



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: M20-3219
GTA ProjNo: 021320-2

Site Addr: BURGER KING

Sampled By: BRAD JEFFERS/MET
Date Rec: 2/13/2020
Time Rec: 12:05 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	SB-1 @ 1-2'	2/11/2020		SOIL
2	SB-2 @ 1-2'	2/11/2020		SOIL
3	SB-2 @ 3-4'	2/11/2020		SOIL
4	SB-3 @ 1-2'	2/11/2020		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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COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M20-3219
LOCATION: BURGER KINGSAMPLED BY: MI
BRAD JEFFERS/METSAMPLE MATRIX: SOIL
SAMPLE ID: SB-1 @ 1-2'GTA PROJECT NO: 021320-2
GTA SAMPLE NO: 1DATE SAMPLED: 2/11/2020
TIME SAMPLED:DATE RECEIVED: 2/13/2020
TIME RECEIVED: 12:05 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	2/17/2020	2/17/2020	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: M20-3219
LOCATION: BURGER KING

GTA PROJECT NO: 021320-2
GTA SAMPLE NO: 2

DATE SAMPLED: 2/11/2020
TIME SAMPLED:

SAMPLED BY: MI
BRAD JEFFERS/MET

DATE RECEIVED: 2/13/2020
TIME RECEIVED: 12:05 PM

SAMPLE MATRIX: SOIL
SAMPLE ID: SB-2 @ 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	2/17/2020	2/17/2020	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: 021320-2

PROJECT NO: M20-3219

GTA SAMPLE NO: 3

LOCATION: BURGER KING

DATE SAMPLED: 2/11/2020

TIME SAMPLED:

SAMPLED BY: MI

DATE RECEIVED: 2/13/2020

BRAD JEFFERS/MET

TIME RECEIVED: 12:05 PM

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-2 @ 3-4'

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	2/17/2020	2/17/2020	EPA 3550B
Acenaphthylene	ND	330					
Anthracene	ND	330					
Benzo(a)anthracene	ND	330					
Benzo(b)fluoranthene	540	330					
Benzo(k)fluoranthene	ND	330					
Benzo(a)pyrene	ND	330					
Benzo(ghi)perylene	ND	330					
2-Chloronaphthalene	ND	330					
Chrysene	330	330					
Dibenz(ah)anthracene	ND	330					
Fluoranthene	440	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: M20-3219
LOCATION: BURGER KING

SAMPLED BY: MI
BRAD JEFFERS/MET

SAMPLE MATRIX: SOIL
SAMPLE ID: SB-3 @ 1-2'

GTA PROJECT NO: 021320-2
GTA SAMPLE NO: 4

DATE SAMPLED: 2/11/2020
TIME SAMPLED:

DATE RECEIVED: 2/13/2020
TIME RECEIVED: 12:05 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	2/17/2020	2/17/2020	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

GTA PROJECT NO: 021320-2

PROJECT NO: M20-3219

GTA SAMPLE NO: 1

LOCATION: BURGER KING

DATE SAMPLED: 2/11/2020

TIME SAMPLED:

DATE RECEIVED: 2/13/2020

TIME RECEIVED: 12:05 PM

SAMPLED BY: MI

BRAD JEFFERS/MET

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-1 @ 1-2'

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	0.46	0.35	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
BARIUM TOTAL EPA 6020A	8.4	0.35	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
CADMIUM TOTAL EPA 6020A	ND	0.35	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
CHROMIUM TOTAL EPA 6020A	5.2	0.35	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
COPPER TOTAL EPA 6020A	2.3	0.35	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
LEAD TOTAL EPA 6020A	2.0	0.35	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
MERCURY TOTAL EPA 7471B	ND	0.013	mg/Kg (PPM)	MR	2/14/2020	EPA 7471
SELENIUM TOTAL EPA 6020A	ND	0.35	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
SILVER TOTAL EPA 6020A	ND	0.35	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
ZINC TOTAL EPA 6020A	9.1	3.5	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B

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COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 021320-2

PROJECT NO: M20-3219

GTA SAMPLE NO: 2

LOCATION: BURGER KING

DATE SAMPLED: 2/11/2020

TIME SAMPLED:

DATE RECEIVED: 2/13/2020

TIME RECEIVED: 12:05 PM

SAMPLED BY: MI

BRAD JEFFERS/MET

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-2 @ 1-2'

