

Richard E. Dunn, Director

EPD Director's Office

2 Martin Luther King, Jr. Drive Suite 1456, East Tower Atlanta, Georgia 30334 404-656-4713

May 14, 2020

MEMORANDUM

To: Karen Hays, Air Branch Chief

Through: Dika Kuoh, Assistant Branch Chief

From: DeAnna Oser, Ambient Monitoring Program Manager

RE: Fulton January 22, 2020 – February 27, 2020 Sampling Results for Ethylene Oxide

Samples of Ethylene Oxide (EtO) were collected during the period of January 22, 2020 - February 27, 2020 in the south Fulton area to characterize the EtO concentrations. The sample for F1 on January 16, 2020 was reported on the last data set and is included here to be consistent with the attached lab report. Sampling began at the F2 location on January 28, 2020. The samples were sent to Eastern Research Group (ERG) for analysis. The Qualifier code of "2" is applied to samples to indicate that the collection deviated from established procedures, but the integrity of the sample was not compromised. Code AL is applied to the sample to indicate that it is voided by operator.

Please note that ERG is now providing values for levels below the detection limit.

Location	Date	Qualifier	EtO Concentration (ug/m³)
F1	01/16/2020		0.17
F1	01/22/2020		0.29
F1	01/28/2020		0.82
F1	02/03/2020		0.35
F1	02/09/2020	2	0.44
F1	02/15/2020		0.39
F1	02/21/2020		0.64
F1	02/27/2020		AL
F2	01/28/2020		2.87
F2	02/03/2020		0.56
F2	02/09/2020	2	0.38
F2	02/15/2020		1.13
F2	02/21/2020	2	2.8
F2	02/27/2020	2	1.03

If you have any questions, please let me know.



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

March 24, 2020

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

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 01/23/20 12:33 through 03/05/20 13:41.

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.



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: 03/24/20 12:36

SUBMITTED: 01/23/20 to 03/05/20

AQS SITE CODE:

SITE CODE: Fu

Fulton

ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	Received
F1	0012318-01	Air	01/16/20 23:59	01/23/20 12:33
F1	0013007-01	Air	01/22/20 23:59	01/30/20 10:47
F1	0020526-01	Air	01/28/20 23:59	02/05/20 12:04
F2	0020526-02	Air	01/28/20 23:59	02/05/20 12:04
F1	0021215-01	Air	02/03/20 23:59	02/12/20 11:03
F2	0021215-02	Air	02/03/20 23:59	02/12/20 11:03
F2	0021405-01	Air	02/09/20 23:59	02/14/20 11:35
F1	0021824-01	Air	02/09/20 23:59	02/18/20 15:14
F1	0022613-01	Air	02/15/20 23:59	02/26/20 11:09
F2	0022613-02	Air	02/15/20 23:59	02/26/20 11:09
F1	0030234-01	Air	02/21/20 23:59	03/02/20 13:18
F2	0030234-02	Air	02/21/20 23:59	03/02/20 13:18
Fulton FB	0030234-03	Air	02/21/20 23:59	03/02/20 13:18
F2 site value; F1 was void sample	0030537-01	Air	02/27/20 23:59	03/05/20 13:41



U.S. Environmental Protection Agency, Region 4

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Atlanta, GA 30354

SUBMITTED: 01/23/20 to 03/05/20

Fulton

ATTN: Ms. Jaime Gore

FAX: (919) 541-0516

AQS SITE CODE:

PHONE: (404) 362-4912

SITE CODE:

Sampled: 01/16/20 23:59

Description: F1

Lab ID: 0012318-01

Sampled: 01/16/20 23:59

Pressure @ Receipt: 3.00" Hg

Canister #: 18884

Received: 01/23/20 12:33 **Analyzed:** 01/27/20 19:22

Air Toxics by EPA Compendium Method TO-15

<u>Results</u>

0.17

MDL

Analyte
Ethylene oxide

Comments:

ppbv ug/m³

0.0961

<u>Flag</u>

<u>ppbv</u> 0.0250



U.S. Environmental Protection Agency, Region 4

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4244 International Pkwy, Suite 120

