

December 13, 2019

MEMORANDUM

To: Karen Hays, Air Branch Chief *KH*

Through: Dika Kuoh, Assistant Branch Chief

From: DeAnna Oser, Ambient Monitoring Program Manager

RE: Covington October 3- October 30 Revised Sampling Results for Ethylene Oxide

Samples of ethylene oxide (EtO) were collected in October 2019 by the Ambient Monitoring Program in the Covington area to characterize the EtO concentration. All samples were sent for analysis to Eastern Research Group (ERG), a contract laboratory used both by Georgia EPD and US EPA. ERG has revised the sampling results previously reported to Georgia EPD upon request by the US EPA (reasons provided in the attached December 3, 2019 email from Ken Mitchell, Acting Director of the Air and Radiation Division at US EPA Region 4). The values below reflect the revised concentrations for the EtO project to date in Covington.

Samples listed in the table below as ND were reported below the method detection limit of 0.0452 ug/m³. The samples listed as X indicate that the sample was not collected properly. The code LK indicates that the concentration may be biased high. The sample listed as QA is a sample taken side by side during the same time period to compare the precision of the measurement. No samples were taken at location C6 during this period. The Qualifier code of "2" was given two samples to indicate that the collection deviated from established procedures, but the integrity of the sample was not compromised.

Location	Date	Qualifier	EtO Concentration (ug/m3)
C1	10/3/2019		1.08
C1	10/6/2019		0.14
C1	10/12/2019		1.60
C1	10/18/2019		X
C1	10/24/2019		X
C1	10/27/2019		2.56
C1	10/30/2019		0.35
C2	10/3/2019	LK	0.60
C2	10/6/2019		0.16

C2		10/12/2019		X
C2		10/18/2019	2	0.47
C2		10/24/2019		X
C2		10/27/2019		0.32
C2		10/30/2019		0.33
C3		10/3/2019		0.49
C3		10/6/2019		0.17
C3		10/12/2019		0.59
C3		10/18/2019		0.57
C3		10/24/2019		0.06
C3		10/27/2019		0.36
C3		10/30/2019		0.35
C4		10/3/2019		1.88
C4		10/6/2019		1.65
C4		10/12/2019		ND
C4		10/18/2019		0.76
C4		10/24/2019		2.18
C4		10/27/2019		0.19
C4		10/30/2019		0.33
C4 QA		10/30/2019		0.17
C5		10/30/2019	2, LK	0.36
C7		10/30/2019		0.16
C8		10/30/2019		0.22
C9		10/30/2019		0.24

If you have any questions, please let me know.

DGO/do



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

December 02, 2019

Ms. Jaime Gore
U.S. Environmental Protection Agency, Region 4
4244 International Pkwy, Suite 120
Atlanta, GA 30354
Project Name: Covington

Dear Ms. Jaime Gore,

This report contains the analytical results for the sample(s) received under chain(s) of custody by Eastern Research Group on 10/09/19 11:48 through 11/01/19 10:56.

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

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	<u>Received</u>
C1	9100922-01	Air	10/03/19 23:59	10/09/19 11:48
C2	9100922-02	Air	10/03/19 23:59	10/09/19 11:48
C3	9100922-03	Air	10/03/19 23:59	10/09/19 11:48
C4	9100922-04	Air	10/03/19 23:59	10/09/19 11:48
C1	9100922-05	Air	10/06/19 23:59	10/09/19 11:48
C2	9100922-06	Air	10/06/19 23:59	10/09/19 11:48
C3	9100922-07	Air	10/06/19 23:59	10/09/19 11:48
C4	9100922-08	Air	10/06/19 23:59	10/09/19 11:48
C1	9101803-01	Air	10/12/19 23:59	10/18/19 10:26
C3	9101803-02	Air	10/12/19 23:59	10/18/19 10:26
C4	9101803-03	Air	10/12/19 23:59	10/18/19 10:26
C3	9102507-01	Air	10/18/19 23:59	10/25/19 10:19
C4	9102507-03	Air	10/18/19 23:59	10/25/19 10:19
C2	9102507-04	Air	10/18/19 23:59	10/25/19 10:19
C1	9103069-01	Air	10/27/19 23:59	10/30/19 11:28
C2	9103069-02	Air	10/27/19 23:59	10/30/19 11:28
C3	9103069-03	Air	10/24/19 23:59	10/30/19 11:28
C3	9103069-04	Air	10/27/19 23:59	10/30/19 11:28
C4	9103069-05	Air	10/24/19 23:59	10/30/19 11:28
C4	9103069-06	Air	10/27/19 23:59	10/30/19 11:28
C1	9110118-01	Air	10/30/19 23:59	11/01/19 10:56
C2	9110118-02	Air	10/30/19 23:59	11/01/19 10:56
C3	9110118-03	Air	10/30/19 23:59	11/01/19 10:56

