

August 13, 2020

**MEMORANDUM**

To: Karen Hays, Air Branch Chief KH

Through: Dika Kuoh, Assistant Branch Chief

From: DeAnna Oser, Ambient Monitoring Program Manager

RE: Fulton May 21, 2020 – June 08, 2020 Sampling Results for Ethylene Oxide

Samples of Ethylene Oxide (EtO) were collected during the period of May 21, 2020 – June 08, 2020 in the south Fulton area to characterize the EtO concentrations. 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.

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

Location	Date	Qualifier	EtO Concentration (ug/m <sup>3</sup> )
F1	05/21/2020	2	1.10
F1	05/27/2020	2	0.62
F1	06/02/2020	2	0.40
F1	06/08/2020	2	1.14
F2	05/21/2020	2	0.58
F2	05/27/2020	2	0.33
F2	06/02/2020	2	0.95
F2	06/08/2020	2	0.83
F2 QA	06/08/2020	2	0.81

If you have any questions, please let me know.

DGO/do



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

July 01, 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 05/29/20 12:08 through 06/17/20 11:34.

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](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 #: 4222.00

REPORTED: 07/01/20 13:01

SUBMITTED: 05/29/20 to 06/17/20

AQS SITE CODE:

SITE CODE: Fulton

## ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	<u>Received</u>
Fulton FB	0052919-01	Air	05/26/20 23:59	05/29/20 12:08
F1	0052919-02	Air	05/21/20 23:59	05/29/20 12:08
F2	0052919-03	Air	05/21/20 23:59	05/29/20 12:08
F1	0060507-01	Air	05/27/20 23:59	06/05/20 10:52
F2	0060507-02	Air	05/27/20 23:59	06/05/20 10:52
F1	0061732-01	Air	06/02/20 23:59	06/17/20 11:34
F2	0061732-02	Air	06/02/20 23:59	06/17/20 11:34
F1	0061732-03	Air	06/08/20 23:59	06/17/20 11:34
F2	0061732-04	Air	06/08/20 23:59	06/17/20 11:34
F2 QA	0061732-05	Air	06/08/20 23:59	06/17/20 11:34



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REPORTED: 07/01/20 13:01

SUBMITTED: 05/29/20 to 06/17/20

AQS SITE CODE:

SITE CODE: Fulton

Description: Fulton FB

Lab ID: 0052919-01

Sampled: 05/26/20 23:59

Pressure @ Receipt: 29.50" Hg

Canister #: 35118

Received: 05/29/20 12:08

Comments: Field Blank

Analyzed: 06/11/20 18:31

## 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/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.0159	0.03	U	0.0285



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FILE #: 4222.00

REPORTED: 07/01/20 13:01

SUBMITTED: 05/29/20 to 06/17/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F1

Lab ID: 0052919-02

Sampled: 05/21/20 23:59

Pressure @ Receipt: 6.50" Hg

Canister #: SAT017

Received: 05/29/20 12:08

Comments:

Analyzed: 06/12/20 03:43

## 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/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.611	1.10		0.0285



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FILE #: 4222.00

REPORTED: 07/01/20 13:01

SUBMITTED: 05/29/20 to 06/17/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F2

Lab ID: 0052919-03

Sampled: 05/21/20 23:59

Pressure @ Receipt: 6.00" Hg

Canister #: ~~504~~ 5004 *dgo*

Received: 05/29/20 12:08

Comments:

Analyzed: 06/12/20 04:38

## 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	0.321	0.58		0.0285



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FILE #: 4222.00

REPORTED: 07/01/20 13:01

SUBMITTED: 05/29/20 to 06/17/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F1

Lab ID: 0060507-01

Sampled: 05/27/20 23:59

Pressure @ Receipt: 6.50" Hg

Canister #: 35126

Received: 06/05/20 10:52

Comments:

Analyzed: 06/11/20 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/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.341	0.62		0.0285



