



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: M21-3486
GTA ProjNo: 081121-4

Site Addr: KORTHASE WELL DRILLING

Sampled By: BRAD JEFFERS/MET
Date Rec: 8/11/2021
Time Rec: 3:07 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	S-1	8/11/2021		SOIL
2	S-2	8/11/2021		SOIL
3	S-3	8/11/2021		SOIL
4	S-4	8/11/2021		WATER
5	S-5	8/11/2021		WATER
6	S-6	8/11/2021		WATER
7	S-8	8/11/2021		SOIL
8	S-9	8/11/2021		SOIL
9	PW-1	8/11/2021		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
Grand Traverse Analytical
830 Robinwood Court
Traverse City, MI 49686
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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M21-3486
 LOCATION: KORTHASE WELL DRILLING
 MI
 SAMPLED BY: BRAD JEFFERS/MET
 SAMPLE MATRIX: SOIL

GTA PROJECT NO: 081121-4
 GTA SAMPLE NO: 3
 DATE SAMPLED: 8/11/2021
 TIME SAMPLED:
 DATE RECEIVED: 8/11/2021
 TIME RECEIVED: 3:07 PM
 SAMPLE ID: S-3

**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 Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
Benzene	ND	50	ug/Kg (PPB)	MR	8/11/2021	8/12/2021	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					
1,2-Dibromoethane	ND	20					
1,2-Dichloroethane	ND	50					

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



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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M21-3486
 LOCATION: KORTHASE WELL DRILLING
 MI
 SAMPLED BY: BRAD JEFFERS/MET
 SAMPLE MATRIX: WATER

GTA PROJECT NO: 081121-4
 GTA SAMPLE NO: 4
 DATE SAMPLED: 8/11/2021
 TIME SAMPLED:
 DATE RECEIVED: 8/11/2021
 TIME RECEIVED: 3:07 PM
 SAMPLE ID: S-4

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		8/12/2021	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					
1,2-Dibromoethane	ND	1.0					
1,2-Dichloroethane	ND	1.0					

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COMPANY: MACKINAC ENVIRONMENTAL
PROJECT NO: M21-3486
LOCATION: KORTHASE WELL DRILLING
MI
SAMPLED BY: BRAD JEFFERS/MET
SAMPLE MATRIX: WATER

GTA PROJECT NO: 081121-4
GTA SAMPLE NO: 5
DATE SAMPLED: 8/11/2021
TIME SAMPLED:
DATE RECEIVED: 8/11/2021
TIME RECEIVED: 3:07 PM
SAMPLE ID: S-5

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		8/12/2021	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					
1,2-Dibromoethane	ND	1.0					
1,2-Dichloroethane	ND	1.0					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
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COMPANY: MACKINAC ENVIRONMENTAL
PROJECT NO: M21-3486
LOCATION: KORTHASE WELL DRILLING
MI
SAMPLED BY: BRAD JEFFERS/MET
SAMPLE MATRIX: WATER

GTA PROJECT NO: 081121-4
GTA SAMPLE NO: 6
DATE SAMPLED: 8/11/2021
TIME SAMPLED:
DATE RECEIVED: 8/11/2021
TIME RECEIVED: 3:07 PM
SAMPLE ID: S-6

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		8/12/2021	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					
1,2-Dibromoethane	ND	1.0					
1,2-Dichloroethane	ND	1.0					

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COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M21-3486

LOCATION: KORTHASE WELL DRILLING

GTA PROJECT NO: 081121-4

GTA SAMPLE NO: 7

DATE SAMPLED: 8/11/2021

TIME SAMPLED:

DATE RECEIVED: 8/11/2021

TIME RECEIVED: 3:07 PM

SAMPLED BY: BRAD JEFFERS/MET

SAMPLE MATRIX: SOIL

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

SAMPLE ID: S-8

EPA 8260B VOLATILE ORGANICS

Units= ug/Kg (PPB)

Analyst= MR

Date Extracted= 8/11/2021

Date Completed= 8/12/2021

Prep Method= 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	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: M21-3486
 LOCATION: KORTHASE WELL DRILLING

GTA PROJECT NO: 081121-4
 GTA SAMPLE NO: 9
 DATE SAMPLED: 8/11/2021
 TIME SAMPLED:
 DATE RECEIVED: 8/11/2021
 TIME RECEIVED: 3:07 PM

SAMPLED BY: BRAD JEFFERS/MET

SAMPLE MATRIX: WATER

SAMPLE ID: PW-1

EPA 8260B VOLATILE ORGANICS

Units= ug/L (PPB)

Analyst= MR

Date Extracted=

Date Completed= 8/12/2021

Prep Method= 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
CHLOROENZENE	ND	1.0
1-CHLOROBUTANE	ND	1.0
CHLOROFORM	2.0	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-DICHLOROENZENE	ND	1.0
1,3-DICHLOROENZENE	ND	1.0
1,4-DICHLOROENZENE	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-TRICHLOROENZENE	ND	1.0
1,2,4-TRICHLOROENZENE	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
 PROJECT NO: M21-3486
 LOCATION: KORTHASE WELL DRILLING

