

October 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 July 26, 2020 – August 13, 2020 Sampling Results for Ethylene Oxide

Samples of Ethylene Oxide (EtO) were collected during the period of July 26, 2020 – August 13, 2020 in the south Fulton area to characterize the EtO concentrations. The samples were sent to Eastern Research Group (ERG) for analysis. The sample listed as AN indicate that the sampler malfunctioned while collecting the sample. 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. Qualifier code “D-F” is given by ERG to indicate duplicate exceeds Data Quality Objectives (DQO) criteria. Sampling began at site F3 on August 13. Please note that ERG is now providing values for levels below the detection limit.

Location	Date	Qualifier	EtO Concentration (ug/m ³)
F1	07/26/2020		1.57
F1	08/01/2020		0.78
F1	08/07/2020		2.17
F1	08/13/2020		1.60
F2	07/26/2020		0.86
F2	08/01/2020		0.19
F2	08/07/2020		AN
F2	08/13/2020	D-F	0.50
F2 QA	08/13/2020	D-F	0.68
F3	08/13/2020		1.76

If you have any questions, please let me know.

DGO/do



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

September 10, 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 07/29/20 12:22 through 08/21/20 12:49.

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

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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: 09/10/20 13:55

SUBMITTED: 07/29/20 to 08/21/20

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	0072931-03	Air	07/22/20 23:59	07/29/20 12:22
F1	0080536-01	Air	07/26/20 23:59	08/05/20 14:37
F2	0080536-02	Air	07/26/20 23:59	08/05/20 14:37
F1	0080617-01	Air	08/01/20 23:59	08/06/20 11:22
F2	0080617-02	Air	08/01/20 23:59	08/06/20 11:22
F2	0081832-01	Air	08/07/20 23:59	08/18/20 11:24
F1	0081933-01	Air	08/07/20 23:59	08/19/20 13:35
F1	0082115-01	Air	08/13/20 23:59	08/21/20 12:49
F2	0082115-02	Air	08/13/20 23:59	08/21/20 12:49
F2 QA	0082115-03	Air	08/13/20 23:59	08/21/20 12:49
F3	0082115-04	Air	08/13/20 23:59	08/21/20 12:49



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REPORTED: 09/10/20 13:55

SUBMITTED: 07/29/20 to 08/21/20

AQS SITE CODE:

SITE CODE: Fulton

Description: Fulton FB

Lab ID: 0072931-03

Sampled: 07/22/20 23:59

Pressure @ Receipt: 29.50" Hg

Canister #: A21012

Received: 07/29/20 12:22

Comments: Field Blank

Analyzed: 08/20/20 20:58

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	ND	ND	U	0.0285



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REPORTED: 09/10/20 13:55

SUBMITTED: 07/29/20 to 08/21/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F1	Lab ID: 0080536-01	Sampled: 07/26/20 23:59
Pressure @ Receipt: 3.50" Hg	Canister #: 5086	Received: 08/05/20 14:37
Comments:		Analyzed: 08/21/20 03:23

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	0.867	1.57		0.0285



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FILE #: 4222.00

REPORTED: 09/10/20 13:55

SUBMITTED: 07/29/20 to 08/21/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F2

Lab ID: 0080536-02

Sampled: 07/26/20 23:59

Pressure @ Receipt: 3.00" Hg

Canister #: 5054

Received: 08/05/20 14:37

Comments:

Analyzed: 08/21/20 07:03

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	0.476	0.86		0.0285



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REPORTED: 09/10/20 13:55

SUBMITTED: 07/29/20 to 08/21/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F1	Lab ID: 0080617-01	Sampled: 08/01/20 23:59
Pressure @ Receipt: 2.50" Hg	Canister #: SAT057	Received: 08/06/20 11:22
Comments:		Analyzed: 08/28/20 15:35

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/m³</u>		<u>ppbv</u>
Ethylene oxide	0.434	0.78		0.0285



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FILE #: 4222.00

REPORTED: 09/10/20 13:55

SUBMITTED: 07/29/20 to 08/21/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F2

Lab ID: 0080617-02

Sampled: 08/01/20 23:59

Pressure @ Receipt: 2.00" Hg

Canister #: 33327

Received: 08/06/20 11:22

Comments:

Analyzed: 08/28/20 16:41

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	0.103	0.19		0.0285



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REPORTED: 09/10/20 13:55

SUBMITTED: 07/29/20 to 08/21/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F2