REPORTED: 03/24/20 12:36

Atlanta, GA 30354

Description: F1

SUBMITTED: 01/23/20 to 03/05/20

ATTN: Ms. Jaime Gore AQS SITE CODE:

FAX: (919) 541-0516

SITE CODE: Fulton

PHONE: (404) 362-4912

Lab ID: 0013007-01

Sampled: 01/22/20 23:59

Pressure @ Receipt: 3.00" Hg

Canister #: 5126

Received: 01/30/20 10:47

Comments:

Analyzed: 02/19/20 18:29

Air Toxics by EPA Compendium Method TO-15

Results

0.29

<u>MDL</u>

Analyte
Ethylene oxide

ppbv ug/m³

0.163

<u>Flag</u>

<u>ppbv</u> 0.0250



U.S. Environmental Protection Agency, Region 4

FILE #: 4222.00

4244 International Pkwy, Suite 120

REPORTED: 03/24/20 12:36

Atlanta, GA 30354

Description: F1

SUBMITTED: 01/23/20 to 03/05/20

Fulton

ATTN: Ms. Jaime Gore

FAX: (919) 541-0516

AQS SITE CODE: SITE CODE:

PHONE: (404) 362-4912

Lab ID: 0020526-01

Sampled: 01/28/20 23:59

Pressure @ Receipt: 3.00" Hg

Canister #: 5125

Received: 02/05/20 12:04

Comments:

Analyzed: 02/22/20 06:25

Results

Air Toxics by EPA Compendium Method TO-15
ults MDL

Analyte
Ethylene oxide

ppbv ug/m³

0.452

0.82

<u>Flag</u>

<u>ppbv</u> 0.0250

Eastern Research Group

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U.S. Environmental Protection Agency, Region 4

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Atlanta, GA 30354

SUBMITTED: 01/23/20 to 03/05/20

Fulton

ATTN: Ms. Jaime Gore

FAX: (919) 541-0516

AQS SITE CODE:

PHONE: (404) 362-4912

SITE CODE:

Sampled: 01/28/20 23:59

Description: F2

Lab ID:

0020526-02

Received: 02/05/20 12:04

Comments:

Pressure @ Receipt: 0.0" Hg

Received at ambient

Canister #: SAT002

<u>Flag</u>

Analyzed: 02/22/20 07:21

Air Toxics by EPA Compendium Method TO-15

Results

MDL

Ethylene oxide

Analyte

ppbv ug/m³ 1.59

2.87

ppbv 0.0250



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Fulton

ATTN: Ms. Jaime Gore

FAX: (919) 541-0516

AQS SITE CODE:

PHONE: (404) 362-4912

SITE CODE:

Sampled: 02/03/20 23:59

Description: F1 Pressure @ Receipt: 3.50" Hg Lab ID:

0021215-01

Received: 02/12/20 11:03

Comments:

Canister #: SAT087

Analyzed: 02/25/20 00:46

Air Toxics by EPA Compendium Method TO-15

Results

0.191

MDL

Analyte Ethylene oxide ppbv ug/m³

0.35

<u>Flag</u>

ppbv 0.0250



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Atlanta, GA 30354

SUBMITTED: 01/23/20 to 03/05/20

ATTN: Ms. Jaime Gore **FAX:** (919) 541-0516

AQS SITE CODE: SITE CODE:

PHONE: (404) 362-4912

0021215-02

Fulton

Description: F2

Lab ID:

Sampled: 02/03/20 23:59

Pressure @ Receipt: 2.00" Hg

Canister #: 19642

Received: 02/12/20 11:03

Comments:

Analyzed: 02/25/20 01:42

Air Toxics by EPA Compendium Method TO-15

Results

MDL

Analyte Ethylene oxide ppbv ug/m³ 0.310

0.56

<u>Flag</u>

ppbv 0.0250



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Atlanta, GA 30354

SUBMITTED: 01/23/20 to 03/05/20

Fulton

ATTN: Ms. Jaime Gore

FAX: (919) 541-0516

AQS SITE CODE:

PHONE: (404) 362-4912

SITE CODE:

Sampled: 02/09/20 23:59

Description: F2

Lab ID:

0021405-01

Received: 02/14/20 11:35

Pressure @ Receipt: 0.00" Hg

Comments: Received at ambient

Analyzed: 02/25/20 14:08

Air Toxics by EPA Compendium Method TO-15

Results

0.38

<u>MDL</u>

Analyte
Ethylene oxide

ppbv ug/m³

0.211

<u>Flag</u>

Canister #: 5133

<u>ppbv</u> 0.0250



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Atlanta, GA 30354

Comments:

SUBMITTED: 01/23/20 to 03/05/20

ATTN: Ms. Jaime Gore **AQS SITE CODE:**

> SITE CODE: **Fulton**

PHONE: (404) 362-4912 **FAX:** (919) 541-0516 Sampled: 02/09/20 23:59 **Description:** F1 Lab ID: 0021824-01 Pressure @ Receipt: 11.00" Hg Canister #: SAT021

Received: 02/18/20 15:14 **Analyzed:** 03/03/20 19:28

Air Toxics by EPA Compendium Method TO-15

MDL Results Analyte ppbv ug/m³ ppbv <u>Flag</u> Ethylene oxide 0.44 0.0250 0.243



U.S. Environmental Protection Agency, Region 4

FILE #: 4222.00

4244 International Pkwy, Suite 120

Pressure @ Receipt: 0.00" Hg

REPORTED: 03/24/20 12:36

Atlanta, GA 30354

SUBMITTED: 01/23/20 to 03/05/20

Fulton

ATTN: Ms. Jaime Gore

AQS SITE CODE:

PHONE: (404) 362-4912

SITE CODE:

Sampled: 02/15/20 23:59

Description: F1

Lab ID:

0022613-01

Received: 02/26/20 11:09

Comments:

Received at ambient

Canister #: A21083

Analyzed: 03/04/20 22:58

Air Toxics by EPA Compendium Method TO-15

Results

0.39

MDL

Analyte
Ethylene oxide

ppbv ug/m³

0.217

FAX: (919) 541-0516

<u>Flag</u>

<u>ppbv</u> 0.0250



U.S. Environmental Protection Agency, Region 4

Received at ambient

FILE #: 4222.00

4244 International Pkwy, Suite 120

REPORTED: 03/24/20 12:36

Atlanta, GA 30354

Comments:

PHONE: (404) 362-4912

SUBMITTED: 01/23/20 to 03/05/20

Analyzed: 03/04/20 23:53

ATTN: Ms. Jaime Gore AQS SITE CODE:

SITE CODE: Fulton

 Description:
 F2
 Lab ID:
 0022613-02
 Sampled: 02/15/20 23:59

 Pressure @ Receipt:
 0.00" Hg
 Canister #:
 5086
 Received: 02/26/20 11:09

Air Toxics by EPA Compendium Method TO-15

FAX: (919) 541-0516

Eastern Research Group

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REPORTED: 03/24/20 12:36

Atlanta, GA 30354

ATTN: Ms. Jaime Gore

SUBMITTED: 01/23/20 to 03/05/20

Fulton

AQS SITE CODE:

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

Sampled: 02/21/20 23:59

Description: F1 Lab ID: 0030234-01

Pressure @ Receipt: 2.50" Hg Canister #: A21022

Comments:

Received: 03/02/20 13:18 **Analyzed:** 03/05/20 06:21

Air Toxics by EPA Compendium Method TO-15



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Atlanta, GA 30354

SUBMITTED: 01/23/20 to 03/05/20

AQS SITE CODE:

ATTN: Ms. Jaime Gore **PHONE:** (404) 362-4912

SITE CODE:

Fulton **Sampled:** 02/21/20 23:59

Description: F2

Lab ID:

0030234-02

Received: 03/02/20 13:18

Comments:

Pressure @ Receipt: 0.00" Hg

Received at ambient

Canister #: 18832

Analyzed: 03/13/20 21:48

Air Toxics by EPA Compendium Method TO-15

<u>Results</u>

2.80

MDL

Analyte
Ethylene oxide

ppbv ug/m³

1.55

FAX: (919) 541-0516

<u>Flag</u>

<u>ppbv</u> 0.0250



Atlanta, GA 30354

CERTIFICATE OF ANALYSIS

FILE #: 4222.00

SUBMITTED: 01/23/20 to 03/05/20

U.S. Environmental Protection Agency, Region 4

4244 International Pkwy, Suite 120 REPORTED: 03/24/20 12:36

ATTN: Ms. Jaime Gore AQS SITE CODE:

PHONE: (404) 362-4912 **FAX:** (919) 541-0516 **SITE CODE:** Fulton

 Description:
 Fulton FB
 Lab ID:
 0030234-03
 Sampled: 02/21/20 23:59

 Pressure @ Receipt:
 30.00" Hg
 Canister #:
 A21096
 Received: 03/02/20 13:18

 Comments:
 Field Blank
 Analyzed: 03/13/20 23:57

Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>			<u>MDL</u>		
	<u>ppbv</u>	ug/m³	<u>Flag</u>	<u>ppbv</u>		
Ethylene oxide	ND	ND	U	0.0250		

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Received at ambient

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4244 International Pkwy, Suite 120

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Atlanta, GA 30354

Comments:

PHONE: (404) 362-4912

SUBMITTED: 01/23/20 to 03/05/20

ATTN: Ms. Jaime Gore AQS SITE CODE:

FAX: (919) 541-0516

SITE CODE: Fulton

 Description:
 F1
 canister # matches F2 site zgc
 Lab ID:
 0030537-01
 Sampled: 02/27/20 23:59

 Pressure @ Receipt:
 0.00" Hg
 Canister #:
 19645
 Received: 03/05/20 13:41

Analyzed: 03/16/20 20:21

Air Toxics by EPA Compendium Method TO-15



U.S. Environmental Protection Agency, Region 4

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ATTN: Ms. Jaime Gore

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

FILE #: 4222.00

REPORTED: 03/24/20 12:36

SUBMITTED: 01/23/20 to 03/05/20

AQS SITE CODE:

SITE CODE: Fulton

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Air Toxics by EPA Compendium Meth	od TO-15 -	Quality Control				
Batch B0A2709 - Summa Canister Prep						
Blank (B0A2709-BLK1)			Prepared: 01/23/20	Analyzed: 01/27/20		
Ethylene oxide	ND	ppbv				U
Batch B0B1907 - Summa Canister Prep						
Blank (B0B1907-BLK1)			Prepared: 02/14/20	Analyzed: 02/19/20		
Ethylene oxide	ND	ppbv				U
Batch B0B2006 - Summa Canister Prep						
Blank (B0B2006-BLK1)			Prepared: 02/14/20	Analyzed: 02/21/20		
Ethylene oxide	ND	ppbv				U
Duplicate (B0B2006-DUP1)	Source:	0020526-02	Prepared: 01/28/20	Analyzed: 02/22/20		
Ethylene oxide	1.58	ppbv	1.59	0.321	25	
Batch B0B2408 - Summa Canister Prep						
Blank (B0B2408-BLK1)			Prepared: 02/14/20	Analyzed: 02/24/20		
Ethylene oxide	ND	ppbv				U
Batch B0C0310 - Summa Canister Prep						
Blank (B0C0310-BLK1)			Prepared & Analyzed: 03/03/20			
Ethylene oxide	ND	ppbv				U
Batch B0C0407 - Summa Canister Prep						
Blank (B0C0407-BLK1)			Prepared & Analyzed: 03/04/20			
Ethylene oxide	ND	ppbv				U
Batch B0C0910 - Summa Canister Prep						
Blank (B0C0910-BLK1)			Prepared: 03/09/20	Analyzed: 03/13/20		
Ethylene oxide	ND	ppbv				U
Duplicate (B0C0910-DUP1)	Source:	0030234-02	Prepared: 02/21/20	Analyzed: 03/13/20		
Ethylene oxide	1.57	ppbv	1.55	1.67	25	
Batch B0C1605 - Summa Canister Prep						
Blank (B0C1605-BLK1)			Prepared: 03/09/20	Analyzed: 03/16/20		
Ethylene oxide	ND	ppbv				U

