

March 30, 2022

**MEMORANDUM**

To: Karen Hays, Air Branch Chief *KH*

Through: James Boylan, Assistant Branch Chief

From: DeAnna Oser, Ambient Monitoring Program Manager

RE: South DeKalb June 9-27, 2021 Sampling Results for Ethylene Oxide

Samples of Ethylene Oxide (EtO) were taken at our South DeKalb monitoring station during the period of June 9-27, 2021. Samples were also collected on a pressurized system (ATEC sampler) at our South DeKalb site for comparison purposes. This comparison is part of the Community Scales Air Toxics Monitoring Grant awarded to Georgia EPD by EPA for evaluating new technologies for ethylene oxide measurement. Each of the samples were sent to Eastern Research Group (ERG) for analysis. The Qualifier codes of "1" and "6" were added to data because the pressurized system samplers used for collection had not been verified against an ethylene oxide standard prior to sampling. The Qualifier code of "LK" was given by ERG to indicate that the sample may be biased high. Please note that ERG is now providing values for levels below the detection limit.

Location	Date	Qualifier	EtO Concentration (ug/m <sup>3</sup> )
South DeKalb passive	06/09/2021		0.17
South DeKalb passive	06/15/2021		0.30
South DeKalb passive	06/21/2021		0.24
South DeKalb passive	06/27/2021	LK	0.28
South DeKalb ATEC	06/09/2021	1, 6	0.09
South DeKalb ATEC	06/15/2021	1, 6	0.13
South DeKalb ATEC	06/21/2021	1, 6	0.08
South DeKalb ATEC	06/27/2021	1, 6	0.19

If you have any questions, please let me know.

DGO/do



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

August 25, 2021

Ms. Jaime Gore  
GA Ambient Monitoring Program  
4244 International Pkwy, Suite 120  
Atlanta, GA 30354  
Project Name: GA EtO

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 06/18/21 13:28 through 07/01/21 11:23.

Values below the MDL for QC results in this report are recorded as ND, however the actual values are reported in the accompanying Excel report with a "U" flag (Under the detection limit). The actual values are reported in AQS.

This test is accredited under the 2016 TNI Standard for Environmental Laboratories (FL DOH Certification # E87673). 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](mailto:julie.swift@erg.com)

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# 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 #:** 4022.00

**REPORTED:** 08/25/21 12:22

**SUBMITTED:** 06/18/21 to 07/01/21

**AQS SITE CODE:**

**SITE CODE:** GA EtO

## ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	<u>Received</u>
South Dekalb	1061822-01	Air	06/09/21 23:59	06/18/21 13:28
South Dekalb-Atec	1061822-02	Air	06/09/21 23:59	06/18/21 13:28
South Dekalb	1062364-01	Air	06/15/21 23:59	06/23/21 13:19
South Dekalb-Atec	1062364-02	Air	06/15/21 23:59	06/23/21 13:19
South Dekalb-Atec	1062930-01	Air	06/21/21 23:59	06/29/21 11:25
South Dekalb	1062930-02	Air	06/21/21 23:59	06/29/21 11:25
South Dekalb	1070114-01	Air	06/27/21 23:59	07/01/21 11:23
South Dekalb-Atec	1070114-02	Air	06/27/21 23:59	07/01/21 11:23



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AQS SITE CODE:

SITE CODE: GA EtO

Description: South Dekalb

Lab ID: 1061822-01

Sampled: 06/09/21 23:59

Pressure @ Receipt: 2.00" Hg

Canister #: 18824

Received: 06/18/21 13:28

Comments:

Analyzed: 07/02/21 02:52

## 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/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.0958	0.17		0.0261



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AQS SITE CODE:

SITE CODE: GA EtO

Description: South Dekalb-Atec

Lab ID: 1061822-02

Sampled: 06/09/21 23:59

Pressure @ Receipt: 10.00 ~~psi~~

Canister #: 19658

Received: 06/18/21 13:28

Comments: [psig DGO 3/30/22](#)

Analyzed: 07/02/21 03:56

## 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/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.0517	0.09		0.0261



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REPORTED: 08/25/21 12:22

SUBMITTED: 06/18/21 to 07/01/21

AQS SITE CODE:

SITE CODE: GA EtO

Description: South Dekalb

Lab ID: 1062364-01

Sampled: 06/15/21 23:59

Pressure @ Receipt: 4.50" Hg

Canister #: 114340

Received: 06/23/21 13:19

Comments:

Analyzed: 07/02/21 09:00

## 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/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.168	0.30		0.0261



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SUBMITTED: 06/18/21 to 07/01/21

AQS SITE CODE:

SITE CODE: GA EtO

Description: South Dekalb-Atec

Lab ID: 1062364-02

Sampled: 06/15/21 23:59

Pressure @ Receipt: 9.75 psig

Canister #: 114344

Received: 06/23/21 13:19

Comments:

Analyzed: 07/02/21 10:01

## 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/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.0699	0.13		0.0261



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AQS SITE CODE:

SITE CODE: GA EtO

**Description:** South Dekalb-Atec

**Lab ID:** 1062930-01

**Sampled:** 06/21/21 23:59

**Pressure @ Receipt:** 10.0 psig

**Canister #:** 19643

**Received:** 06/29/21 11:25

**Comments:**

**Analyzed:** 07/08/21 22:11

## 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/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.0433	0.08		0.0261





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REPORTED: 08/25/21 12:22

SUBMITTED: 06/18/21 to 07/01/21

AQS SITE CODE:

SITE CODE: GA EtO

Description: South Dekalb

Lab ID: 1062930-02

Sampled: 06/21/21 23:59

Pressure @ Receipt: 4.50" Hg

Canister #: 114348

Received: 06/29/21 11:25

Comments:

Analyzed: 07/08/21 23:11

## 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/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.130	0.24		0.0261



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REPORTED: 08/25/21 12:22

SUBMITTED: 06/18/21 to 07/01/21

AQS SITE CODE:

SITE CODE: GA EtO

Description: South Dekalb

Lab ID: 1070114-01

Sampled: 06/27/21 23:59

Pressure @ Receipt: 4.0" Hg

Canister #: A21107

Received: 07/01/21 11:23

Comments:

Analyzed: 07/02/21 20:18

## 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/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.156	0.28	LK	0.0261



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FILE #: 4022.00

REPORTED: 08/25/21 12:22

SUBMITTED: 06/18/21 to 07/01/21

AQS SITE CODE:

SITE CODE: GA EtO

Description: South Dekalb-Atec

Lab ID: 1070114-02

Sampled: 06/27/21 23:59

Pressure @ Receipt: 10.25 psig

Canister #: SAT037

Received: 07/01/21 11:23

Comments:

Analyzed: 07/02/21 21:18

## 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/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.103	0.19		0.0261



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**AQS SITE CODE:**  
**SITE CODE:** GA EtO

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
<b>Air Toxics by EPA Compendium Method TO-15 - Quality Control</b>						
<i>Batch B1G0110 - Summa Canister Prep</i>						
<b>Blank (B1G0110-BLK1)</b>			Prepared & Analyzed: 07/01/21			
Ethylene oxide	ND	ppbv				U
<i>Batch B1G0203 - Summa Canister Prep</i>						
<b>Blank (B1G0203-BLK1)</b>			Prepared & Analyzed: 07/02/21			
Ethylene oxide	ND	ppbv				U
<i>Batch B1G0811 - Summa Canister Prep</i>						
<b>Blank (B1G0811-BLK1)</b>			Prepared & Analyzed: 07/08/21			
Ethylene oxide	ND	ppbv				U



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**AQS SITE CODE:**  
**SITE CODE:** GA EtO

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

### Sequence 2107004

#### Calibration Check (2107004-CCV1)

Prepared & Analyzed: 07/01/21

Ethylene oxide	2.27	ppbv	-9.3	30.00
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### Sequence 2107010

#### Calibration Check (2107010-CCV1)

Prepared & Analyzed: 07/02/21

Ethylene oxide	2.17	ppbv	-13.3	30.00
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### Sequence 2107022

#### Calibration Check (2107022-CCV1)

Prepared & Analyzed: 07/08/21

Ethylene oxide	2.20	ppbv	-11.9	30.00
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**AQS SITE CODE:**  
**SITE CODE:** GA EtO

## 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: This test is accredited under the 2016 TNI Standard; however the following analytes are not accredited: acetylene, bromodichloroethane, dichlorotetrafluoromethane, ethyl tert butyl ether, n-octane, tert amyl methyl ether, trichlorofluoroethane, and bromochloromethane.