



**INDEPENDENT TESTING LAB**

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

[www.gtanalytical.com](http://www.gtanalytical.com)

Company: BCOC  
Name:  
ClientProj: 4035  
GTA ProjNo: 050219-1

Site Addr: SPIRIT OF ONEKAMA  
5028 MAIN ST.  
ONEKAMA  
Sampled By: DOUG HULL/COMPLIANCE INC.  
Date Rec: 5/2/2019  
Time Rec: 9:55 AM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	B-1	5/1/2019		SOIL
2	B-2	5/1/2019		SOIL
3	B-3	5/1/2019		SOIL
4	B-4	5/1/2019		SOIL
5	CB-1	5/1/2019		WATER
6	OF-1	5/1/2019		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 L Chase*

Kirk L. Chase/Chemist  
Grand Traverse Analytical  
830 Robinwood Court  
Traverse City, MI 49686  
Ph: 231-929-0905  
Fx: 231-929-0894  
SP: 231-590-0291  
[kirk@gtanalytical.com](mailto:kirk@gtanalytical.com)

COMPANY: BCOC  
PROJECT NO: 4035  
LOCATION: SPIRIT OF ONEKAMA  
5028 MAIN ST.  
ONEKAMA  
MI  
SAMPLED BY: DOUG HULL/COMPLIANCE INC.  
SAMPLE MATRIX: SOIL

GTA PROJECT NO: 050219-1  
GTA SAMPLE NO: 1  
DATE SAMPLED: 5/1/2019  
TIME SAMPLED:  
DATE RECEIVED: 5/2/2019  
TIME RECEIVED: 9:55 AM  
SAMPLE ID: B-1

\*\*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	5/1/2019	5/3/2019	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

ND = NOT DETECTED

LOD = LIMIT OF DETECTION



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COMPANY:	BCOC	GTA PROJECT NO:	050219-1
PROJECT NO:	4035	GTA SAMPLE NO:	2
LOCATION:	SPIRIT OF ONEKAMA	DATE SAMPLED:	5/1/2019
	5028 MAIN ST.	TIME SAMPLED:	
	ONEKAMA	DATE RECEIVED:	5/2/2019
	MI	TIME RECEIVED:	9:55 AM
SAMPLED BY:	DOUG HULL/COMPLIANCE INC.	SAMPLE ID:	B-2
SAMPLE MATRIX:	SOIL		

\*\*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	5/1/2019	5/3/2019	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					

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COMPANY: BCOC  
 PROJECT NO: 4035  
 LOCATION: SPIRIT OF ONEKAMA  
 5028 MAIN ST.  
 ONEKAMA  
 MI  
 SAMPLED BY: DOUG HULL/COMPLIANCE INC.  
 SAMPLE MATRIX: SOIL

GTA PROJECT NO: 050219-1  
 GTA SAMPLE NO: 3  
 DATE SAMPLED: 5/1/2019  
 TIME SAMPLED:  
 DATE RECEIVED: 5/2/2019  
 TIME RECEIVED: 9:55 AM  
 SAMPLE ID: B-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</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	ND	50	ug/Kg (PPB)	MR	5/1/2019	5/3/2019	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					

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COMPANY:	BCOC	GTA PROJECT NO:	050219-1
PROJECT NO:	4035	GTA SAMPLE NO:	4
LOCATION:	SPIRIT OF ONEKAMA	DATE SAMPLED:	5/1/2019
	5028 MAIN ST.	TIME SAMPLED:	
	ONEKAMA	DATE RECEIVED:	5/2/2019
	MI	TIME RECEIVED:	9:55 AM
SAMPLED BY:	DOUG HULL/COMPLIANCE INC.	SAMPLE ID:	B-4
SAMPLE MATRIX:	SOIL		

\*\*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	5/1/2019	5/3/2019	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

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COMPANY: BCOC  
PROJECT NO: 4035  
LOCATION: SPIRIT OF ONEKAMA  
5028 MAIN ST.  
ONEKAMA  
MI  
SAMPLED BY: DOUG HULL/COMPLIANCE INC.  
SAMPLE MATRIX: WATER

GTA PROJECT NO: 050219-1  
GTA SAMPLE NO: 5  
DATE SAMPLED: 5/1/2019  
TIME SAMPLED:  
DATE RECEIVED: 5/2/2019  
TIME RECEIVED: 9:55 AM  
SAMPLE ID: CB-1

**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	45	1.0	ug/L (PPB)	MR		5/4/2019	EPA 5030B
Toluene	34	1.0					
Ethylbenzene	30	1.0					
Xylene(Total)	210	3.0					
1,2,4-Trimethylbenzene	50	1.0					
1,3,5-Trimethylbenzene	12	1.0					
Methyl-t-Butyl Ether	8.3	5.0					
Naphthalene	38	5.0					
2-Methylnaphthalene	21	5.0					
1,2-Dibromoethane	ND	1.0					
1,2-Dichloroethane	ND	1.0					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT  
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COMPANY: BCOC  
PROJECT NO: 4035  
LOCATION: SPIRIT OF ONEKAMA  
5028 MAIN ST.  
ONEKAMA  
MI  
SAMPLED BY: DOUG HULL/COMPLIANCE INC.  
SAMPLE MATRIX: WATER