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SUBMITTED: 01/23/20 to 03/05/20

AQS SITE CODE:

SITE CODE: Fulton

Analyte	Result	Units	% Difference	Limit (%)	Notes
Air Toxics by EPA Compendium Me	thod TO-15 - (Quality Contr	ol		
Sequence 2001074		- ,			
Calibration Check (2001074-CCV1)			Prepared & Analyzed	: 01/27/20	
Ethylene oxide	2.56	ppbv	2.4	30.00	
Sequence 2002042					
Calibration Check (2002042-CCV1)			Prepared & Analyzed	: 02/19/20	
Ethylene oxide	2.61	ppbv	4.5	30.00	
Sequence 2002044					
Calibration Check (2002044-CCV1)			Prepared: 02/20/20	Analyzed: 02/21/20	
Ethylene oxide	2.66	ppbv	6.3	30.00	
Sequence 2002051					
Calibration Check (2002051-CCV1)			Prepared: 02/19/20	Analyzed: 02/24/20	
Ethylene oxide	2.76	ppbv	10.6	30.00	
Sequence 2003009					
Calibration Check (2003009-CCV1)			Prepared & Analyzed		
Ethylene oxide	2.43	ppbv	-2.7	30.00	
Sequence 2003013					
Calibration Check (2003013-CCV1)			Prepared & Analyzed	: 03/04/20	
Ethylene oxide	2.87	ppbv	14.6	30.00	
Sequence 2003022					
Calibration Check (2003022-CCV1)			Prepared: 03/09/20	Analyzed: 03/13/20	
Ethylene oxide	2.50	ppbv	1.0	30.00	
Sequence 2003031					
Calibration Check (2003031-CCV1)			Prepared & Analyzed	: 03/16/20	
Ethylene oxide	2.77	ppbv	12.1	30.00	

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Atlanta, GA 30354 SUBMITTED: 01/23/20 to 03/05/20

ATTN: Ms. Jaime Gore AQS SITE CODE:

PHONE: (404) 362-4912 **FAX:** (919) 541-0516 **SITE CODE:** Fulton

Notes and Definitions

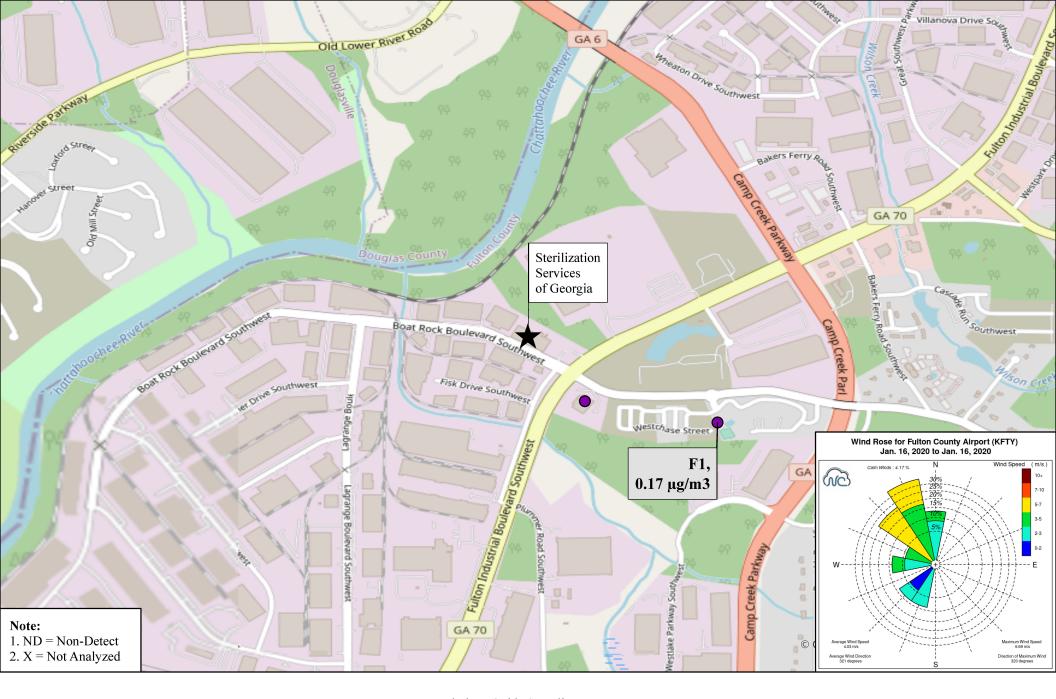
U Under Detection Limit
ND Analyte NOT DETECTED