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 Atlanta, GA 30354  
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FILE #: 4222.00  
 REPORTED: 07/01/20 13:01  
 SUBMITTED: 05/29/20 to 06/17/20  
 AQS SITE CODE:  
 SITE CODE: Fulton

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<b>Description:</b> F2	<b>Lab ID:</b> 0060507-02	<b>Sampled:</b> 05/27/20 23:59
<b>Pressure @ Receipt:</b> 5.50" Hg	<b>Canister #:</b> SAT020	<b>Received:</b> 06/05/20 10:52
<b>Comments:</b>		<b>Analyzed:</b> 06/12/20 00:02

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### 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	0.182	0.33		0.0285





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FILE #: 4222.00

REPORTED: 07/01/20 13:01

SUBMITTED: 05/29/20 to 06/17/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F1

Lab ID: 0061732-01

Sampled: 06/02/20 23:59

Pressure @ Receipt: 8.00" Hg

Canister #: 5117

Received: 06/17/20 11:34

Comments:

Analyzed: 06/18/20 01:35

## 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	0.223	0.40		0.0285



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FILE #: 4222.00

REPORTED: 07/01/20 13:01

SUBMITTED: 05/29/20 to 06/17/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F2

Lab ID: 0061732-02

Sampled: 06/02/20 23:59

Pressure @ Receipt: 6.00" Hg

Canister #: 33327

Received: 06/17/20 11:34

Comments:

Analyzed: 06/18/20 02:30

## 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/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.528	0.95		0.0285



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FILE #: 4222.00  
 REPORTED: 07/01/20 13:01  
 SUBMITTED: 05/29/20 to 06/17/20  
 AQS SITE CODE:  
 SITE CODE: Fulton

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<b>Description:</b> F1	<b>Lab ID:</b> 0061732-03	<b>Sampled:</b> 06/08/20 23:59
<b>Pressure @ Receipt:</b> 7.50" Hg	<b>Canister #:</b> SAT037	<b>Received:</b> 06/17/20 11:34
<b>Comments:</b>		<b>Analyzed:</b> 06/18/20 03:25

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### 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	0.630	1.14		0.0285



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FILE #: 4222.00

REPORTED: 07/01/20 13:01

SUBMITTED: 05/29/20 to 06/17/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F2

Lab ID: 0061732-04

Sampled: 06/08/20 23:59

Pressure @ Receipt: 7.50" Hg

Canister #: 5050

Received: 06/17/20 11:34

Comments:

Analyzed: 06/18/20 17:59

## 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	0.460	0.83		0.0285



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FILE #: 4222.00

REPORTED: 07/01/20 13:01

SUBMITTED: 05/29/20 to 06/17/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F2 QA

Lab ID: 0061732-05

Sampled: 06/08/20 23:59

Pressure @ Receipt: 7.00" Hg

Canister #: SAT069

Received: 06/17/20 11:34

Comments:

Analyzed: 06/18/20 19:50

## 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	0.448	0.81		0.0285



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**FILE #:** 4222.00  
**REPORTED:** 07/01/20 13:01  
**SUBMITTED:** 05/29/20 to 06/17/20  
**AQS SITE CODE:**  
**SITE CODE:** Fulton

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
<b>Air Toxics by EPA Compendium Method TO-15 - Quality Control</b>						
<i>Batch B0F1107 - Summa Canister Prep</i>						
<b>Blank (B0F1107-BLK1)</b>			Prepared & Analyzed: 06/11/20			
Ethylene oxide	ND	ppbv				U
<i>Batch B0F1705 - Summa Canister Prep</i>						
<b>Blank (B0F1705-BLK1)</b>			Prepared & Analyzed: 06/17/20			
Ethylene oxide	ND	ppbv				U
<i>Batch B0F1806 - Summa Canister Prep</i>						
<b>Blank (B0F1806-BLK1)</b>			Prepared & Analyzed: 06/18/20			
Ethylene oxide	ND	ppbv				U
<b>Duplicate (B0F1806-DUP1)</b>			<b>Source: 0061732-04</b> Prepared: 06/08/20 Analyzed: 06/18/20			
Ethylene oxide	0.459	ppbv	0.46	0.196	25	
<b>Duplicate (B0F1806-DUP2)</b>			<b>Source: 0061732-05</b> Prepared: 06/08/20 Analyzed: 06/18/20			
Ethylene oxide	0.444	ppbv	0.45	1.03	25	