GTA PROJECT NO: 050219-1  
GTA SAMPLE NO: 6  
DATE SAMPLED: 5/1/2019  
TIME SAMPLED:  
DATE RECEIVED: 5/2/2019  
TIME RECEIVED: 9:55 AM  
SAMPLE ID: OF-1

**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	1.6	1.0	ug/L (PPB)	MR		5/4/2019	EPA 5030B
Toluene	3.3	1.0					
Ethylbenzene	1.6	1.0					
Xylene(Total)	8.4	3.0					
1,2,4-Trimethylbenzene	3.1	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: BCOC  
 PROJECT NO: 4035  
 LOCATION: SPIRIT OF ONEKAMA  
 5028 MAIN ST.  
 ONEKAMA  
 MI  
 SAMPLED BY: DOUG HULL/COMPLIANCE INC.  
 SAMPLE MATRIX: SOIL  
 SAMPLE ID: B-1

GTA PROJECT NO: 050219-1  
 GTA SAMPLE NO: 1  
 DATE SAMPLED: 5/1/2019  
 TIME SAMPLED:  
 DATE RECEIVED: 5/2/2019  
 TIME RECEIVED: 9:55 AM

**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	330.0	ug/Kg (PPB)	KC/TR	5/5/2019	5/6/2019	EPA 3550B
Acenaphthylene	ND	330.0					
Anthracene	ND	330.0					
Benzo(a)anthracene	ND	330.0					
Benzo(b)fluoranthene	ND	330.0					
Benzo(k)fluoranthene	ND	330.0					
Benzo(a)pyrene	ND	330.0					
Benzo(ghi)perylene	ND	330.0					
2-Chloronaphthalene	ND	330.0					
Chrysene	ND	330.0					
Dibenz(ah)anthracene	ND	330.0					
Fluoranthene	480	330.0					
Fluorene	ND	330.0					
Indeno(123-cd)pyrene	ND	330.0					
2-Methylnaphthalene	ND	330.0					
Naphthalene	ND	330.0					
Phenanthrene	ND	330.0					
Pyrene	ND	330.0					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.  
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COMPANY:	BCOC	GTA PROJECT NO:	050219-1
PROJECT NO:	4035	GTA SAMPLE NO:	2
LOCATION:	SPIRIT OF ONEKAMA	DATE SAMPLED:	5/1/2019
	5028 MAIN ST.	TIME SAMPLED:	
	ONEKAMA	DATE RECEIVED:	5/2/2019
	MI	TIME RECEIVED:	9:55 AM
SAMPLED BY:	DOUG HULL/COMPLIANCE INC.		
SAMPLE MATRIX:	SOIL		
SAMPLE ID:	B-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	330.0	ug/Kg (PPB)	KC/TR	5/5/2019	5/6/2019	EPA 3550B
Acenaphthylene	ND	330.0					
Anthracene	ND	330.0					
Benzo(a)anthracene	ND	330.0					
Benzo(b)fluoranthene	ND	330.0					
Benzo(k)fluoranthene	ND	330.0					
Benzo(a)pyrene	ND	330.0					
Benzo(ghi)perylene	ND	330.0					
2-Chloronaphthalene	ND	330.0					
Chrysene	ND	330.0					
Dibenz(ah)anthracene	ND	330.0					
Fluoranthene	420	330.0					
Fluorene	ND	330.0					
Indeno(123-cd)pyrene	ND	330.0					
2-Methylnaphthalene	ND	330.0					
Naphthalene	ND	330.0					
Phenanthrene	ND	330.0					
Pyrene	ND	330.0					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.  
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COMPANY: BCOC  
 PROJECT NO: 4035  
 LOCATION: SPIRIT OF ONEKAMA  
 5028 MAIN ST.  
 ONEKAMA  
 MI  
 SAMPLED BY: DOUG HULL/COMPLIANCE INC.  
 SAMPLE MATRIX: SOIL  
 SAMPLE ID: B-3

GTA PROJECT NO: 050219-1  
 GTA SAMPLE NO: 3  
 DATE SAMPLED: 5/1/2019  
 TIME SAMPLED:  
 DATE RECEIVED: 5/2/2019  
 TIME RECEIVED: 9:55 AM

