

**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: M19-3038
GTA ProjNo: 070919-8

Site Addr: 601 RIGGS DRIVE

Sampled By: BRAD JEFFERS/MET
Date Rec: 7/9/2019
Time Rec: 12:55 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	B-1	7/2/2019		WATER
2	B-3	7/2/2019		WATER
3	B-5	7/2/2019		WATER
4	B-7	7/2/2019		WATER
5	B-8	7/2/2019		WATER
6	B-9	7/2/2019		WATER
7	B-10	7/2/2019		WATER
8	B-11	7/2/2019		WATER
9	B-12	7/2/2019		WATER
10	B-1 @ 0.5-1'	7/2/2019		SOIL
11	B-3 @ 0.5-1'	7/2/2019		SOIL
12	B-5 @ 0.5-1'	7/2/2019		SOIL
13	B-7 @ 0.5-1'	7/2/2019		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
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

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COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 070919-8

PROJECT NO: M19-3038

GTA SAMPLE NO: 1

LOCATION: 601 RIGGS DRIVE

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

DATE RECEIVED: 7/9/2019

TIME RECEIVED: 12:55 PM

SAMPLED BY: BRAD JEFFERS/MET

SAMPLE MATRIX: WATER

SAMPLE ID: B-1

EPA 8260B VOLATILE ORGANICS

Units= ug/L (PPB)

Analyst= MR

Date

Date Completed= 7/11/2019

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
CHLOROBEZENE	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-DICHLOROBENZENE	ND	1.0
1,3-DICHLOROBENZENE	ND	1.0
1,4-DICHLOROBENZENE	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-TRICHLOROBENZENE	ND	1.0
1,2,4-TRICHLOROBENZENE	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

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COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 070919-8

PROJECT NO: M19-3038

GTA SAMPLE NO: 2

LOCATION: 601 RIGGS DRIVE

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

DATE RECEIVED: 7/9/2019

TIME RECEIVED: 12:55 PM

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= 7/11/2019

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
CHLOROBEZENE	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-DICHLOROBEZENE	ND	1.0
1,3-DICHLOROBEZENE	ND	1.0
1,4-DICHLOROBEZENE	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-TRICHLOROBEZENE	ND	1.0
1,2,4-TRICHLOROBEZENE	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

GTA PROJECT NO: 070919-8

PROJECT NO: M19-3038

GTA SAMPLE NO: 3

LOCATION: 601 RIGGS DRIVE

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

DATE RECEIVED: 7/9/2019

TIME RECEIVED: 12:55 PM

SAMPLED BY: BRAD JEFFERS/MET

SAMPLE MATRIX: WATER

SAMPLE ID: B-5

EPA 8260B VOLATILE ORGANICS

Units= ug/L (PPB)

Analyst= MR

Date

Date Completed= 7/11/2019

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
CHLOROBENZENE	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-DICHLOROBENZENE	ND	1.0
1,3-DICHLOROBENZENE	ND	1.0
1,4-DICHLOROBENZENE	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-TRICHLOROBENZENE	ND	1.0
1,2,4-TRICHLOROBENZENE	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

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PH: 231-929-0905

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COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 070919-8

PROJECT NO: M19-3038

GTA SAMPLE NO: 4

LOCATION: 601 RIGGS DRIVE

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

DATE RECEIVED: 7/9/2019

TIME RECEIVED: 12:55 PM

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= 7/11/2019

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
CHLORO BENZENE	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-DICHLOROBENZENE	ND	1.0
1,3-DICHLOROBENZENE	ND	1.0
1,4-DICHLOROBENZENE	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-TRICHLOROBENZENE	ND	1.0
1,2,4-TRICHLOROBENZENE	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

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COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 070919-8

PROJECT NO: M19-3038

GTA SAMPLE NO: 5

LOCATION: 601 RIGGS DRIVE

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

DATE RECEIVED: 7/9/2019

TIME RECEIVED: 12:55 PM

SAMPLED BY: BRAD JEFFERS/MET

SAMPLE MATRIX: WATER

SAMPLE ID: B-8

EPA 8260B VOLATILE ORGANICS

Units= ug/L (PPB)

