-1

EPA 8260B VOLATILE ORGANICS

<u>Units</u> = ug/Kg (PPB)	<u>Analyst</u> = MR	<u>Date</u>	10/9/2019	<u>Date Completed</u> = 10/19/2019	<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	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.
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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)
 SAMPLED BY: ER/MJR - MET
 SAMPLE MATRIX: SOIL

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 2
 DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 11:30 AM
 DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

SAMPLE ID: MW-2

EPA 8260B VOLATILE ORGANICS

<u>Units</u> = ug/Kg (PPB)	<u>Analyst</u> = MR	<u>Date</u>	10/9/2019	<u>Date Completed</u> = 10/19/2019	<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	HEXACHLOROBTADIENE	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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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)
 SAMPLED BY: ER/MJR - MET
 SAMPLE MATRIX: SOIL

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 3
 DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 11:39 AM
 DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

SAMPLE ID: MW-3

EPA 8260B VOLATILE ORGANICS

<u>Units=</u> ug/Kg (PPB)	<u>Analyst=</u> MR	<u>Date</u>	10/9/2019	<u>Date Completed=</u> 10/19/2019	<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	HEXACHLOROBTADIENE	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

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)
 SAMPLED BY: ER/MJR - MET
 SAMPLE MATRIX: SOIL

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 4
 DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 10:50 AM
 DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

SAMPLE ID: MW-4 @ 2'

EPA 8260B VOLATILE ORGANICS

Units= ug/Kg (PPB) Analyst= MR

Date 10/9/2019

Date Completed= 10/19/2019

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	HEXACHLOROBTADIENE	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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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)
 SAMPLED BY: ER/MJR - MET
 SAMPLE MATRIX: SOIL

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 5
 DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 12:15 PM
 DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

SAMPLE ID: MW-5

EPA 8260B VOLATILE ORGANICS

<u>Units=</u> ug/Kg (PPB)	<u>Analyst=</u> MR	<u>Date</u>	10/9/2019	<u>Date Completed=</u> 10/19/2019	<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	HEXACHLOROBTADIENE	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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FAX: 231-929-0894

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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)
 SAMPLED BY: ER/MJR - MET
 SAMPLE MATRIX: SOIL

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 6
 DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 11:48 AM
 DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

SAMPLE ID: SB-1

EPA 8260B VOLATILE ORGANICS

<u>Units=</u> ug/Kg (PPB)	<u>Analyst=</u> MR	<u>Date</u>	10/9/2019	<u>Date Completed=</u> 10/19/2019	<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	HEXACHLOROBTADIENE	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

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)
 SAMPLED BY: ER/MJR - MET
 SAMPLE MATRIX: SOIL

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 7
 DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 12:01 PM
 DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

SAMPLE ID: SB-2 @ 5

EPA 8260B VOLATILE ORGANICS

<u>Units=</u> ug/Kg (PPB)	<u>Analyst=</u> MR	<u>Date</u>	10/9/2019	<u>Date Completed=</u> 10/19/2019	<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	HEXACHLOROBTADIENE	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

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)
 SAMPLED BY: ER/MJR - MET
 SAMPLE MATRIX: SOIL

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 8
 DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 12:02 PM
 DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

SAMPLE ID: SB-2 @ 8"

EPA 8260B VOLATILE ORGANICS

<u>Units</u> = ug/Kg (PPB)	<u>Analyst</u> = MR	<u>Date</u>	10/9/2019	<u>Date Completed</u> = 10/19/2019	<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	HEXACHLOROBTADIENE	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

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PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 1

DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 10:45 AM

SAMPLED BY: MI
 ER/MJR - MET

DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM

SAMPLE MATRIX: SOIL
 SAMPLE ID: MW-1

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	330	ug/Kg (PPB)	KC/TR	10/21/2019	10/22/2019	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.
 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: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 2

DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 11:30 AM

SAMPLED BY: MI
 ER/MJR - MET

DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM

SAMPLE MATRIX: SOIL
 SAMPLE ID: MW-2

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	330	ug/Kg (PPB)	KC/TR	10/21/2019	10/22/2019	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.
 ND = NOT DETECTED, RESULT IS <LOD.
 LOD = LIMIT OF DETECTION.

COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 3

DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 11:39 AM

SAMPLED BY: MI
 ER/MJR - MET

DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM

SAMPLE MATRIX: SOIL
 SAMPLE ID: MW-3

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	330	ug/Kg (PPB)	KC/TR	10/21/2019	10/22/2019	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.
 ND = NOT DETECTED, RESULT IS <LOD.
 LOD = LIMIT OF DETECTION.

COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 4

DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 10:50 AM

SAMPLED BY: MI
 ER/MJR - MET

DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM

SAMPLE MATRIX: SOIL
 SAMPLE ID: MW-4 @ 2'

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	330	ug/Kg (PPB)	KC/TR	10/21/2019	10/22/2019	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.
 ND = NOT DETECTED, RESULT IS <LOD.
 LOD = LIMIT OF DETECTION.

COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 5

DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 12:15 PM

SAMPLED BY: MI
 ER/MJR - MET

DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM

SAMPLE MATRIX: SOIL
 SAMPLE ID: MW-5

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	330	ug/Kg (PPB)	KC/TR	10/21/2019	10/22/2019	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.
 ND = NOT DETECTED, RESULT IS <LOD.
 LOD = LIMIT OF DETECTION.

COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 6

DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 11:48 AM

SAMPLED BY: MI
 ER/MJR - MET

DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM

SAMPLE MATRIX: SOIL
 SAMPLE ID: SB-1

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	330	ug/Kg (PPB)	KC/TR	10/21/2019	10/22/2019	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.
 ND = NOT DETECTED, RESULT IS <LOD.
 LOD = LIMIT OF DETECTION.

COMPANY: MACKINAC ENVIRONMENTAL
PROJECT NO: M19-3117
LOCATION: BAYMILLS COMMUNITY (BMIC)

GTA PROJECT NO: 101619-4
GTA SAMPLE NO: 7

DATE SAMPLED: 10/9/2019
TIME SAMPLED: 12:01 PM

SAMPLED BY: MI
ER/MJR - MET

DATE RECEIVED: 10/16/2019
TIME RECEIVED: 12:05 PM

SAMPLE MATRIX: SOIL
SAMPLE ID: SB-2 @ 5

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	330	ug/Kg (PPB)	KC/TR	10/21/2019	10/22/2019	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	660	330					

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

COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 8

DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 12:02 PM

SAMPLED BY: MI
 ER/MJR - MET

DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM

SAMPLE MATRIX: SOIL
 SAMPLE ID: SB-2 @ 8"

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	330	ug/Kg (PPB)	KC/TR	10/21/2019	10/22/2019	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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 LOD = LIMIT OF DETECTION.



INDEPENDENT TESTING LAB

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FAX: 231-929-0894

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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)
 MI
 SAMPLED BY: ER/MJR - MET
 SAMPLE ID: MW-1

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 1
 DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 10:45 AM
 DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM
 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	0.51	0.31	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
BARIUM TOTAL EPA 6020A	12	0.31	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
CHROMIUM TOTAL EPA 6020A	2.5	0.31	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
COPPER TOTAL EPA 6020A	1.4	0.31	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
LEAD TOTAL EPA 6020A	0.96	0.31	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
MERCURY TOTAL EPA 7471B	ND	0.013	mg/Kg (PPM)	MR	10/25/2019	EPA 7471
ZINC TOTAL EPA 6020A	7.2	3.1	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B

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COMPANY:	MACKINAC ENVIRONMENTAL	GTA PROJECT NO:	101619-4
PROJECT NO:	M19-3117	GTA SAMPLE NO:	2
LOCATION:	BAYMILLS COMMUNITY (BMIC)	DATE SAMPLED:	10/9/2019
		TIME SAMPLED:	11:30 AM
		DATE RECEIVED:	10/16/2019
	MI	TIME RECEIVED:	12:05 PM
SAMPLED BY:	ER/MJR - MET	SAMPLE MATRIX:	SOIL
SAMPLE ID:	MW-2		

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	0.46	0.32	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
BARIUM TOTAL EPA 6020A	6.4	0.32	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
CHROMIUM TOTAL EPA 6020A	2.5	0.32	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
COPPER TOTAL EPA 6020A	3.6	0.32	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
LEAD TOTAL EPA 6020A	2.3	0.32	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
MERCURY TOTAL EPA 7471B	ND	0.013	mg/Kg (PPM)	MR	10/25/2019	EPA 7471
ZINC TOTAL EPA 6020A	4.2	3.2	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B