Lab ID: 0081832-01

Sampled: 08/07/20 23:59

Pressure @ Receipt: 0.00" Hg

Canister #: 35127

Received: 08/18/20 11:24

Comments: Received at ambient

Analyzed: 09/02/20 18:12

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	2.44	4.41		0.0285



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REPORTED: 09/10/20 13:55

SUBMITTED: 07/29/20 to 08/21/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F1	Lab ID: 0081933-01	Sampled: 08/07/20 23:59
Pressure @ Receipt: 0.00" Hg	Canister #: SAT123	Received: 08/19/20 13:35
Comments: Received at ambient pressure		Analyzed: 09/01/20 22:59

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/m³</u>		<u>ppbv</u>
Ethylene oxide	1.20	2.17		0.0285



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REPORTED: 09/10/20 13:55

SUBMITTED: 07/29/20 to 08/21/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F1

Lab ID: 0082115-01

Sampled: 08/13/20 23:59

Pressure @ Receipt: 7.50" Hg

Canister #: SAT068

Received: 08/21/20 12:49

Comments:

Analyzed: 09/02/20 19:07

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	0.884	1.60		0.0285



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FILE #: 4222.00

REPORTED: 09/10/20 13:55

SUBMITTED: 07/29/20 to 08/21/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F2	Lab ID: 0082115-02	Sampled: 08/13/20 23:59
Pressure @ Receipt: 6.50" Hg	Canister #: 33506	Received: 08/21/20 12:49
Comments:		Analyzed: 09/02/20 20:02

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	0.279	0.50	D-F	0.0285



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FILE #: 4222.00

REPORTED: 09/10/20 13:55

SUBMITTED: 07/29/20 to 08/21/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F2 QA

Lab ID: 0082115-03

Sampled: 08/13/20 23:59

Pressure @ Receipt: 6.50" Hg

Canister #: SAT178

Received: 08/21/20 12:49

Comments:

Analyzed: 09/02/20 21:52

Air Toxics by EPA Compendium Method TO-15

Analyte	Results		Flag	MDL
	ppbv	ug/m ³		ppbv
Ethylene oxide	0.375	0.68	D-F	0.0285



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FILE #: 4222.00

REPORTED: 09/10/20 13:55

SUBMITTED: 07/29/20 to 08/21/20

AQS SITE CODE:

SITE CODE: Fulton

Description: F3

Lab ID: 0082115-04

Sampled: 08/13/20 23:59

Pressure @ Receipt: 7.00" Hg

Canister #: 18883

Received: 08/21/20 12:49

Comments:

Analyzed: 09/02/20 23:42

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	0.975	1.76		0.0285



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FILE #: 4222.00

REPORTED: 09/10/20 13:55

SUBMITTED: 07/29/20 to 08/21/20

AQS SITE CODE:

SITE CODE: Fulton

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Air Toxics by EPA Compendium Method TO-15 - Quality Control						
<i>Batch B0H2009 - Summa Canister Prep</i>						
Blank (B0H2009-BLK1)			Prepared & Analyzed: 08/20/20			
Ethylene oxide	ND	ppbv				U
<i>Batch B0H2802 - Summa Canister Prep</i>						
Blank (B0H2802-BLK1)			Prepared: 08/11/20 Analyzed: 08/28/20			
Ethylene oxide	ND	ppbv				U
<i>Batch B0I0108 - Summa Canister Prep</i>						
Blank (B0I0108-BLK1)			Prepared & Analyzed: 09/01/20			
Ethylene oxide	ND	ppbv				U
<i>Batch B0I0206 - Summa Canister Prep</i>						
Blank (B0I0206-BLK1)			Prepared & Analyzed: 09/02/20			
Ethylene oxide	ND	ppbv				U
Duplicate (B0I0206-DUP1)			Source: 0082115-02		Prepared: 08/13/20 Analyzed: 09/02/20	
Ethylene oxide	0.276	ppbv	0.28	1.26	25	
Duplicate (B0I0206-DUP2)			Source: 0082115-03		Prepared: 08/13/20 Analyzed: 09/02/20	
Ethylene oxide	0.383	ppbv	0.38	1.95	25	



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FILE #: 4222.00

REPORTED: 09/10/20 13:55

SUBMITTED: 07/29/20 to 08/21/20

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 2008018

Calibration Check (2008018-CCV1)

Prepared & Analyzed: 08/07/20

Ethylene oxide	3.01	ppbv	21.6	30.00
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Sequence 2008048