Analyst= MR

Date

Date Completed= 7/11/2019

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
CHLOROBENZENE	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-DICHLOROBENZENE	ND	1.0
1,3-DICHLOROBENZENE	ND	1.0
1,4-DICHLOROBENZENE	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-TRICHLOROBENZENE	ND	1.0
1,2,4-TRICHLOROBENZENE	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: M19-3038
LOCATION: 601 RIGGS DRIVE
MI
SAMPLE MATRIX: WATER
SAMPLE ID: B-9

GTA PROJECT NO: 070919-8
GTA SAMPLE NO: 6
DATE SAMPLED: 7/2/2019
TIME SAMPLED:
DATE RECEIVED: 7/9/2019
TIME RECEIVED: 12:55 PM
SAMPLED BY: BRAD JEFFERS/MET

EPA 8260B VOLATILE ORGANICS

<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>
Benzene	ND	1.0	ug/L (PPB)	MR		7/11/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					

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

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION



INDEPENDENT TESTING LAB

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FAX: 231-929-0894

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COMPANY: MACKINAC ENVIRONMENTAL
PROJECT NO: M19-3038
LOCATION: 601 RIGGS DRIVE
MI
SAMPLE MATRIX: WATER
SAMPLE ID: B-10

GTA PROJECT NO: 070919-8
GTA SAMPLE NO: 7
DATE SAMPLED: 7/2/2019
TIME SAMPLED:
DATE RECEIVED: 7/9/2019
TIME RECEIVED: 12:55 PM
SAMPLED BY: BRAD JEFFERS/MET

EPA 8260B VOLATILE ORGANICS

<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>
Benzene	ND	1.0	ug/L (PPB)	MR		7/11/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					

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

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION



INDEPENDENT TESTING LAB

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COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 070919-8

PROJECT NO: M19-3038

GTA SAMPLE NO: 8

LOCATION: 601 RIGGS DRIVE

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

DATE RECEIVED: 7/9/2019

TIME RECEIVED: 12:55 PM

SAMPLED BY: BRAD JEFFERS/MET

SAMPLE MATRIX: WATER

SAMPLE ID: B-11

EPA 8260B VOLATILE ORGANICS

Units= ug/L (PPB)

Analyst= MR

Date

Date Completed= 7/11/2019

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
CHLORO BENZENE	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-DICHLOROBENZENE	ND	1.0
1,3-DICHLOROBENZENE	ND	1.0
1,4-DICHLOROBENZENE	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-TRICHLOROBENZENE	ND	1.0
1,2,4-TRICHLOROBENZENE	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

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COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 070919-8

PROJECT NO: M19-3038

GTA SAMPLE NO: 9

LOCATION: 601 RIGGS DRIVE

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

DATE RECEIVED: 7/9/2019

TIME RECEIVED: 12:55 PM

SAMPLED BY: BRAD JEFFERS/MET

SAMPLE MATRIX: WATER

SAMPLE ID: B-12

EPA 8260B VOLATILE ORGANICS

Units= ug/L (PPB)

Analyst= MR

Date

Date Completed= 7/11/2019

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
CHLOROBEZENE	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-DICHLOROBENZENE	ND	1.0
1,3-DICHLOROBENZENE	ND	1.0
1,4-DICHLOROBENZENE	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-TRICHLOROBENZENE	ND	1.0
1,2,4-TRICHLOROBENZENE	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

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COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M19-3038
LOCATION: 601 RIGGS DRIVESAMPLED BY: MI
BRAD JEFFERS/METSAMPLE MATRIX: WATER
SAMPLE ID: B-1

GTA PROJECT NO: 070919-8

GTA SAMPLE NO: 1

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

DATE RECEIVED: 7/9/2019

TIME RECEIVED: 12:55 PM

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	5.0	ug/L (PPB)	KC/TR	7/9/2019	7/12/2019	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					
2-Methylnaphthalene	ND	5.0					
Naphthalene	ND	5.0					
Phenanthrene	ND	2.0					
Pyrene	ND	5.0					

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

ND = NOT DETECTED

LOD = LIMIT OF DETECTION

**INDEPENDENT TESTING LAB**

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

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COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M19-3038
LOCATION: 601 RIGGS DRIVESAMPLED BY: MI
BRAD JEFFERS/METSAMPLE MATRIX: WATER
SAMPLE ID: B-3

