

**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: M21-3489
GTA ProjNo: 082521-3

Site Addr: TANGLEWOOD

Sampled By: MET
Date Rec: 8/25/2021
Time Rec: 11:20 AM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	SB-1 @ 2'	8/23/2021		SOIL
2	SB-2 @ 2'	8/23/2021		SOIL
3	SB-3 @ 2'	8/23/2021		SOIL
4	SB-4 @ 2'	8/23/2021		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 Chase

Kirk L. Chase/Chemist
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Traverse City, MI 49686
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COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M21-3489

LOCATION: TANGLEWOOD

MI

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-1 @ 2'

GTA PROJECT NO: 082521-3

GTA SAMPLE NO: 1

DATE SAMPLED: 8/23/2021

TIME SAMPLED:

DATE RECEIVED: 8/25/2021

TIME RECEIVED: 11:20 AM

SAMPLED BY: MET

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	50	ug/Kg (PPB) MR		8/23/2021	8/26/2021	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Methyl-t-Butyl Ether	ND	250					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

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: M21-3489

LOCATION: TANGLEWOOD

MI

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-2 @ 2'

GTA PROJECT NO: 082521-3

GTA SAMPLE NO: 2

DATE SAMPLED: 8/23/2021

TIME SAMPLED:

DATE RECEIVED: 8/25/2021

TIME RECEIVED: 11:20 AM

SAMPLED BY: MET

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	50	ug/Kg (PPB) MR		8/23/2021	8/26/2021	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Methyl-t-Butyl Ether	ND	250					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

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PROJECT NO: M21-3489

LOCATION: TANGLEWOOD

MI

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-3 @ 2'

GTA PROJECT NO: 082521-3

GTA SAMPLE NO: 3

DATE SAMPLED: 8/23/2021

TIME SAMPLED:

DATE RECEIVED: 8/25/2021

TIME RECEIVED: 11:20 AM

SAMPLED BY: MET

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	50	ug/Kg (PPB) MR		8/23/2021	8/26/2021	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Methyl-t-Butyl Ether	ND	250					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

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COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M21-3489

LOCATION: TANGLEWOOD

MI

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-4 @ 2'

GTA PROJECT NO: 082521-3

GTA SAMPLE NO: 4

DATE SAMPLED: 8/23/2021

TIME SAMPLED:

DATE RECEIVED: 8/25/2021

TIME RECEIVED: 11:20 AM

SAMPLED BY: MET

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

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	50	ug/Kg (PPB) MR		8/23/2021	8/26/2021	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Methyl-t-Butyl Ether	ND	250					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

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COMPANY: MACKINAC ENVIRONMENTAL
PROJECT NO: M21-3489
LOCATION: TANGLEWOOD

GTA PROJECT NO: 082521-3
GTA SAMPLE NO: 1

DATE SAMPLED: 8/23/2021
TIME SAMPLED:

SAMPLED BY: MI
MET

DATE RECEIVED: 8/25/2021
TIME RECEIVED: 11:20 AM

SAMPLE MATRIX: SOIL
SAMPLE ID: SB-1 @ 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	8/30/2021	8/31/2021	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					
2-Methylnaphthalene	ND	330					
Naphthalene	ND	330					
Phenanthrene	ND	330					
Pyrene	ND	330					

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LOD = LIMIT OF DETECTION

COMPANY: MACKINAC ENVIRONMENTAL
PROJECT NO: M21-3489
LOCATION: TANGLEWOOD

GTA PROJECT NO: 082521-3
GTA SAMPLE NO: 2

DATE SAMPLED: 8/23/2021
TIME SAMPLED:

SAMPLED BY: MI
MET

DATE RECEIVED: 8/25/2021
TIME RECEIVED: 11:20 AM

SAMPLE MATRIX: SOIL
SAMPLE ID: SB-2 @ 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	8/30/2021	8/31/2021	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					
2-Methylnaphthalene	ND	330					
Naphthalene	ND	330					
Phenanthrene	ND	330					
Pyrene	ND	330					

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COMPANY: MACKINAC ENVIRONMENTAL
PROJECT NO: M21-3489
LOCATION: TANGLEWOOD

GTA PROJECT NO: 082521-3
GTA SAMPLE NO: 3

DATE SAMPLED: 8/23/2021
TIME SAMPLED:

SAMPLED BY: MI
MET

DATE RECEIVED: 8/25/2021
TIME RECEIVED: 11:20 AM

SAMPLE MATRIX: SOIL
SAMPLE ID: SB-3 @ 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	8/30/2021	8/31/2021	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					
2-Methylnaphthalene	ND	330					
Naphthalene	ND	330					
Phenanthrene	ND	330					
Pyrene	ND	330					

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COMPANY: MACKINAC ENVIRONMENTAL
PROJECT NO: M21-3489
LOCATION: TANGLEWOOD

GTA PROJECT NO: 082521-3
GTA SAMPLE NO: 4

DATE SAMPLED: 8/23/2021
TIME SAMPLED:

SAMPLED BY: MI
MET

DATE RECEIVED: 8/25/2021
TIME RECEIVED: 11:20 AM

SAMPLE MATRIX: SOIL
SAMPLE ID: SB-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	8/30/2021	8/31/2021	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					
2-Methylnaphthalene	ND	330					
Naphthalene	ND	330					
Phenanthrene	ND	330					
Pyrene	ND	330					

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COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 082521-

NAME:

SAMPLED BY: MET

PROJECT NO: M21-3489

DATE SAMPLED: 8/23/2021

TIME SAMPLED:

LOCATION: TANGLEWOOD

SAMPLE MATRIX: SOIL

DATE RECEIVED: 8/25/2021

TIME RECEIVED: 11:20 AM

MI

MOISTURE

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
SAMPLE ID: SB-1 @ 2'	% MOISTURE EPA 3550C	12	0.050	% OF SAMPLE	AS	8/25/2021
SAMPLE ID: SB-2 @ 2'	% MOISTURE EPA 3550C	12	0.050	% OF SAMPLE	AS	8/25/2021
SAMPLE ID: SB-3 @ 2'	% MOISTURE EPA 3550C	5.8	0.050	% OF SAMPLE	AS	8/25/2021
SAMPLE ID: SB-4 @ 2'	% MOISTURE EPA 3550C	7.0	0.050	% OF SAMPLE	AS	8/25/2021