NR Not Reported

MDL Method Detection Limit

RPD Relative Percent Difference

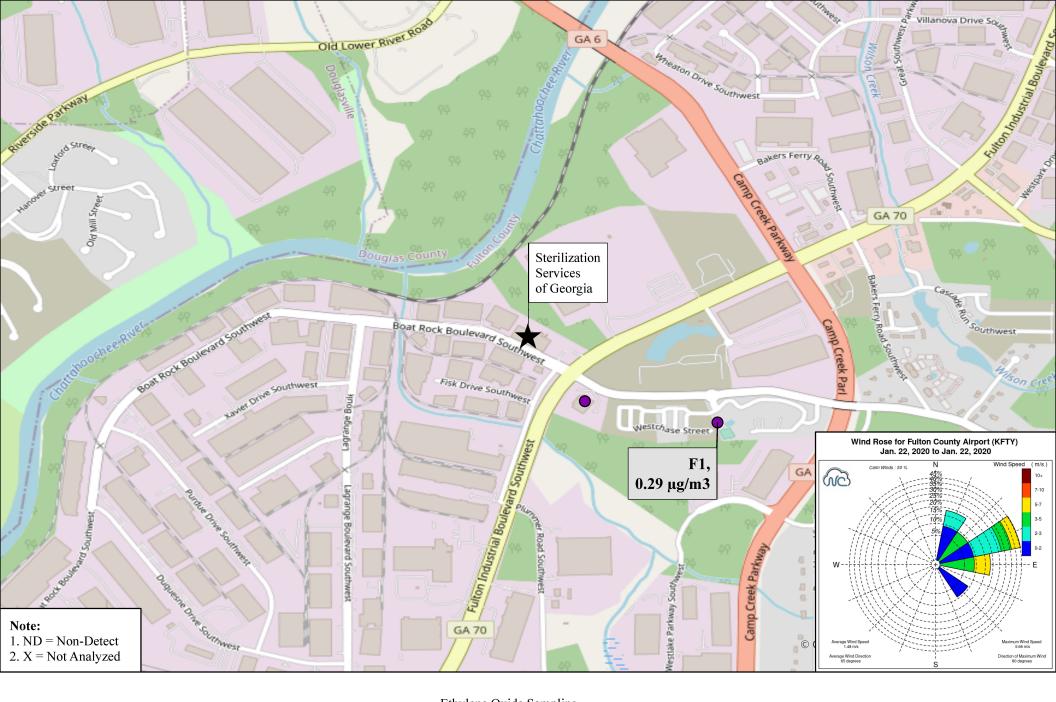
Note: The test results meet all requirements of NELAC; however the following analytes are not accredited: 1,2,4-trimethylbenzene, 1,2-dibromoethane, 1,2-dichloropropane, 1,3,5-trimethylbenzene, 1,3-butadiene, acetylene, acrolein, bromochloromethane, bromodichloromethane, bromoform, carbon disulfide, 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 trichlorotrufluoroethane.