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**FILE #:** 4222.00  
**REPORTED:** 07/01/20 13:01  
**SUBMITTED:** 05/29/20 to 06/17/20  
**AQS SITE CODE:**  
**SITE CODE:** Fulton

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

### Sequence 2006037

#### Calibration Check (2006037-CCV1)

Prepared & Analyzed: 06/11/20

Ethylene oxide	2.73	ppbv	10.3	30.00
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### Sequence 2006051

#### Calibration Check (2006051-CCV1)

Prepared & Analyzed: 06/17/20

Ethylene oxide	2.91	ppbv	17.6	30.00
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### Sequence 2006056

#### Calibration Check (2006056-CCV1)

Prepared & Analyzed: 06/18/20

Ethylene oxide	3.16	ppbv	28.0	30.00
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Atlanta, GA 30354  
**ATTN:** Ms. Jaime Gore  
**PHONE:** (404) 362-4912 **FAX:** (919) 541-0516

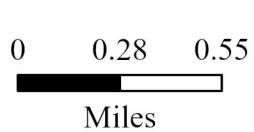
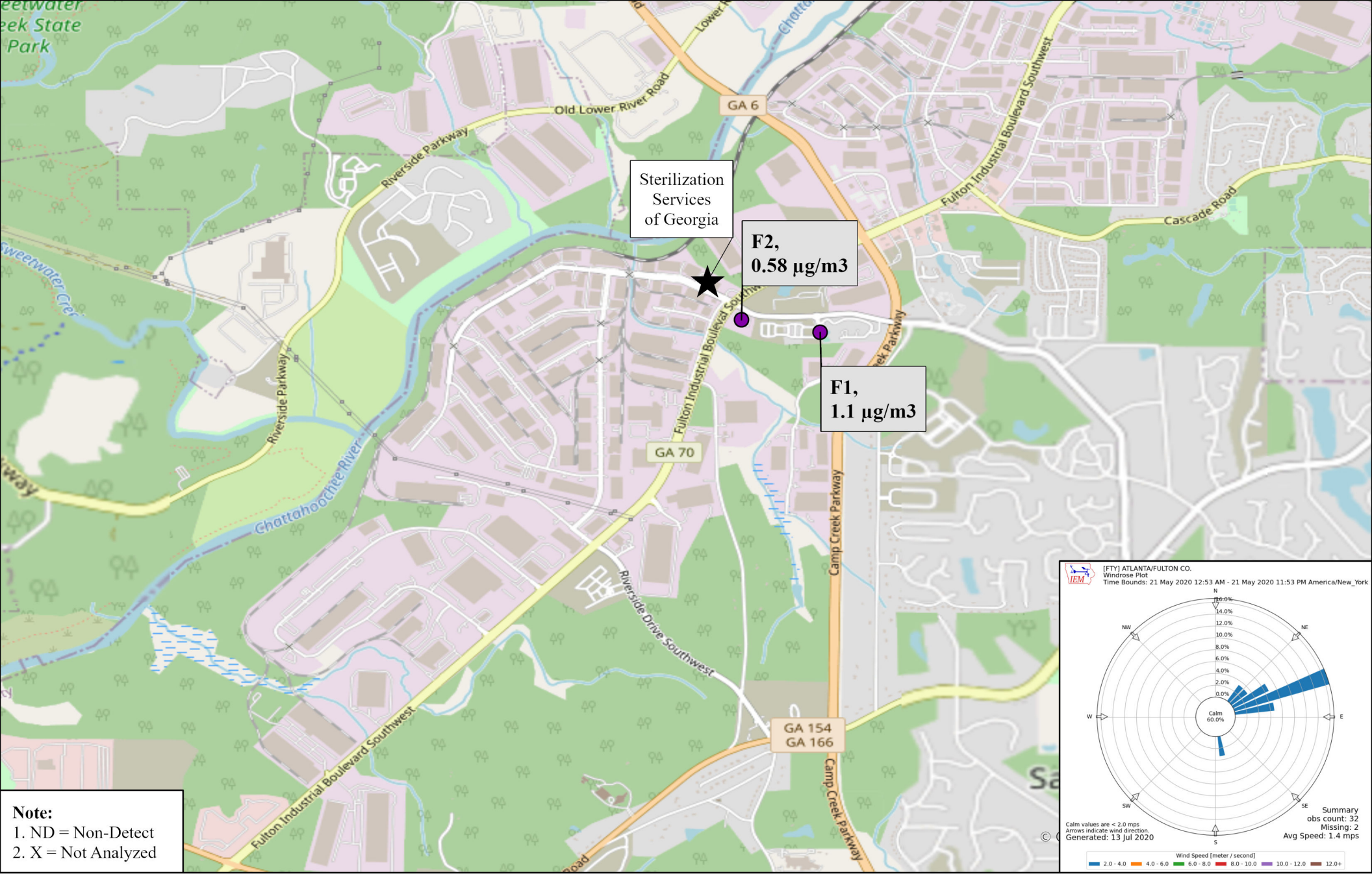
**FILE #:** 4222.00  
**REPORTED:** 07/01/20 13:01  
**SUBMITTED:** 05/29/20 to 06/17/20  
**AQS SITE CODE:**  
**SITE CODE:** Fulton