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	1.3	0.36	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
BARIUM TOTAL EPA 6020A	9.6	0.36	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
CADMIUM TOTAL EPA 6020A	ND	0.36	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
CHROMIUM TOTAL EPA 6020A	4.5	0.36	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
COPPER TOTAL EPA 6020A	11	0.36	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
LEAD TOTAL EPA 6020A	17	0.36	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
MERCURY TOTAL EPA 7471B	0.032	0.014	mg/Kg (PPM)	MR	2/14/2020	EPA 7471
SELENIUM TOTAL EPA 6020A	ND	0.36	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
SILVER TOTAL EPA 6020A	ND	0.36	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
ZINC TOTAL EPA 6020A	16	3.6	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B

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PROJECT NO: M20-3219
LOCATION: BURGER KING
MI
SAMPLED BY: BRAD JEFFERS/MET
SAMPLE ID: SB-2 @ 3-4'

GTA PROJECT NO: 021320-2
GTA SAMPLE NO: 3
DATE SAMPLED: 2/11/2020
TIME SAMPLED:
DATE RECEIVED: 2/13/2020
TIME RECEIVED: 12:05 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>
ARSENIC TOTAL EPA 6020A	4.4	0.38	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
BARIUM TOTAL EPA 6020A	21	0.38	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
CADMIUM TOTAL EPA 6020A	ND	0.38	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
CHROMIUM TOTAL EPA 6020A	5.0	0.38	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
COPPER TOTAL EPA 6020A	84	0.38	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
LEAD TOTAL EPA 6020A	99	0.38	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
MERCURY TOTAL EPA 7471B	0.079	0.016	mg/Kg (PPM)	MR	2/14/2020	EPA 7471
SELENIUM TOTAL EPA 6020A	ND	0.38	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
SILVER TOTAL EPA 6020A	ND	0.38	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
ZINC TOTAL EPA 6020A	46	3.8	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B

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COMPANY: MACKINAC ENVIRONMENTAL

PROJECT NO: M20-3219
LOCATION: BURGER KINGSAMPLED BY: MI
BRAD JEFFERS/MET

SAMPLE ID: SB-3 @ 1-2'

GTA PROJECT NO: 021320-2

GTA SAMPLE NO: 4

DATE SAMPLED: 2/11/2020
TIME SAMPLED:DATE RECEIVED: 2/13/2020
TIME RECEIVED: 12:05 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>
ARSENIC TOTAL EPA 6020A	0.77	0.39	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
BARIUM TOTAL EPA 6020A	16	0.39	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
CADMIUM TOTAL EPA 6020A	ND	0.39	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
CHROMIUM TOTAL EPA 6020A	9.7	0.39	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
COPPER TOTAL EPA 6020A	4.4	0.39	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
LEAD TOTAL EPA 6020A	6.6	0.39	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
MERCURY TOTAL EPA 7471B	0.12	0.015	mg/Kg (PPM)	MR	2/14/2020	EPA 7471
SELENIUM TOTAL EPA 6020A	ND	0.39	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
SILVER TOTAL EPA 6020A	ND	0.39	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B
ZINC TOTAL EPA 6020A	11	3.9	mg/Kg (PPM)	MR	2/15/2020	EPA 3050B

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COMPANY: MACKINAC ENVIRONMENTAL

GTA PROJECT NO: 021320-2

NAME:

SAMPLED BY: BRAD JEFFERS/MET

PROJECT NO: M20-3219

DATE SAMPLED: 2/11/2020

TIME SAMPLED:

LOCATION: BURGER KING

SAMPLE MATRIX: SOIL

DATE RECEIVED: 2/13/2020

TIME RECEIVED: 12:05 PM

MI

MOISTURE

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
SAMPLE ID: SB-1 @ 1-2'	% MOISTURE EPA 3550C	6.8	0.050	% OF	AS	2/13/2020
SAMPLE ID: SB-2 @ 1-2'	% MOISTURE EPA 3550C	7.4	0.050	% OF	AS	2/13/2020
SAMPLE ID: SB-2 @ 3-4'	% MOISTURE EPA 3550C	7.8	0.050	% OF	AS	2/13/2020
SAMPLE ID: SB-3 @ 1-2'	% MOISTURE EPA 3550C	11	0.050	% OF	AS	2/13/2020

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3 BUSINESS DAYS