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LOD = LIMIT OF DETECTION

DISS = DISSOLVED



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COMPANY:	MACKINAC ENVIRONMENTAL	GTA PROJECT NO:	101619-4
PROJECT NO:	M19-3117	GTA SAMPLE NO:	3
LOCATION:	BAYMILLS COMMUNITY (BMIC)	DATE SAMPLED:	10/9/2019
		TIME SAMPLED:	11:39 AM
		DATE RECEIVED:	10/16/2019
	MI	TIME RECEIVED:	12:05 PM
SAMPLED BY:	ER/MJR - MET	SAMPLE MATRIX:	SOIL
SAMPLE ID:	MW-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 TOTAL EPA 6020A	0.42	0.30	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
BARIUM TOTAL EPA 6020A	5.5	0.30	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
CHROMIUM TOTAL EPA 6020A	5.4	0.30	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
COPPER TOTAL EPA 6020A	2.8	0.30	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
LEAD TOTAL EPA 6020A	1.0	0.30	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
MERCURY TOTAL EPA 7471B	ND	0.013	mg/Kg (PPM)	MR	10/25/2019	EPA 7471
ZINC TOTAL EPA 6020A	6.2	3.0	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

DISS = DISSOLVED

COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)
 MI
 SAMPLED BY: ER/MJR - MET
 SAMPLE ID: MW-4 @ 2'

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 4
 DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 10:50 AM
 DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM
 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	0.50	0.30	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
BARIUM TOTAL EPA 6020A	6.5	0.30	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
CHROMIUM TOTAL EPA 6020A	4.4	0.30	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
COPPER TOTAL EPA 6020A	2.4	0.30	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
LEAD TOTAL EPA 6020A	1.7	0.30	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
MERCURY TOTAL EPA 7471B	ND	0.011	mg/Kg (PPM)	MR	10/25/2019	EPA 7471
ZINC TOTAL EPA 6020A	21	3.0	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B

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COMPANY:	MACKINAC ENVIRONMENTAL	GTA PROJECT NO:	101619-4
PROJECT NO:	M19-3117	GTA SAMPLE NO:	5
LOCATION:	BAYMILLS COMMUNITY (BMIC)	DATE SAMPLED:	10/9/2019
		TIME SAMPLED:	12:15 PM
		DATE RECEIVED:	10/16/2019
	MI	TIME RECEIVED:	12:05 PM
SAMPLED BY:	ER/MJR - MET	SAMPLE MATRIX:	SOIL
SAMPLE ID:	MW-5		

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	0.35	0.33	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
BARIUM TOTAL EPA 6020A	4.4	0.33	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
CHROMIUM TOTAL EPA 6020A	3.2	0.33	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
COPPER TOTAL EPA 6020A	1.8	0.33	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
LEAD TOTAL EPA 6020A	1.3	0.33	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
MERCURY TOTAL EPA 7471B	ND	0.015	mg/Kg (PPM)	MR	10/25/2019	EPA 7471
ZINC TOTAL EPA 6020A	3.4	3.3	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B

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 LOD = LIMIT OF DETECTION
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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)
 MI
 SAMPLED BY: ER/MJR - MET
 SAMPLE ID: SB-1

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 6
 DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 11:48 AM
 DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM
 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	0.56	0.28	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
BARIUM TOTAL EPA 6020A	7.3	0.28	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
CHROMIUM TOTAL EPA 6020A	5.5	0.28	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
COPPER TOTAL EPA 6020A	1.9	0.28	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
LEAD TOTAL EPA 6020A	1.1	0.28	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
MERCURY TOTAL EPA 7471B	ND	0.012	mg/Kg (PPM)	MR	10/25/2019	EPA 7471
ZINC TOTAL EPA 6020A	11	2.8	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B

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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)
 MI
 SAMPLED BY: ER/MJR - MET
 SAMPLE ID: SB-2 @ 5

