



Eastern Research Group
601 Keystone Park Drive
Suite 700
Morrisville, NC 27560

December 10, 2019

Mr. Benjamin Chandler
GHD Services Inc.
11719 Hinson Road, Suite 100
Little Rock, AR 72223
Project Name: Village of Gurnee

Dear Mr. Benjamin Chandler,

This report contains the analytical results for the sample(s) received under chain(s) of custody by Eastern Research Group on 11/21/19 12:05.

The test results in this report are in compliance with NELAC accreditation requirements for the certified parameters. All analyses were performed as described in the US EPA-approved QAPP, under the contract for UATMP, NATTS, CSATAM, PAMS and NMOC support (US EPA Contract No. EP-D-14-030). This cover page is an integral part of this report, and any exceptions or comments are noted on the last page.

Release of the data contained in this data package and in the data submitted in the electronic data deliverable, has been authorized by the Program Manager, or the Program Manager's designee as verified by the following signature.

The issuance of the final Certificate of Analysis takes precedence over any previous Report. If you have any questions, please contact me at 919-468-7924.

Sincerely,

Julie Swift
Program Manager
julie.swift@erg.com

The information contained in this report and its attachment(s) are intended only for the use of the individual to whom it is addressed and may contain information that is privileged, confidential, or exempt from disclosure. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this report is strictly prohibited. If you have received this report in error, please notify julie.swift@erg.com and delete the report without retaining any copies.



CERTIFICATE OF ANALYSIS

GHD Services Inc.
 11719 Hinson Road, Suite 100
 Little Rock, AR 72223
ATTN: Mr. Benjamin Chandler
PHONE: (501) 224-1926 **FAX:**

FILE #: 4210.00
REPORTED: 12/10/19 08:02
SUBMITTED: 11/21/19
AQS SITE CODE:
SITE CODE: Village of Gurnee

ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	<u>Received</u>
11197130-V1-09	9112108-01	Air	11/19/19 23:59	11/21/19 12:05
11197130-V3-09	9112108-03	Air	11/19/19 23:59	11/21/19 12:05
11197130-V4-09	9112108-04	Air	11/19/19 23:59	11/21/19 12:05
11197130-V5-09	9112108-05	Air	11/19/19 23:59	11/21/19 12:05
11197130-M1-09	9112108-06	Air	11/19/19 23:59	11/21/19 12:05
11197130-M2-09	9112108-07	Air	11/19/19 23:59	11/21/19 12:05
11197130-M3-09	9112108-08	Air	11/19/19 23:59	11/21/19 12:05
11197130-M4-09	9112108-09	Air	11/19/19 23:59	11/21/19 12:05
11197130-M5-09	9112108-10	Air	11/19/19 23:59	11/21/19 12:05
11197130-R1-09	9112108-11	Air	11/19/19 23:59	11/21/19 12:05
11197130-R2-09	9112108-12	Air	11/19/19 23:59	11/21/19 12:05



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Description: 11197130-V1-09 **Lab ID:** 9112108-01 **Sampled:** 11/19/19 23:59
Pressure @ Receipt: 6.00" Hg **Canister #:** 5063 **Received:** 11/21/19 12:05
Comments: **Analyzed:** 11/27/19 01:10

Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m³</u>		<u>ppbv</u>
Ethylene oxide	0.118	0.21		0.0250



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Description: 11197130-V3-09 **Lab ID:** 9112108-03 **Sampled:** 11/19/19 23:59
Pressure @ Receipt: 7.00" Hg **Canister #:** 5074 **Received:** 11/21/19 12:05
Comments: **Analyzed:** 11/27/19 02:46

Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m³</u>		<u>ppbv</u>
Ethylene oxide	0.106	0.19	LK	0.0250



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Description: 11197130-V4-09 **Lab ID:** 9112108-04 **Sampled:** 11/19/19 23:59
Pressure @ Receipt: 6.50" Hg **Canister #:** SAT113 **Received:** 11/21/19 12:05
Comments: **Analyzed:** 11/27/19 03:34

Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m³</u>		<u>ppbv</u>
Ethylene oxide	0.0885	0.16	LK	0.0250



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Description: 11197130-V5-09 **Lab ID:** 9112108-05 **Sampled:** 11/19/19 23:59
Pressure @ Receipt: 6.00" Hg **Canister #:** 5065 **Received:** 11/21/19 12:05
Comments: **Analyzed:** 11/27/19 04:23

Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m³</u>		<u>ppbv</u>
Ethylene oxide	0.0587	0.11	LK	0.0250



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Description: 11197130-M1-09 **Lab ID:** 9112108-06 **Sampled:** 11/19/19 23:59
Pressure @ Receipt: 4.00" Hg **Canister #:** A21011 **Received:** 11/21/19 12:05
Comments: **Analyzed:** 12/02/19 14:15

Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m³</u>		<u>ppbv</u>
Ethylene oxide	0.0723	0.13		0.0250



