

**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: M93-226
GTA ProjNo: 022120-2

Site Addr: STRONGS CCRC

Sampled By: SLF/SMC - MET
Date Rec: 2/21/2020
Time Rec: 12:10 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	MW-108	2/17/2020	12:51 PM	WATER
2	MW-103R	2/17/2020	1:50 PM	WATER
3	MW-112	2/17/2020	1:41 PM	WATER
4	MW-106	2/17/2020	2:55 PM	WATER
5	MW-111	2/17/2020	2:50 PM	WATER
6	VW-3	2/17/2020	3:30 PM	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: M93-226

LOCATION: STRONGS CCRC

MI

SAMPLE MATRIX: WATER

SAMPLE ID: MW-108

GTA PROJECT NO: 022120-2

GTA SAMPLE NO: 1

DATE SAMPLED: 2/17/2020

TIME SAMPLED: 12:51 PM

DATE RECEIVED: 2/21/2020

TIME RECEIVED: 12:10 PM

SAMPLED BY: SLF/SMC - 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>Complete</u>	<u>Prep Method</u>
Benzene	1.1	1.0	ug/L (PPB)	KC		2/22/2020	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	28	1.0					
Xylene(Total)	50	3.0					
1,2,4-Trimethylbenzene	52	1.0					
1,3,5-Trimethylbenzene	39	1.0					
Methyl-t-Butyl Ether	ND	5.0					
Naphthalene	95	5.0					
2-Methylnaphthalene	88	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: M93-226

LOCATION: STRONGS CCRC

MI

SAMPLE MATRIX: WATER

SAMPLE ID: MW-103R

GTA PROJECT NO: 022120-2

GTA SAMPLE NO: 2

DATE SAMPLED: 2/17/2020

TIME SAMPLED: 1:50 PM

DATE RECEIVED: 2/21/2020

TIME RECEIVED: 12:10 PM

SAMPLED BY: SLF/SMC - 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>Complete</u>	<u>Prep Method</u>
Benzene	47	1.0	ug/L (PPB)	KC		2/22/2020	EPA 5030B
Toluene	9.9	1.0					
Ethylbenzene	21	1.0					
Xylene(Total)	54	3.0					
1,2,4-Trimethylbenzene	59	1.0					
1,3,5-Trimethylbenzene	35	1.0					
Methyl-t-Butyl Ether	ND	5.0					
Naphthalene	97	5.0					
2-Methylnaphthalene	160	5.0					

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COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M93-226
LOCATION: STRONGS CCRC

MI

SAMPLE MATRIX: WATER

SAMPLE ID: MW-112

GTA PROJECT NO: 022120-2

GTA SAMPLE NO: 3

DATE SAMPLED: 2/17/2020

TIME SAMPLED: 1:41 PM

DATE RECEIVED: 2/21/2020

TIME RECEIVED: 12:10 PM

SAMPLED BY: SLF/SMC - 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>Complete</u>	<u>Prep Method</u>
Benzene	1.2	1.0	ug/L (PPB)	KC		2/22/2020	EPA 5030B
Toluene	1.2	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	6.4	5.0					
2-Methylnaphthalene	38	5.0					

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COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M93-226

LOCATION: STRONGS CCRC

MI

SAMPLE MATRIX: WATER

SAMPLE ID: MW-106

GTA PROJECT NO: 022120-2

GTA SAMPLE NO: 4

DATE SAMPLED: 2/17/2020

TIME SAMPLED: 2:55 PM

DATE RECEIVED: 2/21/2020

TIME RECEIVED: 12:10 PM

SAMPLED BY: SLF/SMC - 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>Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	KC		2/22/2020	EPA 5030B
Toluene	ND	1.0					
Ethylbenzene	ND	1.0					
Xylene(Total)	3.1	3.0					
1,2,4-Trimethylbenzene	2.0	1.0					
1,3,5-Trimethylbenzene	1.1	1.0					
Methyl-t-Butyl Ether	ND	5.0					
Naphthalene	ND	5.0					
2-Methylnaphthalene	7.6	5.0					

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

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LOD = LIMIT OF DETECTION

COMPANY:	MACKINAC ENVIRONMENTAL	GTA PROJECT NO:	022120-2
PROJECT NO:	M93-226	GTA SAMPLE NO:	5
LOCATION:	STRONGS CCRC	DATE SAMPLED:	2/17/2020
		TIME SAMPLED:	2:50 PM
		DATE RECEIVED:	2/21/2020
	MI	TIME RECEIVED:	12:10 PM
SAMPLE MATRIX:	WATER		
SAMPLE ID:	MW-111	SAMPLED BY:	SLF/SMC - 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>Complete</u>	<u>Prep Method</u>
Benzene	ND	1.0	ug/L (PPB)	KC		2/22/2020	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.