Calibration Check (2008048-CCV1)

Prepared & Analyzed: 08/20/20

Ethylene oxide	2.51	ppbv	0.3	30.00
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Sequence 2008066

Calibration Check (2008066-CCV1)

Prepared & Analyzed: 08/28/20

Ethylene oxide	2.31	ppbv	-6.7	30.00
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Sequence 2009001

Calibration Check (2009001-CCV1)

Prepared & Analyzed: 09/01/20

Ethylene oxide	2.22	ppbv	-11.3	30.00
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Sequence 2009005

Calibration Check (2009005-CCV1)

Prepared & Analyzed: 09/02/20

Ethylene oxide	2.31	ppbv	-7.5	30.00
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SUBMITTED: 07/29/20 to 08/21/20

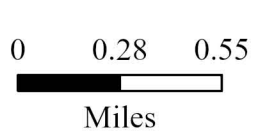
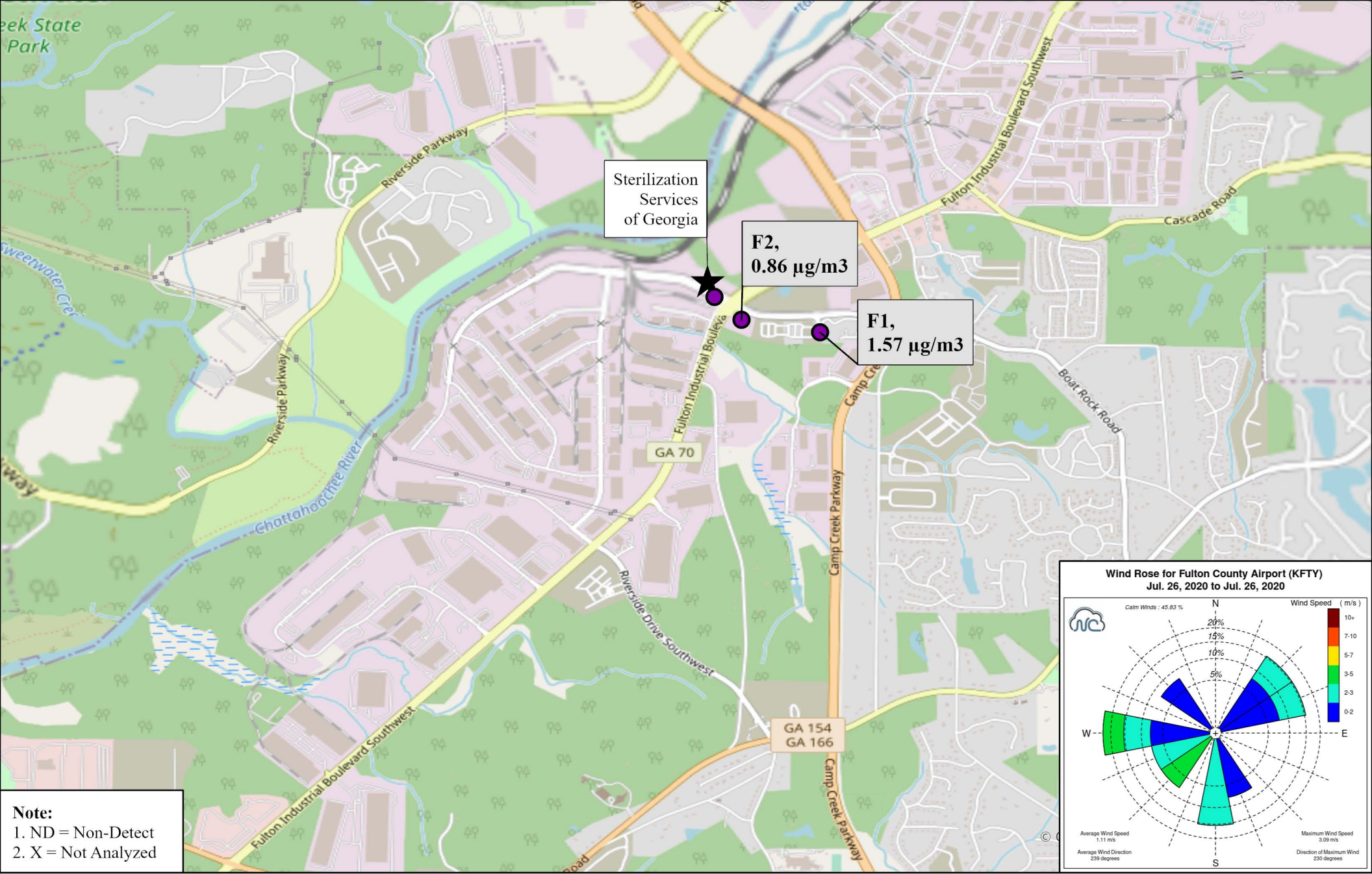
AQS SITE CODE:

SITE CODE: Fulton

Notes and Definitions

U	Under Detection Limit
D-F	Duplicate exceeds DQO criteria.
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 (µg/m³)

Ethylene Oxide Sampling
 Fulton County, GA

07/26/2020

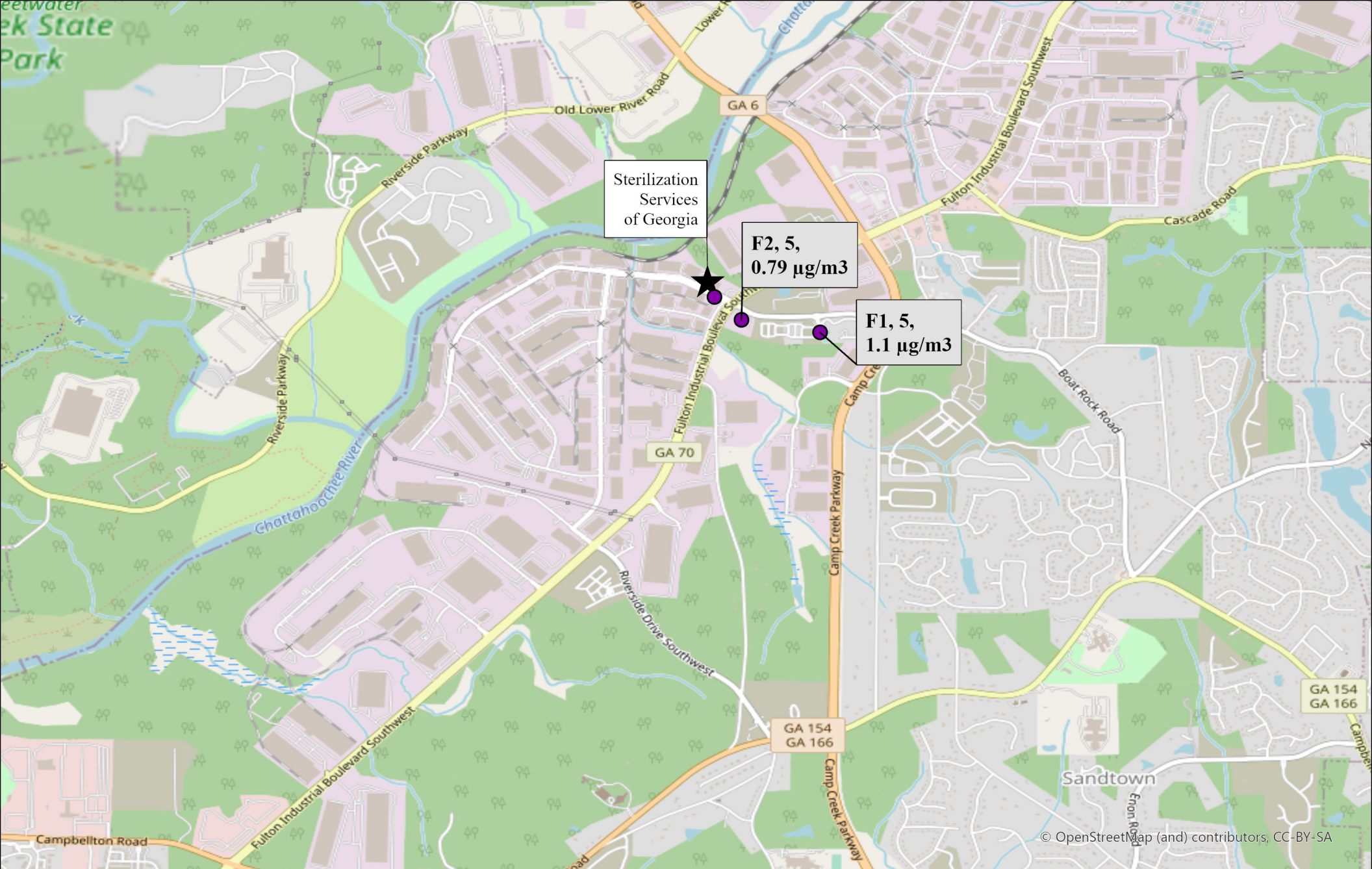
Sampled By: Georgia Environmental Protection Division