GTA PROJECT NO: 081121-4
 GTA SAMPLE NO: 1

DATE SAMPLED: 8/11/2021
 TIME SAMPLED:

SAMPLED BY: MI
 BRAD JEFFERS/MET

DATE RECEIVED: 8/11/2021
 TIME RECEIVED: 3:07 PM

SAMPLE MATRIX: SOIL
 SAMPLE ID: S-1

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	330	ug/Kg (PPB)	KC/TR	8/12/2021	8/12/2021	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					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M21-3486
 LOCATION: KORTHASE WELL DRILLING

GTA PROJECT NO: 081121-4
 GTA SAMPLE NO: 2

DATE SAMPLED: 8/11/2021
 TIME SAMPLED:

SAMPLED BY: MI
 BRAD JEFFERS/MET

DATE RECEIVED: 8/11/2021
 TIME RECEIVED: 3:07 PM

SAMPLE MATRIX: SOIL
 SAMPLE ID: S-2

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	330	ug/Kg (PPB)	KC/TR	8/12/2021	8/12/2021	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					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.
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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M21-3486
 LOCATION: KORTHASE WELL DRILLING
 MI
 SAMPLED BY: BRAD JEFFERS/MET
 SAMPLE MATRIX: WATER
 SAMPLE ID: S-5

GTA PROJECT NO: 081121-4
 GTA SAMPLE NO: 5
 DATE SAMPLED: 8/11/2021
 TIME SAMPLED:
 DATE RECEIVED: 8/11/2021
 TIME RECEIVED: 3:07 PM

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	5.0	ug/L (PPB)	KC/TR	8/12/2021	8/12/2021	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					

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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M21-3486
 LOCATION: KORTHASE WELL DRILLING
 MI
 SAMPLED BY: BRAD JEFFERS/MET
 SAMPLE MATRIX: WATER
 SAMPLE ID: S-6

GTA PROJECT NO: 081121-4
 GTA SAMPLE NO: 6
 DATE SAMPLED: 8/11/2021
 TIME SAMPLED:
 DATE RECEIVED: 8/11/2021
 TIME RECEIVED: 3:07 PM

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	5.0	ug/L (PPB)	KC/TR	8/12/2021	8/12/2021	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					

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 PROJECT NO: M21-3486
 LOCATION: KORTHASE WELL DRILLING
 MI
 SAMPLED BY: BRAD JEFFERS/MET
 SAMPLE MATRIX: SOIL
 SAMPLE ID: S-8

GTA PROJECT NO: 081121-4
 GTA SAMPLE NO: 7
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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 Extracted</u>	<u>Date Complete</u>	<u>Prep Method</u>
Acenaphthene	ND	330	ug/Kg (PPB)	KC/TR	8/12/2021	8/12/2021	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					

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

COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M21-3486
 LOCATION: KORTHASE WELL DRILLING
 MI
 SAMPLED BY: BRAD JEFFERS/MET
 SAMPLE MATRIX: SOIL
 SAMPLE ID: S-9

GTA PROJECT NO: 081121-4
 GTA SAMPLE NO: 8
 DATE SAMPLED: 8/11/2021
 TIME SAMPLED:
 DATE RECEIVED: 8/11/2021
 TIME RECEIVED: 3:07 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	330	ug/Kg (PPB)	KC/TR	8/12/2021	8/12/2021	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					

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



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COMPANY: MACKINAC ENVIRONMENTAL
 PROJECT NO: M21-3486
 LOCATION: KORTHASE WELL DRILLING

GTA PROJECT NO: 081121-4
 GTA SAMPLE NO: 9

DATE SAMPLED: 8/11/2021
 TIME SAMPLED:

SAMPLED BY: MI
 BRAD JEFFERS/MET

DATE RECEIVED: 8/11/2021
 TIME RECEIVED: 3:07 PM

SAMPLE MATRIX: WATER
 SAMPLE ID: PW-1

PNA EPA 8270D (SIM)

<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>
Acenaphthene	ND	5.0	ug/L (PPB)	KC/TR	8/12/2021	8/12/2021	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: M21-3486
LOCATION: KORTHASE WELL DRILLING
MI
SAMPLED BY: BRAD JEFFERS/MET
SAMPLE ID: S-3
GTA PROJECT NO: 081121-4
GTA SAMPLE NO: 3
DATE SAMPLED: 8/11/2021
TIME SAMPLED:
DATE RECEIVED: 8/11/2021
TIME RECEIVED: 3:07 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>
LEAD TOTAL EPA 6020A	2.2	0.30	mg/Kg (PPM)	MR	8/13/2021	EPA 3050B