## 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 trichlorotrifluoroethane.





Site ID, Concentration ( $\mu\text{g}/\text{m}^3$ )

Ethylene Oxide Sampling  
 Fulton County, GA

05/21/2020

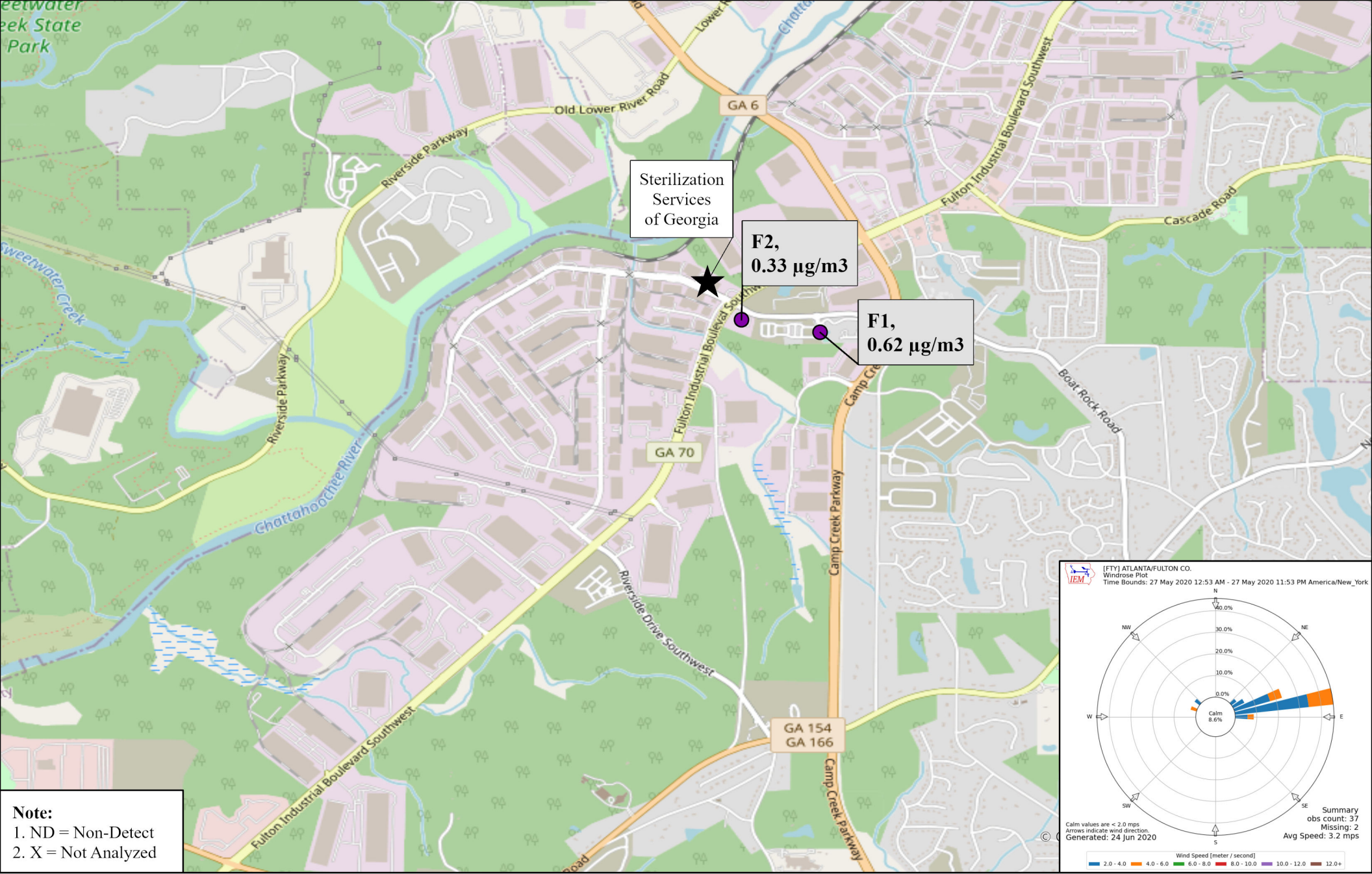
Sampled By: Georgia Environmental Protection Division