**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	330.0	ug/Kg (PPB)	KC/TR	5/5/2019	5/6/2019	EPA 3550B
Acenaphthylene	ND	330.0					
Anthracene	ND	330.0					
Benzo(a)anthracene	470	330.0					
Benzo(b)fluoranthene	650	330.0					
Benzo(k)fluoranthene	540	330.0					
Benzo(a)pyrene	600	330.0					
Benzo(ghi)perylene	420	330.0					
2-Chloronaphthalene	ND	330.0					
Chrysene	630	330.0					
Dibenz(ah)anthracene	ND	330.0					
Fluoranthene	1,800	330.0					
Fluorene	ND	330.0					
Indeno(123-cd)pyrene	450	330.0					
2-Methylnaphthalene	ND	330.0					
Naphthalene	ND	330.0					
Phenanthrene	1,100	330.0					
Pyrene	1,000	330.0					

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COMPANY: BCOC  
 PROJECT NO: 4035  
 LOCATION: SPIRIT OF ONEKAMA  
 5028 MAIN ST.  
 ONEKAMA  
 MI  
 SAMPLED BY: DOUG HULL/COMPLIANCE INC.  
 SAMPLE MATRIX: SOIL  
 SAMPLE ID: B-4

GTA PROJECT NO: 050219-1  
 GTA SAMPLE NO: 4  
 DATE SAMPLED: 5/1/2019  
 TIME SAMPLED:  
 DATE RECEIVED: 5/2/2019  
 TIME RECEIVED: 9:55 AM

**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	330.0	ug/Kg (PPB)	KC/TR	5/5/2019	5/6/2019	EPA 3550B
Acenaphthylene	ND	330.0					
Anthracene	ND	330.0					
Benzo(a)anthracene	ND	330.0					
Benzo(b)fluoranthene	ND	330.0					
Benzo(k)fluoranthene	ND	330.0					
Benzo(a)pyrene	ND	330.0					
Benzo(ghi)perylene	ND	330.0					
2-Chloronaphthalene	ND	330.0					
Chrysene	ND	330.0					
Dibenz(ah)anthracene	ND	330.0					
Fluoranthene	ND	330.0					
Fluorene	ND	330.0					
Indeno(123-cd)pyrene	ND	330.0					
2-Methylnaphthalene	ND	330.0					
Naphthalene	ND	330.0					
Phenanthrene	ND	330.0					
Pyrene	ND	330.0					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.  
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 LOD = LIMIT OF DETECTION



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COMPANY: BCOC

NAME:  
PROJECT NO: 4035

LOCATION: SPIRIT OF ONEKAMA  
5028 MAIN ST.  
ONEKAMA  
MI

GTA PROJECT NO: 050219-1  
SAMPLED BY: DOUG HULL/COMPLIANCE INC.

DATE SAMPLED: 5/1/2019  
TIME SAMPLED:

SAMPLE MATRIX: SOIL

DATE RECEIVED: 5/2/2019  
TIME RECEIVED: 9:55 AM

**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: B-1	% MOISTURE EPA 3550C	11	0.050	% OF SAMPLE	AS	5/2/2019
SAMPLE ID: B-2	% MOISTURE EPA 3550C	15	0.050	% OF SAMPLE	AS	5/2/2019
SAMPLE ID: B-3	% MOISTURE EPA 3550C	22	0.050	% OF SAMPLE	AS	5/2/2019
SAMPLE ID: B-4	% MOISTURE EPA 3550C	14	0.050	% OF SAMPLE	AS	5/2/2019

**CHAIN OF CUSTODY**

PROJECT NUMBER <i>4035</i>	SITE NAME/ADDRESS <i>Spirit of Onokama 5028 Main St, Onokama, MI</i>	COMPANY/NAME <i>Blarney Castle Oil Co.</i>
SAMPLED BY <i>Doug Hill</i>	COMPANY <i>Compliance, Inc.</i>	GTA PROJECT # <i>050219-1</i>

**SAMPLE INFORMATION**

#	SAMPLE ID	DATE SAMPLED	TIME	MATRIX	ANALYSIS
1	B-1	5-1-19		Soil	(A)(B) BTEX
2	B-2	↓		↓	(A)(B) MTBE
3	B-3	↓		↓	(A)(B) Naphthalene
4	B-4	↓		↓	(A)(B) 2-Methylnaphthalene
					(A) 1,2,4 TMB
					1,3,5 TMB
5	CB-1	5-1-19		Water	(A) 1,2-Dichloroethane
6	OF-1	5-1-19		Water	(A) 1,2-Dibromoethane
					(B) EPNAs
					Del
					0

**BILL TO:**

*Compliance, Inc.*

**REPORT TO:**

*Doug Hill*

RELEASED BY	DATE/TIME	RECEIVED BY	DATE/TIME
<i>Doug Hill</i>	5-1-19 5:15PM	<i>Compliance, Inc. 4°C storage</i>	5-1-19 5:15PM
<i>Compliance, Inc. 4°C storage</i>	5-2-19 9:25AM	<i>Doug Hill</i>	5-2-19 9:25AM
<i>Doug Hill</i>	5-2-19 9:52AM	<i>W. E.</i>	5-2-19 9:52A

REQUESTED TAT  STANDARD  1 BUSINESS DAY  2 BUSINESS DAYS  3 BUSINESS DAYS