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 7
 DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 12:01 PM
 DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM
 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	1.5	0.33	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
BARIUM TOTAL EPA 6020A	9.6	0.33	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
CHROMIUM TOTAL EPA 6020A	4.8	0.33	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
COPPER TOTAL EPA 6020A	14	0.33	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
LEAD TOTAL EPA 6020A	8.8	0.33	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
MERCURY TOTAL EPA 7471B	ND	0.013	mg/Kg (PPM)	MR	10/25/2019	EPA 7471
ZINC TOTAL EPA 6020A	180	3.3	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B

ND = NOT DETECTED, RESULT < LOD
 LOD = LIMIT OF DETECTION
 DISS = DISSOLVED

COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M19-3117
 LOCATION: BAYMILLS COMMUNITY (BMIC)
 MI
 SAMPLED BY: ER/MJR - MET
 SAMPLE ID: SB-2 @ 8"

GTA PROJECT NO: 101619-4
 GTA SAMPLE NO: 8
 DATE SAMPLED: 10/9/2019
 TIME SAMPLED: 12:02 PM
 DATE RECEIVED: 10/16/2019
 TIME RECEIVED: 12:05 PM
 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	0.37	0.37	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
BARIUM TOTAL EPA 6020A	51	0.37	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
CHROMIUM TOTAL EPA 6020A	4.5	0.37	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
COPPER TOTAL EPA 6020A	3.3	0.37	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
LEAD TOTAL EPA 6020A	1.6	0.37	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B
MERCURY TOTAL EPA 7471B	ND	0.012	mg/Kg (PPM)	MR	10/25/2019	EPA 7471
ZINC TOTAL EPA 6020A	5.7	3.7	mg/Kg (PPM)	MR/TR	10/22/2019	EPA 3050B

ND = NOT DETECTED, RESULT < LOD
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COMPANY: MACKINAC ENVIRONMENTAL

NAME:
PROJECT NO: M19-3117

LOCATION: BAYMILLS COMMUNITY (BMIC)

MI

GTA PROJECT NO: 101619-4
SAMPLED BY: ER/MJR - MET

DATE SAMPLED: 10/9/2019
TIME SAMPLED: 10:45 AM
SAMPLE MATRIX: SOIL

DATE RECEIVED: 10/16/2019
TIME RECEIVED: 12:05 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: MW-1 % MOISTURE EPA 3550C	16	0.050	% OF SAMPLE	AS	10/16/2019
SAMPLE ID: MW-2 % MOISTURE EPA 3550C	14	0.050	% OF SAMPLE	AS	10/16/2019
SAMPLE ID: MW-3 % MOISTURE EPA 3550C	15	0.050	% OF SAMPLE	AS	10/16/2019
SAMPLE ID: MW-4 @ 2' % MOISTURE EPA 3550C	13	0.050	% OF SAMPLE	AS	10/16/2019
SAMPLE ID: MW-5 % MOISTURE EPA 3550C	12	0.050	% OF SAMPLE	AS	10/16/2019
SAMPLE ID: SB-1 % MOISTURE EPA 3550C	15	0.050	% OF SAMPLE	AS	10/16/2019
SAMPLE ID: SB-2 @ 5 % MOISTURE EPA 3550C	7.8	0.050	% OF SAMPLE	AS	10/16/2019
SAMPLE ID: SB-2 @ 8" % MOISTURE EPA 3550C	11	0.050	% OF SAMPLE	AS	10/16/2019

CHAIN OF CUSTODY

PROJECT NUMBER M19-3117	SITE NAME/ADDRESS Bay Mills Community (BMTC)	COMPANY/NAME
SAMPLED BY ER/MJR	COMPANY Mackinac Environmental Tech	GTA PROJECT # 101619-4

SAMPLE INFORMATION

#	SAMPLE ID	DATE SAMPLED	TIME	MATRIX	ANALYSIS
1	MW-1	10/9/19	1045	Soil	VOCs, PNA's, arsenic, barium, chromium, copper, lead, zinc, mercury
2	MW-2		1130		
3	MW-3		1139		
4	MW-4@2'		1050		
5	MW-5		1215		
6	SB-1		1148		
7	SB-2@5		1201		
8	SB-2@8"	↓	1202	↓	
					Shipped on ice.

BILL TO:

1

REPORT TO:

RELEASED BY

DATE/TIME

Deena Jamett

10/15/19 1500

RECEIVED BY

DATE/TIME

ER 10/16/19 12:05

MS 684

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