Analyzed By: Eastern Research Group

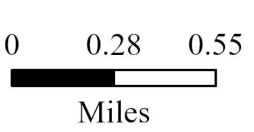


**GEORGIA**  
 DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION



**Note:**  
 1. ND = Non-Detect  
 2. X = Not Analyzed

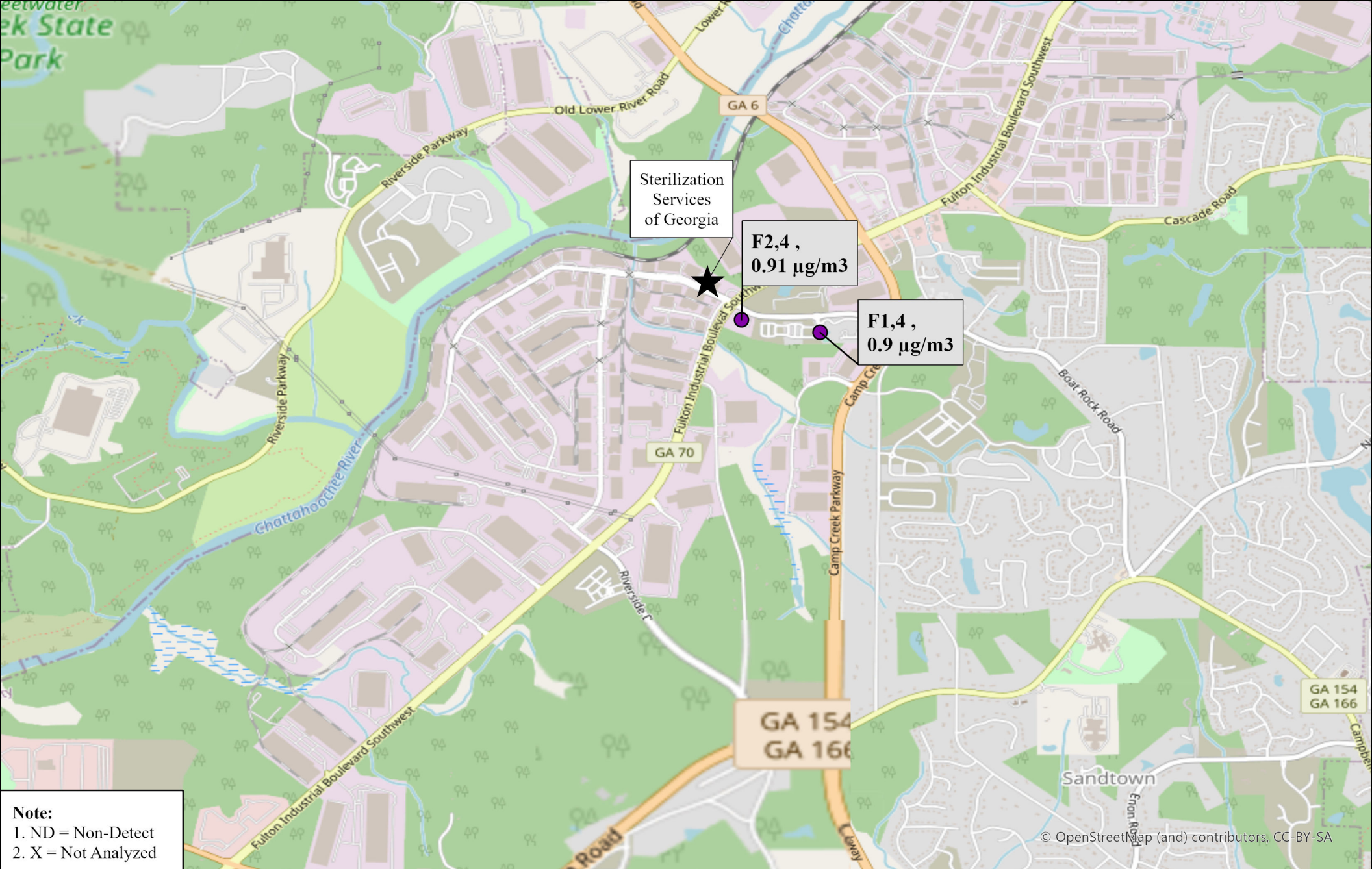


**Site ID, Concentration (µg/m3)**

Ethylene Oxide Sampling  
 Fulton County, GA

05/27/2020  
 Sampled By: Georgia Environmental Protection Division  
 Analyzed By: Eastern Research Group