GTA PROJECT NO: 070919-8

GTA SAMPLE NO: 2

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

DATE RECEIVED: 7/9/2019

TIME RECEIVED: 12:55 PM

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	5.0	ug/L (PPB)	KC/TR	7/9/2019	7/12/2019	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					
2-Methylnaphthalene	ND	5.0					
Naphthalene	ND	5.0					
Phenanthrene	ND	2.0					
Pyrene	ND	5.0					

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

ND = NOT DETECTED

LOD = LIMIT OF DETECTION

COMPANY: MACKINAC ENVIRONMENTAL
PROJECT NO: M19-3038
LOCATION: 601 RIGGS DRIVE

GTA PROJECT NO: 070919-8
GTA SAMPLE NO: 3

DATE SAMPLED: 7/2/2019
TIME SAMPLED:

SAMPLED BY: MI
BRAD JEFFERS/MET

DATE RECEIVED: 7/9/2019
TIME RECEIVED: 12:55 PM

SAMPLE MATRIX: WATER
SAMPLE ID: B-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	5.0	ug/L (PPB)	KC/TR	7/9/2019	7/12/2019	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					
2-Methylnaphthalene	ND	5.0					
Naphthalene	ND	5.0					
Phenanthrene	ND	2.0					
Pyrene	ND	5.0					

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

COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 070919-8

PROJECT NO: M19-3038

GTA SAMPLE NO: 4

LOCATION: 601 RIGGS DRIVE

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

SAMPLED BY: MI
BRAD JEFFERS/MET

DATE RECEIVED: 7/9/2019

TIME RECEIVED: 12:55 PM

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</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Acenaphthene	ND	5.0	ug/L (PPB)	KC/TR	7/9/2019	7/12/2019	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					
2-Methylnaphthalene	ND	5.0					
Naphthalene	ND	5.0					
Phenanthrene	ND	2.0					
Pyrene	ND	5.0					

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

ND = NOT DETECTED

LOD = LIMIT OF DETECTION

COMPANY: MACKINAC ENVIRONMENTAL
PROJECT NO: M19-3038
LOCATION: 601 RIGGS DRIVE

GTA PROJECT NO: 070919-8
GTA SAMPLE NO: 5

DATE SAMPLED: 7/2/2019
TIME SAMPLED:

SAMPLED BY: MI
BRAD JEFFERS/MET

DATE RECEIVED: 7/9/2019
TIME RECEIVED: 12:55 PM

SAMPLE MATRIX: WATER
SAMPLE ID: B-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	5.0	ug/L (PPB)	KC/TR	7/9/2019	7/12/2019	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					
2-Methylnaphthalene	ND	5.0					
Naphthalene	ND	5.0					
Phenanthrene	ND	2.0					
Pyrene	ND	5.0					

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

COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 070919-8

PROJECT NO: M19-3038

GTA SAMPLE NO: 6

LOCATION: 601 RIGGS DRIVE

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

SAMPLED BY: MI

DATE RECEIVED: 7/9/2019

BRAD JEFFERS/MET

TIME RECEIVED: 12:55 PM

SAMPLE MATRIX: WATER

SAMPLE ID: B-9

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	5.0	ug/L (PPB)	KC/TR	7/9/2019	7/12/2019	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					
2-Methylnaphthalene	ND	5.0					
Naphthalene	ND	5.0					
Phenanthrene	ND	2.0					
Pyrene	ND	5.0					

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

ND = NOT DETECTED

LOD = LIMIT OF DETECTION

COMPANY: MACKINAC ENVIRONMENTAL
PROJECT NO: M19-3038
LOCATION: 601 RIGGS DRIVE

GTA PROJECT NO: 070919-8
GTA SAMPLE NO: 7

DATE SAMPLED: 7/2/2019
TIME SAMPLED:

SAMPLED BY: MI
BRAD JEFFERS/MET

DATE RECEIVED: 7/9/2019
TIME RECEIVED: 12:55 PM

SAMPLE MATRIX: WATER
SAMPLE ID: B-10

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	5.0	ug/L (PPB)	KC/TR	7/9/2019	7/12/2019	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					
2-Methylnaphthalene	ND	5.0					
Naphthalene	ND	5.0					
Phenanthrene	ND	2.0					
Pyrene	ND	5.0					

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

COMPANY: MACKINAC ENVIRONMENTAL
PROJECT NO: M19-3038
LOCATION: 601 RIGGS DRIVE

GTA PROJECT NO: 070919-8
GTA SAMPLE NO: 8

DATE SAMPLED: 7/2/2019
TIME SAMPLED:

SAMPLED BY: MI
BRAD JEFFERS/MET

DATE RECEIVED: 7/9/2019
TIME RECEIVED: 12:55 PM

SAMPLE MATRIX: WATER
SAMPLE ID: B-11

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	5.0	ug/L (PPB)	KC/TR	7/9/2019	7/13/2019	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					
2-Methylnaphthalene	ND	5.0					
Naphthalene	ND	5.0					
Phenanthrene	ND	2.0					
Pyrene	ND	5.0					

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

COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 070919-8

PROJECT NO: M19-3038

GTA SAMPLE NO: 9

LOCATION: 601 RIGGS DRIVE

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

SAMPLED BY: MI

DATE RECEIVED: 7/9/2019

BRAD JEFFERS/MET

TIME RECEIVED: 12:55 PM

SAMPLE MATRIX: WATER

SAMPLE ID: B-12

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	5.0	ug/L (PPB)	KC/TR	7/9/2019	7/13/2019	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					
2-Methylnaphthalene	ND	5.0					
Naphthalene	ND	5.0					
Phenanthrene	ND	2.0					
Pyrene	ND	5.0					

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

ND = NOT DETECTED

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

GTA PROJECT NO: 070919-8

PROJECT NO: M19-3038

GTA SAMPLE NO: 10

LOCATION: 601 RIGGS DRIVE

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

DATE RECEIVED: 7/9/2019

TIME RECEIVED: 12:55 PM

SAMPLED BY: MI

SAMPLE MATRIX: SOIL

BRAD JEFFERS/MET

SAMPLE ID: B-1 @ 0.5-1'

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	0.53	0.31	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
BARIUM TOTAL EPA 6020A	17	0.31	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
CADMIUM TOTAL EPA 6020A	ND	0.31	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
CHROMIUM TOTAL EPA 6020A	6.5	0.31	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
COPPER TOTAL EPA 6020A	6.8	0.31	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
LEAD TOTAL EPA 6020A	17	0.31	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
MERCURY TOTAL EPA 7471B	ND	0.014	mg/Kg (PPM)	MR/KR	7/10/2019	EPA 7471
SELENIUM TOTAL EPA 6020A	ND	0.31	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
SILVER TOTAL EPA 6020A	ND	0.31	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
ZINC TOTAL EPA 6020A	22	3.1	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B

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LOD = LIMIT OF DETECTION

DISS = DISSOLVED

**INDEPENDENT TESTING LAB**

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FAX: 231-929-0894

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COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 070919-8

PROJECT NO: M19-3038

GTA SAMPLE NO: 11

LOCATION: 601 RIGGS DRIVE

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

DATE RECEIVED: 7/9/2019

TIME RECEIVED: 12:55 PM

MI

SAMPLED BY: BRAD JEFFERS/MET

SAMPLE MATRIX: SOIL

SAMPLE ID: B-3 @ 0.5-1'

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	0.45	0.30	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
BARIUM TOTAL EPA 6020A	16	0.30	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
CADMIUM TOTAL EPA 6020A	ND	0.30	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
CHROMIUM TOTAL EPA 6020A	7.8	0.30	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
COPPER TOTAL EPA 6020A	29	0.30	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
LEAD TOTAL EPA 6020A	7.2	0.30	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
MERCURY TOTAL EPA 7471B	ND	0.016	mg/Kg (PPM)	MR/KR	7/10/2019	EPA 7471
SELENIUM TOTAL EPA 6020A	ND	0.30	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
SILVER TOTAL EPA 6020A	ND	0.30	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
ZINC TOTAL EPA 6020A	53	3.0	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B

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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

GTA PROJECT NO: 070919-8

PROJECT NO: M19-3038

GTA SAMPLE NO: 12

LOCATION: 601 RIGGS DRIVE

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

DATE RECEIVED: 7/9/2019

TIME RECEIVED: 12:55 PM

MI

SAMPLED BY: BRAD JEFFERS/MET

SAMPLE MATRIX: SOIL

SAMPLE ID: B-5 @ 0.5-1'