01/16/2020







01/22/2020

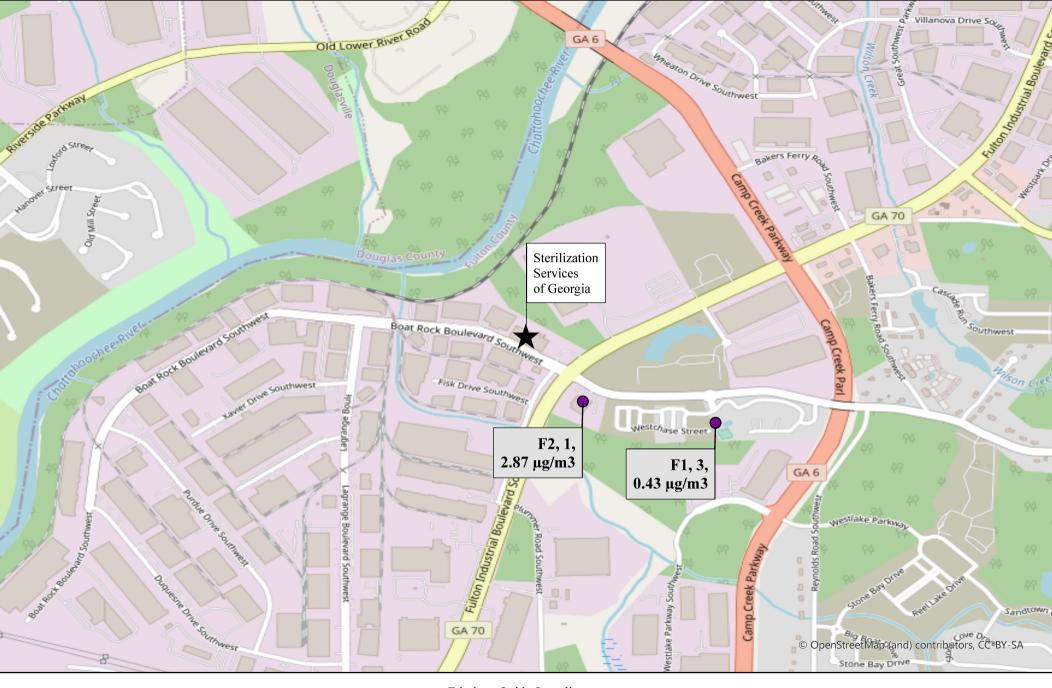


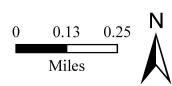




01/28/2020







Site ID, Number of Samples, Concentration (μg/m3) Ethylene Oxide Sampling Fulton County, GA

January 2020 Site Average Values

Note: Not detectable values were included in average calculations as a value of 0.

Sampled By: Georgia Environmental Protection Division Analyzed By: Eastern Research Group