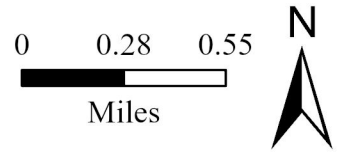
Sterilization  
Services  
of Georgia

F2,4 ,  
0.91 µg/m3

F1,4 ,  
0.9 µg/m3

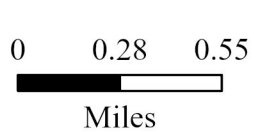
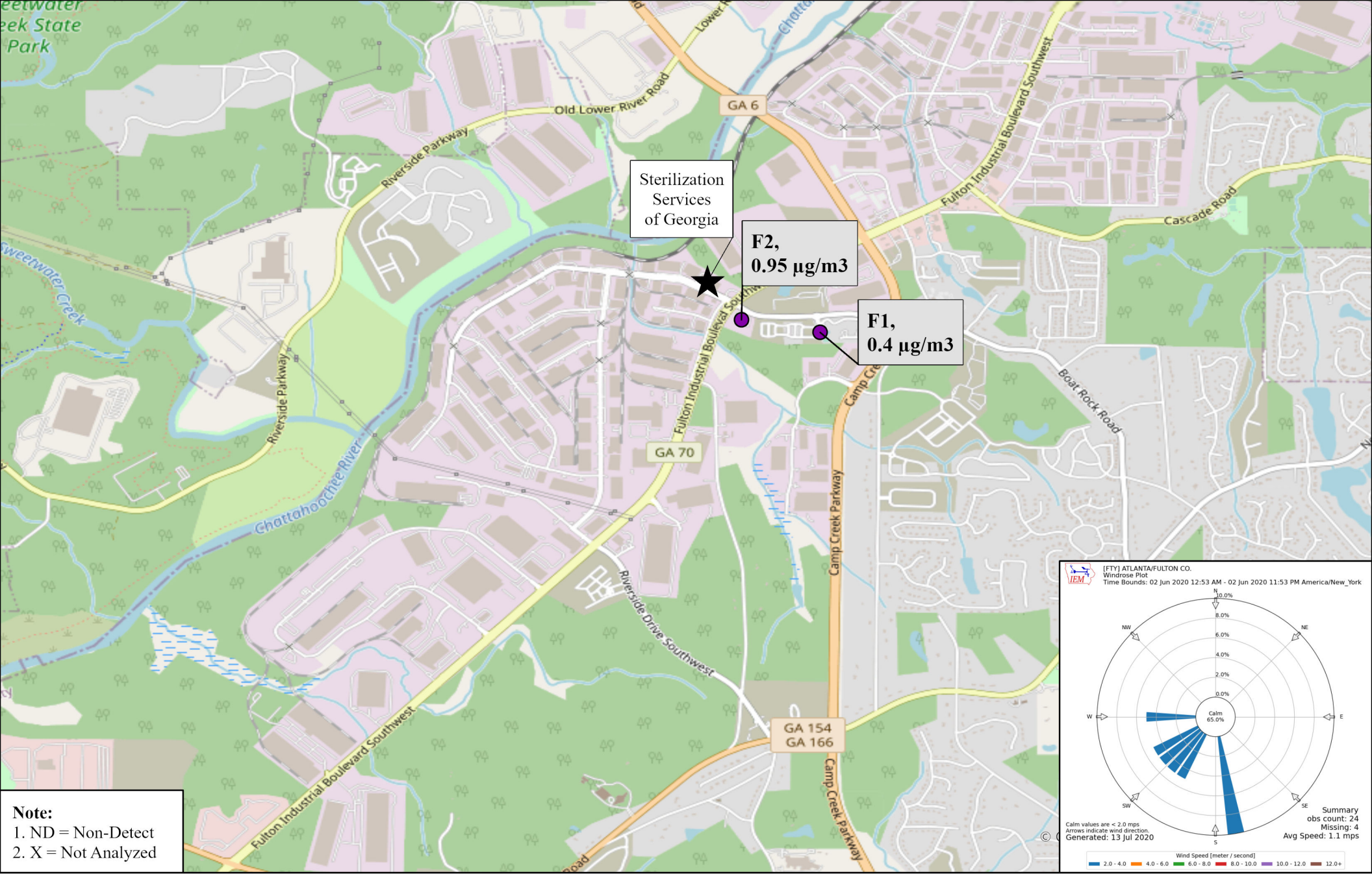
**Note:**  
1. ND = Non-Detect  
2. X = Not Analyzed