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	0.57	0.36	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
BARIUM TOTAL EPA 6020A	55	0.36	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
CADMIUM TOTAL EPA 6020A	ND	0.36	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
CHROMIUM TOTAL EPA 6020A	16	0.36	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
COPPER TOTAL EPA 6020A	4.9	0.36	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
LEAD TOTAL EPA 6020A	6.7	0.36	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
MERCURY TOTAL EPA 7471B	ND	0.013	mg/Kg (PPM)	MR/KR	7/10/2019	EPA 7471
SELENIUM TOTAL EPA 6020A	ND	0.36	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
SILVER TOTAL EPA 6020A	ND	0.36	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
ZINC TOTAL EPA 6020A	18	3.6	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

DISS = DISSOLVED

**INDEPENDENT TESTING LAB**

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FAX: 231-929-0894

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COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 070919-8

PROJECT NO: M19-3038

GTA SAMPLE NO: 13

LOCATION: 601 RIGGS DRIVE

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

DATE RECEIVED: 7/9/2019

TIME RECEIVED: 12:55 PM

SAMPLED BY: MI

SAMPLE MATRIX: SOIL

BRAD JEFFERS/MET

SAMPLE ID: B-7 @ 0.5-1'

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	0.63	0.28	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
BARIUM TOTAL EPA 6020A	54	0.28	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
CADMIUM TOTAL EPA 6020A	ND	0.28	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
CHROMIUM TOTAL EPA 6020A	12	0.28	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
COPPER TOTAL EPA 6020A	5.2	0.28	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
LEAD TOTAL EPA 6020A	6.5	0.28	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
MERCURY TOTAL EPA 7471B	ND	0.013	mg/Kg (PPM)	MR/KR	7/10/2019	EPA 7471
SELENIUM TOTAL EPA 6020A	ND	0.28	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
SILVER TOTAL EPA 6020A	ND	0.28	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B
ZINC TOTAL EPA 6020A	16	2.8	mg/Kg (PPM)	MR/TR	7/10/2019	EPA 3050B

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

DISS = DISSOLVED

**INDEPENDENT TESTING LAB**

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PH: 231-929-0905

FAX: 231-929-0894

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COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 070919-8

NAME:

SAMPLED BY: BRAD JEFFERS/MET

PROJECT NO: M19-3038

DATE SAMPLED: 7/2/2019

TIME SAMPLED:

LOCATION: 601 RIGGS DRIVE

SAMPLE MATRIX: SOIL

DATE RECEIVED: 7/9/2019

TIME RECEIVED: 12:55 PM

MI

MOISTURE**No: Analysis**

<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
12	0.050	% OF SAMPLE	AS	7/9/2019
11	0.050	% OF SAMPLE	AS	7/9/2019
17	0.050	% OF SAMPLE	AS	7/9/2019
17	0.050	% OF SAMPLE	AS	7/9/2019

SAMPLE ID: B-1 @ 0.5-1'

% MOISTURE EPA 3550C

SAMPLE ID: B-3 @ 0.5-1'

% MOISTURE EPA 3550C

SAMPLE ID: B-5 @ 0.5-1'

% MOISTURE EPA 3550C

SAMPLE ID: B-7 @ 0.5-1'

% MOISTURE EPA 3550C

CHAIN OF CUSTODY

PROJECT NUMBER M19-3038	SITE NAME/ADDRESS 601 Rigg's Drive	COMPANY/NAME
SAMPLED BY Brad Jeffers	COMPANY MET	GTA PROJECT # 005 070919-8

SAMPLE INFORMATION

#	SAMPLE ID	DATE SAMPLED	TIME	MATRIX	ANALYSIS
1	B-1	7/2/19		GW	VOC, PNA
2	B-3				VOC, PNA
3	B-5				VOC, PNA
4	B-7				VOC, PNA
5	B-8				VOC, PNA
6	B-9				BTEX, PNA
7	B-10				BTEX, PNA
8	B-11				VOC, PNA
9	B-12			↓	VOC, PNA
10	B-1 e 0.5-1'			Soil	10 MI Metals
11	B-3 e 0.5-1'				"
12	B-5 e 0.5-1'				"
13	B-7 e 0.5-1'	↓		↓	"

BILL TO:

MET
PO Box 485
ST. Ignace, MI 49781

REPORT TO:

met@sault.com

RELEASED BY

DATE/TIME

Brad Jeffers 7/2/19 e 11:25

RECEIVED BY

DATE/TIME

Ang 7/9/19 12:55
rec'd

REQUESTED TAT



STANDARD



1 BUSINESS DAY



2 BUSINESS DAYS



3 BUSINESS DAYS