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

C4 C1	9110118-04	Air	10/30/19 23:59	11/01/19 10:56
C4 C2	9110118-05	Air	10/30/19 23:59	11/01/19 10:56
C5	9110118-06	Air	10/30/19 23:59	11/01/19 10:56
C7	9110118-07	Air	10/30/19 23:59	11/01/19 10:56
C8	9110118-08	Air	10/30/19 23:59	11/01/19 10:56
C9	9110118-09	Air	10/30/19 23:59	11/01/19 10:56



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C1

Lab ID: 9100922-01

Sampled: 10/03/19 23:59

Pressure @ Receipt: 7.00" Hg

Canister #: 18865

Received: 10/09/19 11:48

Comments:

Analyzed: 10/10/19 22:06

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	0.600	1.08		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C2

Lab ID: 9100922-02

Sampled: 10/03/19 23:59

Pressure @ Receipt: 7.50" Hg

Canister #: N4102

Received: 10/09/19 11:48

Comments:

Analyzed: 10/10/19 19:41

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	0.330	0.60	LK	0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C3

Lab ID: 9100922-03

Sampled: 10/03/19 23:59

Pressure @ Receipt: 8.50" Hg

Canister #: SAT033

Received: 10/09/19 11:48

Comments:

Analyzed: 10/10/19 23:43

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	0.272	0.49		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C4

Lab ID: 9100922-04

Sampled: 10/03/19 23:59

Pressure @ Receipt: 7.00" Hg

Canister #: 18869

Received: 10/09/19 11:48

Comments:

Analyzed: 10/11/19 00:31

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	1.04	1.88		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C1

Lab ID: 9100922-05

Sampled: 10/06/19 23:59

Pressure @ Receipt: 5.50" Hg

Canister #: SAT145

Received: 10/09/19 11:48

Comments:

Analyzed: 10/11/19 01:19

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	0.0782	0.14		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C2

Lab ID: 9100922-06

Sampled: 10/06/19 23:59

Pressure @ Receipt: 6.00" Hg

Canister #: SAT177

Received: 10/09/19 11:48

Comments:

Analyzed: 10/10/19 13:14

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	0.0860	0.16		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C3

Lab ID: 9100922-07

Sampled: 10/06/19 23:59

Pressure @ Receipt: 7.00" Hg

Canister #: A21069

Received: 10/09/19 11:48

Comments:

Analyzed: 10/10/19 14:03

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	0.0932	0.17		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C4

Lab ID: 9100922-08

Sampled: 10/06/19 23:59

Pressure @ Receipt: 6.00" Hg

Canister #: N4088

Received: 10/09/19 11:48

Comments:

Analyzed: 10/11/19 02:56

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	0.913	1.65		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4
4244 International Pkwy, Suite 120
Atlanta, GA 30354
ATTN: Ms. Jaime Gore
PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00
REPORTED: 12/02/19 10:54
SUBMITTED: 10/09/19 to 11/01/19
AQS SITE CODE:
SITE CODE: Covington

Description: C1	Lab ID: 9101803-01	Sampled: 10/12/19 23:59
Pressure @ Receipt: 7.00" Hg	Canister #: 5050	Received: 10/18/19 10:26
Comments:		Analyzed: 10/22/19 06:09

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	0.889	1.60		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C3

Lab ID: 9101803-02

Sampled: 10/12/19 23:59

Pressure @ Receipt: 7.50" Hg

Canister #: SAT166

Received: 10/18/19 10:26

Comments:

Analyzed: 10/22/19 08:27

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	0.324	0.59		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C4

Lab ID: 9101803-03

Sampled: 10/12/19 23:59

Pressure @ Receipt: 4.50" Hg

Canister #: SAT016

Received: 10/18/19 10:26

Comments:

Analyzed: 10/22/19 08:27

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	ND	ND	U	0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4
4244 International Pkwy, Suite 120
Atlanta, GA 30354
ATTN: Ms. Jaime Gore
PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00
REPORTED: 12/02/19 10:54
SUBMITTED: 10/09/19 to 11/01/19
AQS SITE CODE:
SITE CODE: Covington

Description: C3	Lab ID: 9102507-01	Sampled: 10/18/19 23:59
Pressure @ Receipt: 4.50" Hg	Canister #: SAT084	Received: 10/25/19 10:19
Comments:		Analyzed: 10/25/19 21:22

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	0.315	0.57		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C4