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

DISS = DISSOLVED

COMPANY: MACKINAC ENVIRONMENTAL
PROJECT NO: M21-3486
LOCATION: KORTHASE WELL DRILLING
MI
SAMPLED BY: BRAD JEFFERS/MET
SAMPLE ID: S-4
GTA PROJECT NO: 081121-4
GTA SAMPLE NO: 4
DATE SAMPLED: 8/11/2021
TIME SAMPLED:
DATE RECEIVED: 8/11/2021
TIME RECEIVED: 3:07 PM
SAMPLE MATRIX: WATER

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
LEAD TOTAL EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/13/2021	EPA 3005A

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

DISS = DISSOLVED

COMPANY:	MACKINAC ENVIRONMENTAL	GTA PROJECT NO:	081121-4
PROJECT NO:	M21-3486	GTA SAMPLE NO:	5
LOCATION:	KORTHASE WELL DRILLING	DATE SAMPLED:	8/11/2021
		TIME SAMPLED:	
	MI	DATE RECEIVED:	8/11/2021
SAMPLED BY:	BRAD JEFFERS/MET	TIME RECEIVED:	3:07 PM
		SAMPLE MATRIX:	WATER
SAMPLE ID:	S-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>
LEAD TOTAL EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/13/2021	EPA 3005A

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

DISS = DISSOLVED

COMPANY:	MACKINAC ENVIRONMENTAL	GTA PROJECT NO:	081121-4
PROJECT NO:	M21-3486	GTA SAMPLE NO:	6
LOCATION:	KORTHASE WELL DRILLING	DATE SAMPLED:	8/11/2021
		TIME SAMPLED:	
	MI	DATE RECEIVED:	8/11/2021
SAMPLED BY:	BRAD JEFFERS/MET	TIME RECEIVED:	3:07 PM
		SAMPLE MATRIX:	WATER
SAMPLE ID:	S-6		

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
LEAD TOTAL EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/13/2021	EPA 3005A

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

DISS = DISSOLVED



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COMPANY:	MACKINAC ENVIRONMENTAL	GTA PROJECT NO:	081121-4
PROJECT NO:	M21-3486	GTA SAMPLE NO:	7
LOCATION:	KORTHASE WELL DRILLING	DATE SAMPLED:	8/11/2021
		TIME SAMPLED:	
		DATE RECEIVED:	8/11/2021
		TIME RECEIVED:	3:07 PM
SAMPLED BY:	MI BRAD JEFFERS/MET	SAMPLE MATRIX:	SOIL
SAMPLE ID:	S-8		

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
CADMIUM TOTAL EPA 6020A	ND	0.28	mg/Kg (PPM)	MR	8/13/2021	EPA 3050B
CHROMIUM TOTAL EPA 6020A	3.1	0.28	mg/Kg (PPM)	MR	8/13/2021	EPA 3050B
LEAD TOTAL EPA 6020A	1.0	0.28	mg/Kg (PPM)	MR	8/13/2021	EPA 3050B

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

DISS = DISSOLVED



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COMPANY:	MACKINAC ENVIRONMENTAL	GTA PROJECT NO:	081121-4
PROJECT NO:	M21-3486	GTA SAMPLE NO:	9
LOCATION:	KORTHASE WELL DRILLING	DATE SAMPLED:	8/11/2021
		TIME SAMPLED:	
		DATE RECEIVED:	8/11/2021
		TIME RECEIVED:	3:07 PM
SAMPLED BY:	MI BRAD JEFFERS/MET	SAMPLE MATRIX:	WATER
SAMPLE ID:	PW-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>
CADMIUM TOTAL EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/13/2021	EPA 3005A
CHROMIUM TOTAL EPA 6020A	0.012	0.0010	mg/L (PPM)	MR	8/13/2021	EPA 3005A
LEAD TOTAL EPA 6020A	ND	0.0010	mg/L (PPM)	MR	8/13/2021	EPA 3005A

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

DISS = DISSOLVED



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COMPANY: MACKINAC ENVIRONMENTAL

NAME:
PROJECT NO: M21-3486

LOCATION: KORTHASE WELL DRILLING

MI

GTA PROJECT NO: 081121-
SAMPLED BY: BRAD JEFFERS/MET

DATE SAMPLED: 8/11/2021
TIME SAMPLED:

SAMPLE MATRIX: SOIL

DATE RECEIVED: 8/11/2021
TIME RECEIVED: 3:07 PM

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: S-1	% MOISTURE EPA 3550C	6.0	0.050	% OF SAMPLE	TR	8/12/2021
SAMPLE ID: S-2	% MOISTURE EPA 3550C	9.9	0.050	% OF SAMPLE	TR	8/12/2021
SAMPLE ID: S-3	% MOISTURE EPA 3550C	3.3	0.050	% OF SAMPLE	TR	8/12/2021
SAMPLE ID: S-8	% MOISTURE EPA 3550C	3.3	0.050	% OF SAMPLE	TR	8/12/2021
SAMPLE ID: S-9	% MOISTURE EPA 3550C	1.7	0.050	% OF SAMPLE	TR	8/12/2021