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Description: 11197130-M2-09 **Lab ID:** 9112108-07 **Sampled:** 11/19/19 23:59
Pressure @ Receipt: 5.50" Hg **Canister #:** A22294 **Received:** 11/21/19 12:05
Comments: **Analyzed:** 12/02/19 15:03

Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m³</u>		<u>ppbv</u>
Ethylene oxide	0.109	0.20	LK	0.0250



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Description: 11197130-M3-09 **Lab ID:** 9112108-08 **Sampled:** 11/19/19 23:59
Pressure @ Receipt: 5.00" Hg **Canister #:** 18881 **Received:** 11/21/19 12:05
Comments: **Analyzed:** 12/02/19 15:51

Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m³</u>		<u>ppbv</u>
Ethylene oxide	0.0412	0.07	LK	0.0250



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Description: 11197130-M4-09 **Lab ID:** 9112108-09 **Sampled:** 11/19/19 23:59
Pressure @ Receipt: 6.00" Hg **Canister #:** SAT110 **Received:** 11/21/19 12:05
Comments: **Analyzed:** 12/02/19 16:39

Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m³</u>		<u>ppbv</u>
Ethylene oxide	0.296	0.53		0.0250



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 SITE CODE: Village of Gurnee

Description: 11197130-M5-09 **Lab ID:** 9112108-10 **Sampled:** 11/19/19 23:59
Pressure @ Receipt: 6.50" Hg **Canister #:** 19657 **Received:** 11/21/19 12:05
Comments: **Analyzed:** 12/02/19 17:28

Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m³</u>		<u>ppbv</u>
Ethylene oxide	0.0549	0.10		0.0250



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Description: 11197130-R1-09 **Lab ID:** 9112108-11 **Sampled:** 11/19/19 23:59
Pressure @ Receipt: 8.00" Hg **Canister #:** 5146 **Received:** 11/21/19 12:05
Comments: **Analyzed:** 12/02/19 18:16

Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m³</u>		<u>ppbv</u>
Ethylene oxide	0.112	0.20	LK	0.0250



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 SITE CODE: Village of Gurnee

Description: 11197130-R2-09 **Lab ID:** 9112108-12 **Sampled:** 11/19/19 23:59
Pressure @ Receipt: 6.50" Hg **Canister #:** SAT028 **Received:** 11/21/19 12:05
Comments: **Analyzed:** 12/02/19 19:05

Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m³</u>		<u>ppbv</u>
Ethylene oxide	0.155	0.28	LK	0.0250



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Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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Air Toxics by EPA Compendium Method TO-15 - Quality Control

Batch B9K2605 - Summa Canister Prep

Blank (B9K2605-BLK1)			Prepared: 11/18/19	Analyzed: 11/26/19		
Ethylene oxide	ND	ppbv				U

Duplicate (B9K2605-DUP1)			Source: 9112108-05		Prepared: 11/19/19	Analyzed: 11/27/19
Ethylene oxide	ND	ppbv	ND		25	LK, U

Batch B9L0205 - Summa Canister Prep

Blank (B9L0205-BLK1)			Prepared: 11/18/19	Analyzed: 12/02/19		
Ethylene oxide	ND	ppbv				U



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REPORTED: 12/10/19 08:02
SUBMITTED: 11/21/19
AQS SITE CODE:
SITE CODE: Village of Gurnee

Analyte	Result	Units	% Difference	Limit (%)	Notes
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Air Toxics by EPA Compendium Method TO-15 - Quality Control

Sequence 1911058

Calibration Check (1911058-CCV1)

Prepared & Analyzed: 11/26/19

Ethylene oxide	2.75	ppbv	9.9	30.00	
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Sequence 1912002

Calibration Check (1912002-CCV1)

Prepared & Analyzed: 12/02/19

Ethylene oxide	2.69	ppbv	7.7	30.00	
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FILE #: 4210.00

REPORTED: 12/10/19 08:02

SUBMITTED: 11/21/19

AQS SITE CODE:

SITE CODE: Village of Gurnee

Notes and Definitions

U	Under Detection Limit
LK	Analyte identified; Reported value may be biased high.
ND	Analyte NOT DETECTED
NR	Not Reported
MDL	Method Detection Limit
RPD	Relative Percent Difference

Note: The test results meet all requirements of NELAC; however the following analytes are not accredited: 1,2,4-trimethylbenzene, 1,2-dibromoethane, 1,2-dichloropropane, 1,3,5-trimethylbenzene, 1,3-butadiene, acetylene, acrolein, bromochloromethane, bromodichloromethane, bromoform, carbon disulfide, dibromochloromethane, dichlorodifluoromethane, dichlorotetrafluoroethane, ethyl acrylate, ethyl tert butyl ether, ethylene oxide, hexachloro-1,3-butadiene, n-octane, propylene, tert amyl methyl ether, tetrachloroethylene, trans-1,2-dichloroethylene, trichlorofluoromethane, and trichlorotrifluoroethane.