Lab ID: 9102507-03

Sampled: 10/18/19 23:59

Pressure @ Receipt: 5.00" Hg

Canister #: SAT106

Received: 10/25/19 10:19

Comments:

Analyzed: 10/25/19 23:46

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	0.421	0.76		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C2

Lab ID: 9102507-04

Sampled: 10/18/19 23:59

Pressure @ Receipt: 0.0" Hg

Canister #: 5082

Received: 10/25/19 10:19

Comments: ambient at field recovery

Analyzed: 10/25/19 22:58

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	0.260	0.47		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C1

Lab ID: 9103069-01

Sampled: 10/27/19 23:59

Pressure @ Receipt: 9.00" Hg

Canister #: 5004

Received: 10/30/19 11:28

Comments:

Analyzed: 11/01/19 19:53

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	1.42	2.56		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C2

Lab ID: 9103069-02

Sampled: 10/27/19 23:59

Pressure @ Receipt: 8.50" Hg

Canister #: 5117

Received: 10/30/19 11:28

Comments:

Analyzed: 11/01/19 20:42

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	0.178	0.32		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C3

Lab ID: 9103069-03

Sampled: 10/24/19 23:59

Pressure @ Receipt: 6.00" Hg

Canister #: 18869

Received: 10/30/19 11:28

Comments:

Analyzed: 11/01/19 21:30

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	0.0358	0.06		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C3

Lab ID: 9103069-04

Sampled: 10/27/19 23:59

Pressure @ Receipt: 8.50" Hg

Canister #: 5069

Received: 10/30/19 11:28

Comments:

Analyzed: 11/01/19 22:18

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	0.198	0.36		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C4

Lab ID: 9103069-05

Sampled: 10/24/19 23:59

Pressure @ Receipt: 5.00" Hg

Canister #: A21036

Received: 10/30/19 11:28

Comments:

Analyzed: 11/01/19 23:07

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	1.21	2.18		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C4

Lab ID: 9103069-06

Sampled: 10/27/19 23:59

Pressure @ Receipt: 6.00" Hg

Canister #: A21077

Received: 10/30/19 11:28

Comments:

Analyzed: 11/01/19 23:55

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	0.105	0.19		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C1

Lab ID: 9110118-01

Sampled: 10/30/19 23:59

Pressure @ Receipt: 8.50" Hg

Canister #: SAT014

Received: 11/01/19 10:56

Comments:

Analyzed: 11/06/19 08:56

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	0.193	0.35		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C2

Lab ID: 9110118-02

Sampled: 10/30/19 23:59

Pressure @ Receipt: 8.00" Hg

Canister #: SAT029

Received: 11/01/19 10:56

Comments:

Analyzed: 11/06/19 09:45

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	0.184	0.33		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C3

Lab ID: 9110118-03

Sampled: 10/30/19 23:59

Pressure @ Receipt: 7.00" Hg

Canister #: 18831

Received: 11/01/19 10:56

Comments:

Analyzed: 11/06/19 10:33

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	0.192	0.35		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C4 C1

Lab ID: 9110118-04

Sampled: 10/30/19 23:59

Pressure @ Receipt: 6.50" Hg

Canister #: 18833

Received: 11/01/19 10:56

Comments: Col 1

Analyzed: 11/06/19 11:22

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	0.183	0.33		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C4 C2

Lab ID: 9110118-05

Sampled: 10/30/19 23:59

Pressure @ Receipt: 8.50" Hg

Canister #: 18865

Received: 11/01/19 10:56

Comments: Col 2

Analyzed: 11/06/19 12:10

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	0.0963	0.17		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4
4244 International Pkwy, Suite 120
Atlanta, GA 30354
ATTN: Ms. Jaime Gore
PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00
REPORTED: 12/02/19 10:54
SUBMITTED: 10/09/19 to 11/01/19
AQS SITE CODE:
SITE CODE: Covington

Description: C5	Lab ID: 9110118-06	Sampled: 10/30/19 23:59
Pressure @ Receipt: 2.00" Hg	Canister #: A21082	Received: 11/01/19 10:56
Comments:		Analyzed: 11/06/19 14:36

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	0.200	0.36	LK	0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C7

Lab ID: 9110118-07

Sampled: 10/30/19 23:59

Pressure @ Receipt: 6.00" Hg

Canister #: 18834

Received: 11/01/19 10:56

Comments:

Analyzed: 11/06/19 15:24

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	0.0891	0.16		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C8

Lab ID: 9110118-08

Sampled: 10/30/19 23:59

Pressure @ Receipt: 8.00" Hg

Canister #: SAT081

Received: 11/01/19 10:56

Comments:

Analyzed: 11/06/19 16:12

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	0.124	0.22		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

