

**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: M17-2757
GTA ProjNo: 121619-8

Site Addr: CRAWFORDS

Sampled By: SLF/MET

Date Rec: 12/17/2019

Time Rec: 10:55 AM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	MW-2R	12/13/2019	9:38 AM	WATER
2	MW-5	12/13/2019	9:50 AM	WATER
3	MW-4	12/13/2019	10:00 AM	WATER

ELECTRONIC SIGNATURE REPORT. This is a final report for the following pages of data for the samples specified above. All analysis was performed by the methods stated and all quality control measures required were completed. All quality control information is available upon request.

Kirk Chase

Kirk L. Chase/Chemist
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COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M17-2757
LOCATION: CRAWFORDS

MI

SAMPLE MATRIX: WATER
SAMPLE ID: MW-2R

GTA PROJECT NO: 121619-8

GTA SAMPLE NO: 1

DATE SAMPLED: 12/13/2019

TIME SAMPLED: 9:38 AM

DATE RECEIVED: 12/17/2019

TIME RECEIVED: 10:55 AM

SAMPLED BY: SLF/MET

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Completed</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		12/18/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					
1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Methyl-t-Butyl Ether	ND	5.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

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

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

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COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M17-2757
LOCATION: CRAWFORDS

MI

SAMPLE MATRIX: WATER
SAMPLE ID: MW-5

GTA PROJECT NO: 121619-8

GTA SAMPLE NO: 2

DATE SAMPLED: 12/13/2019

TIME SAMPLED: 9:50 AM

DATE RECEIVED: 12/17/2019

TIME RECEIVED: 10:55 AM

SAMPLED BY: SLF/MET

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Completed</u>	<u>Prep Method</u>
Benzene	1.1	1.0	ug/L (PPB)	MR		12/18/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	63	10					
Xylene(Total)	110	21					
1,2,4-Trimethylbenzene	300	10					
1,3,5-Trimethylbenzene	73	10					
Methyl-t-Butyl Ether	ND	5.0					
Naphthalene	30	5.0					
2-Methylnaphthalene	91	5.0					

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COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M17-2757
LOCATION: CRAWFORDS

MI

SAMPLE MATRIX: WATER
SAMPLE ID: MW-4GTA PROJECT NO: 121619-8
GTA SAMPLE NO: 3DATE SAMPLED: 12/13/2019
TIME SAMPLED: 10:00 AM
DATE RECEIVED: 12/17/2019
TIME RECEIVED: 10:55 AM

SAMPLED BY: SLF/MET

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Completed</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	MR		12/18/2019	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	ND	3.0					
1,2,4-Trimethylbenzene	ND	1.0					
1,3,5-Trimethylbenzene	ND	1.0					
Methyl-t-Butyl Ether	ND	5.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	ND	5.0					

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COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 121619-8

GTA SAMPLE NO: 1

NAME:

PROJECT NO: M17-2757

DATE SAMPLED: 12/13/2019

LOCATION: CRAWFORDS

TIME SAMPLED: 9:38 AM

DATE RECEIVED: 12/17/2019

TIME RECEIVED: 10:55 AM

SAMPLED BY: MI
SLF/MET**ORGANICS**

<u>No:</u>	<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>Completed</u>	<u>Prep Method</u>
SAMPLE ID:	MW-2R							
SAMPLE	WATER							
DIESEL RANGE ORGANICS (DRO C10- C20) EPA 8015M		ND	0.10	mg/L (PPM)	KC/TR	12/17/2019	12/18/2019	EPA 3510C

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COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 121619-8

GTA SAMPLE NO: 2

NAME:

PROJECT NO: M17-2757

DATE SAMPLED: 12/13/2019

LOCATION: CRAWFORDS

TIME SAMPLED: 9:50 AM

DATE RECEIVED: 12/17/2019

TIME RECEIVED: 10:55 AM

SAMPLED BY: MI
SLF/MET**ORGANICS**

<u>No:</u>	<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>Completed</u>	<u>Prep Method</u>
SAMPLE ID:	MW-5							
SAMPLE	WATER							
DIESEL RANGE ORGANICS (DRO C10- C20) EPA 8015M		0.13	0.10	mg/L (PPM)	KC/TR	12/17/2019	12/18/2019	EPA 3510C

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COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 121619-8

GTA SAMPLE NO: 3

NAME:

PROJECT NO: M17-2757

DATE SAMPLED: 12/13/2019

LOCATION: CRAWFORDS

TIME SAMPLED: 10:00 AM

DATE RECEIVED: 12/17/2019

TIME RECEIVED: 10:55 AM

SAMPLED BY: MI
SLF/MET

ORGANICS

<u>No:</u>	<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>Completed</u>	<u>Prep Method</u>
SAMPLE ID:	MW-4							
SAMPLE	WATER							
DIESEL RANGE ORGANICS (DRO C10- C20) EPA 8015M		ND	0.10	mg/L (PPM)	KC/TR	12/17/2019	12/18/2019	EPA 3510C

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COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M17-2757
LOCATION: CRAWFORDS

SAMPLED BY: MI
SLF/MET

SAMPLE WATER
SAMPLE ID: MW-2R

GTA PROJECT NO: 121619-8
GTA SAMPLE NO: 1

DATE SAMPLED: 12/13/2019
TIME SAMPLED: 9:38 AM

DATE RECEIVED: 12/17/2019
TIME RECEIVED: 10:55 AM

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>Completed</u>	<u>Prep Method</u>
Acenaphthene	ND	5.0	ug/L (PPB)	KC/TR	12/17/2019	12/18/2019	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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COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M17-2757
LOCATION: CRAWFORDS

SAMPLED BY: MI
SLF/MET

SAMPLE WATER
SAMPLE ID: MW-5

GTA PROJECT NO: 121619-8
GTA SAMPLE NO: 2

DATE SAMPLED: 12/13/2019
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DATE RECEIVED: 12/17/2019
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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>Completed</u>	<u>Prep Method</u>
Acenaphthene	ND	5.0	ug/L (PPB)	KC/TR	12/17/2019	12/18/2019	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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PROJECT NO: M17-2757
LOCATION: CRAWFORDS

SAMPLED BY: MI
SLF/MET

SAMPLE WATER
SAMPLE ID: MW-4

GTA PROJECT NO: 121619-8
GTA SAMPLE NO: 3

DATE SAMPLED: 12/13/2019
TIME SAMPLED: 10:00 AM

DATE RECEIVED: 12/17/2019
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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>Completed</u>	<u>Prep Method</u>
Acenaphthene	ND	5.0	ug/L (PPB)	KC/TR	12/17/2019	12/18/2019	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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