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LOD = LIMIT OF DETECTION

COMPANY:	MACKINAC ENVIRONMENTAL	GTA PROJECT NO:	022120-2
PROJECT NO:	M93-226	GTA SAMPLE NO:	6
LOCATION:	STRONGS CCRC	DATE SAMPLED:	2/17/2020
		TIME SAMPLED:	3:30 PM
		DATE RECEIVED:	2/21/2020
	MI	TIME RECEIVED:	12:10 PM
SAMPLE MATRIX:	WATER		
SAMPLE ID:	VW-3	SAMPLED BY:	SLF/SMC - 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)	KC		2/22/2020	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.

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COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M93-226
LOCATION: STRONGS CCRC

GTA PROJECT NO: 022120-2

GTA SAMPLE NO: 1

DATE SAMPLED: 2/17/2020
TIME SAMPLED: 12:51 PMSAMPLED BY: MI
SLF/SMC - METDATE RECEIVED: 2/21/2020
TIME RECEIVED: 12:10 PMSAMPLE MATRIX: WATER
SAMPLE ID: MW-108**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	2/24/2020	2/26/2020	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: M93-226
LOCATION: STRONGS CCRC

SAMPLED BY: MI
SLF/SMC - MET

SAMPLE MATRIX: WATER
SAMPLE ID: MW-103R

GTA PROJECT NO: 022120-2
GTA SAMPLE NO: 2

DATE SAMPLED: 2/17/2020
TIME SAMPLED: 1:50 PM

DATE RECEIVED: 2/21/2020
TIME RECEIVED: 12:10 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	2/24/2020	2/26/2020	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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LOD = LIMIT OF DETECTION.

COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M93-226
LOCATION: STRONGS CCRC

SAMPLED BY: MI
SLF/SMC - MET

SAMPLE MATRIX: WATER
SAMPLE ID: MW-112

GTA PROJECT NO: 022120-2
GTA SAMPLE NO: 3

DATE SAMPLED: 2/17/2020
TIME SAMPLED: 1:41 PM

DATE RECEIVED: 2/21/2020
TIME RECEIVED: 12:10 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	2/24/2020	2/26/2020	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: M93-226
LOCATION: STRONGS CCRC

GTA PROJECT NO: 022120-2

GTA SAMPLE NO: 4

DATE SAMPLED: 2/17/2020
TIME SAMPLED: 2:55 PMSAMPLED BY: MI
SLF/SMC - METDATE RECEIVED: 2/21/2020
TIME RECEIVED: 12:10 PMSAMPLE MATRIX: WATER
SAMPLE ID: MW-106**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	2/24/2020	2/26/2020	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: M93-226
LOCATION: STRONGS CCRC

SAMPLED BY: MI
SLF/SMC - MET

SAMPLE MATRIX: WATER
SAMPLE ID: MW-111

GTA PROJECT NO: 022120-2
GTA SAMPLE NO: 5

DATE SAMPLED: 2/17/2020
TIME SAMPLED: 2:50 PM

DATE RECEIVED: 2/21/2020
TIME RECEIVED: 12:10 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	2/24/2020	2/26/2020	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: M93-226
LOCATION: STRONGS CCRC

SAMPLED BY: MI
SLF/SMC - MET

SAMPLE MATRIX: WATER
SAMPLE ID: VW-3

GTA PROJECT NO: 022120-2
GTA SAMPLE NO: 6

DATE SAMPLED: 2/17/2020
TIME SAMPLED: 3:30 PM

DATE RECEIVED: 2/21/2020
TIME RECEIVED: 12:10 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	2/24/2020	2/26/2020	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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