Description: C9

Lab ID: 9110118-09

Sampled: 10/30/19 23:59

Pressure @ Receipt: 5.50" Hg

Canister #: 19651

Received: 11/01/19 10:56

Comments:

Analyzed: 11/12/19 16:11

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	0.134	0.24		0.0250



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4
4244 International Pkwy, Suite 120
Atlanta, GA 30354
ATTN: Ms. Jaime Gore
PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00
REPORTED: 12/02/19 10:54
SUBMITTED: 10/09/19 to 11/01/19
AQ5 SITE CODE:
SITE CODE: Covington

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Air Toxics by EPA Compendium Method TO-15 - Quality Control						
<i>Batch B9J1004 - Summa Canister Prep</i>						
Blank (B9J1004-BLK1)			Prepared: 09/18/19 Analyzed: 10/10/19			
Ethylene oxide	ND	ppbv				U
Duplicate (B9J1004-DUP1)			Source: 9100922-05 Prepared: 10/06/19 Analyzed: 10/11/19			
Ethylene oxide	0.0732	ppbv	0.08	6.61	25	
<i>Batch B9J2105 - Summa Canister Prep</i>						
Blank (B9J2105-BLK1)			Prepared & Analyzed: 10/21/19			
Ethylene oxide	ND	ppbv				U
<i>Batch B9J2503 - Summa Canister Prep</i>						
Blank (B9J2503-BLK1)			Prepared: 10/21/19 Analyzed: 10/25/19			
Ethylene oxide	ND	ppbv				U
<i>Batch B9K0105 - Summa Canister Prep</i>						
Blank (B9K0105-BLK1)			Prepared: 10/21/19 Analyzed: 11/01/19			
Ethylene oxide	ND	ppbv				U
<i>Batch B9K0506 - Summa Canister Prep</i>						
Blank (B9K0506-BLK1)			Prepared: 10/21/19 Analyzed: 11/05/19			
Ethylene oxide	ND	ppbv				U
Duplicate (B9K0506-DUP1)			Source: 9110118-04 Prepared: 10/30/19 Analyzed: 11/06/19			
Ethylene oxide	0.194	ppbv	0.18	5.46	25	
Duplicate (B9K0506-DUP2)			Source: 9110118-05 Prepared: 10/30/19 Analyzed: 11/06/19			
Ethylene oxide	0.0908	ppbv	0.10	5.88	25	
<i>Batch B9K0707 - Summa Canister Prep</i>						
Blank (B9K0707-BLK1)			Prepared: 10/21/19 Analyzed: 11/12/19			
Ethylene oxide	ND	ppbv				U



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4
4244 International Pkwy, Suite 120
Atlanta, GA 30354
ATTN: Ms. Jaime Gore
PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00
REPORTED: 12/02/19 10:54
SUBMITTED: 10/09/19 to 11/01/19
AQ5 SITE CODE:
SITE CODE: Covington

Analyte	Result	Units	% Difference	Limit (%)	Notes
---------	--------	-------	--------------	-----------	-------

Air Toxics by EPA Compendium Method TO-15 - Quality Control

Sequence 1910027

Calibration Check (1910027-CCV1)

Prepared & Analyzed: 10/10/19

Ethylene oxide	1.96	ppbv	-20.5	30.00
----------------	------	------	-------	-------

Sequence 1910046

Calibration Check (1910046-CCV1)

Prepared & Analyzed: 10/21/19

Ethylene oxide	2.21	ppbv	-10.3	30.00
----------------	------	------	-------	-------

Sequence 1910064

Calibration Check (1910064-CCV1)

Prepared & Analyzed: 10/25/19

Ethylene oxide	2.46	ppbv	-1.5	30.00
----------------	------	------	------	-------

Sequence 1911003

Calibration Check (1911003-CCV1)

Prepared & Analyzed: 11/01/19

Ethylene oxide	2.44	ppbv	-2.3	30.00
----------------	------	------	------	-------

Sequence 1911008

Calibration Check (1911008-CCV1)

Prepared & Analyzed: 11/05/19

Ethylene oxide	2.26	ppbv	-9.4	30.00
----------------	------	------	------	-------

Sequence 1911015

Calibration Check (1911015-CCV1)

Prepared & Analyzed: 11/12/19

Ethylene oxide	1.89	ppbv	-24.5	30.00
----------------	------	------	-------	-------



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

PHONE: (404) 362-4912 FAX: (919) 541-0516

FILE #: 4222.00

REPORTED: 12/02/19 10:54

SUBMITTED: 10/09/19 to 11/01/19

AQS SITE CODE:

SITE CODE: Covington

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.