ENVIRONMENTAL PROTECTION DIVISION





02/03/2020







02/09/2020







02/15/2020

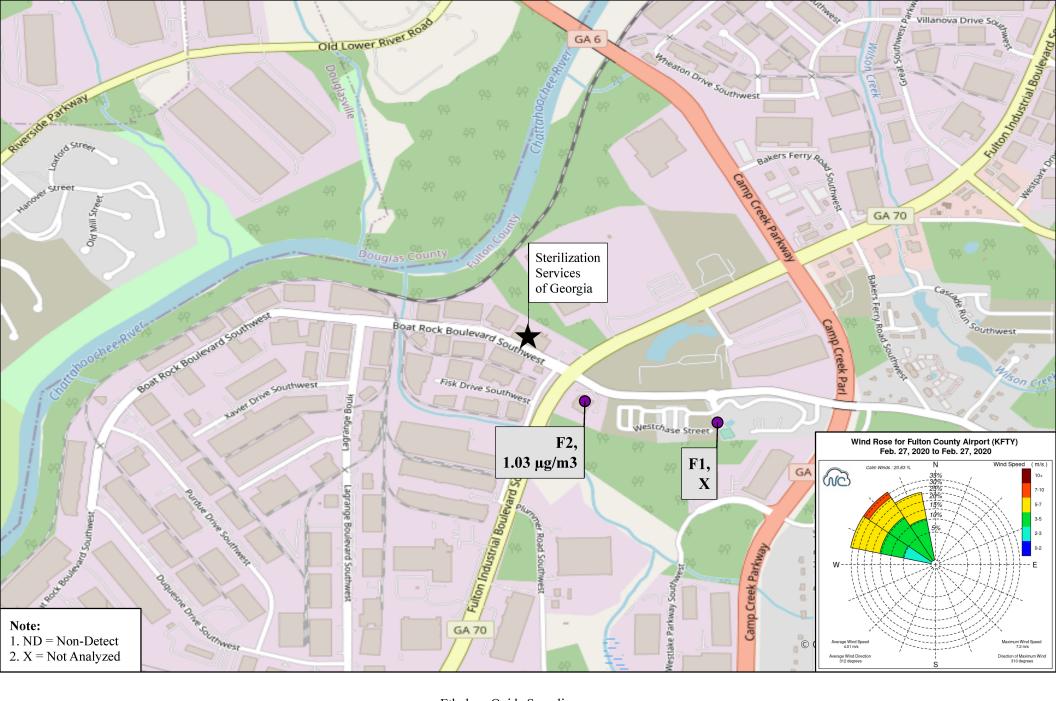






02/21/2020

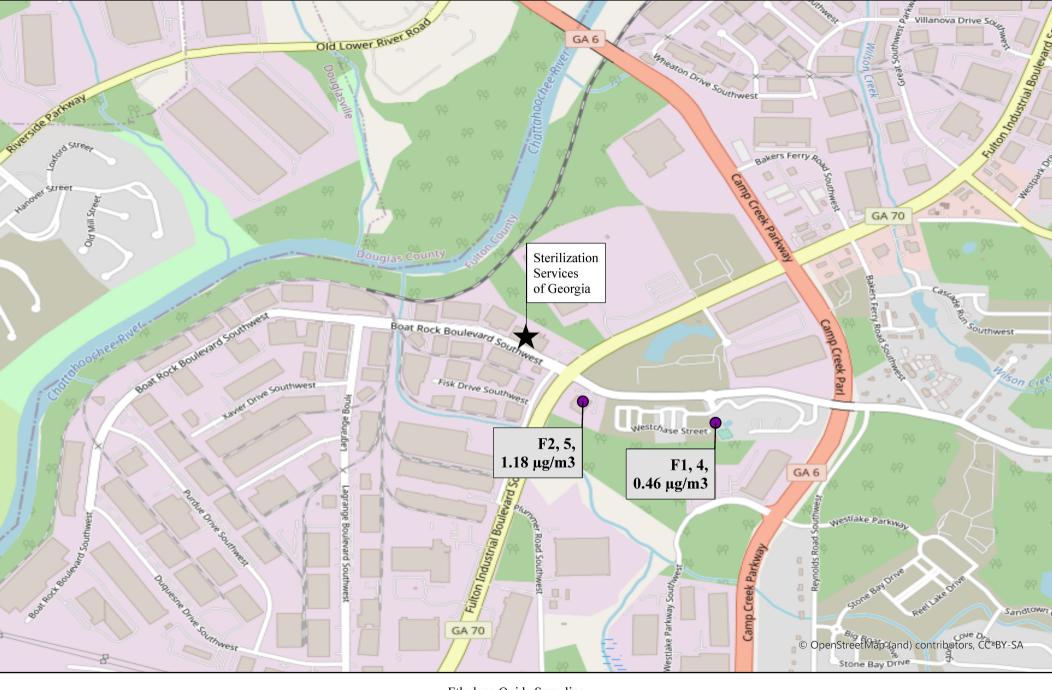


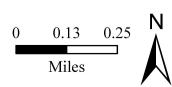




02/27/2020







Site ID, Number of Samples, Concentration (µg/m3) Ethylene Oxide Sampling Fulton County, GA

February 2020 Site Average Values

Note: Not detectable values were included in average calculations as a value of 0.

Sampled By: Georgia Environmental Protection Division Analyzed By: Eastern Research Group



ENVIRONMENTAL PROTECTION DIVISION