Ethylene Oxide Sampling  
Fulton County, GA



**Site ID, Number of Samples,  
Concentration (µg/m3)**

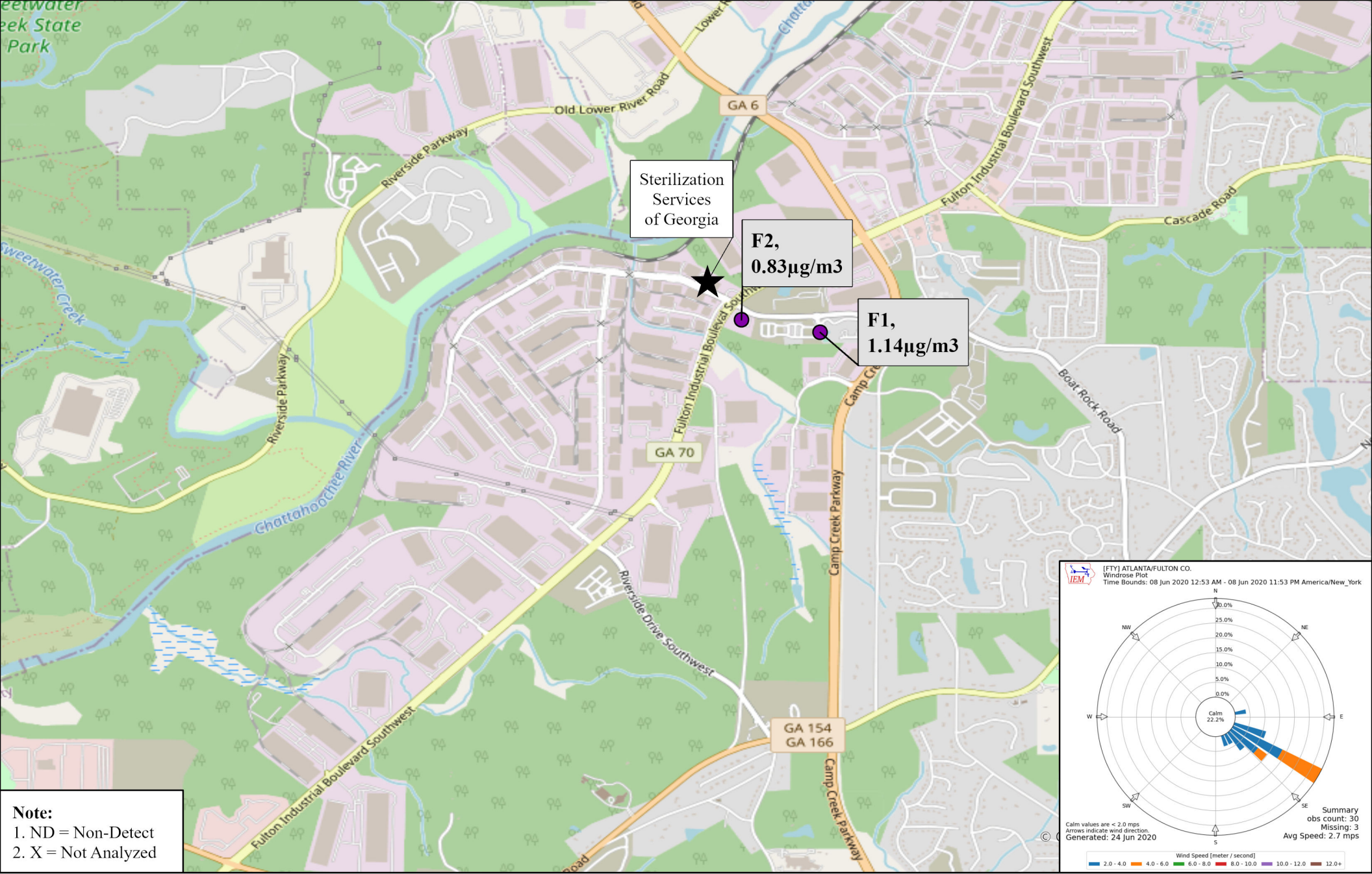
May 2020 Site Average Values  
Note: Not detectable values were included in average  
calculations as a value of 0.  
Sampled By: Georgia Environmental Protection Division  
Analyzed By: Eastern Research Group



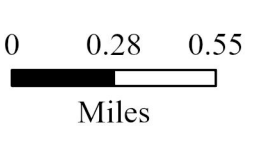
Site ID, Concentration (µg/m<sup>3</sup>)

Ethylene Oxide Sampling  
 Fulton County, GA

06/02/2020  
 Sampled By: Georgia Environmental Protection Division  
 Analyzed By: Eastern Research Group



**Note:**  
 1. ND = Non-Detect  
 2. X = Not Analyzed



**Site ID, Concentration (µg/m<sup>3</sup>)**

Ethylene Oxide Sampling  
 Fulton County, GA

06/08/2020  
 Sampled By: Georgia Environmental Protection Division  
 Analyzed By: Eastern Research Group