Analyzed By: Eastern Research Group



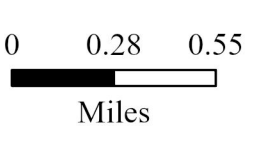
GEORGIA
 DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION



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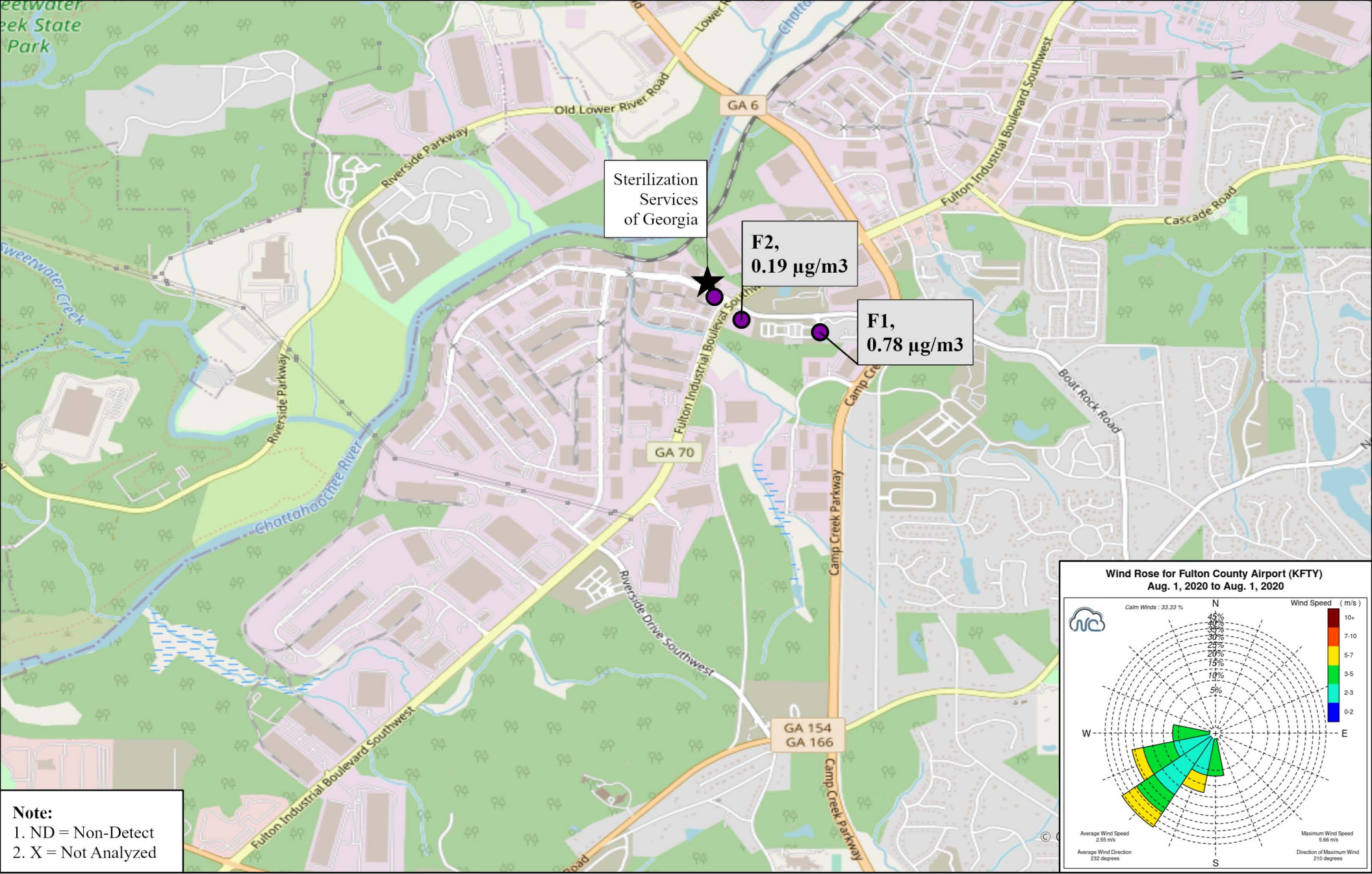
Ethylene Oxide Sampling
Fulton County, GA



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

July 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

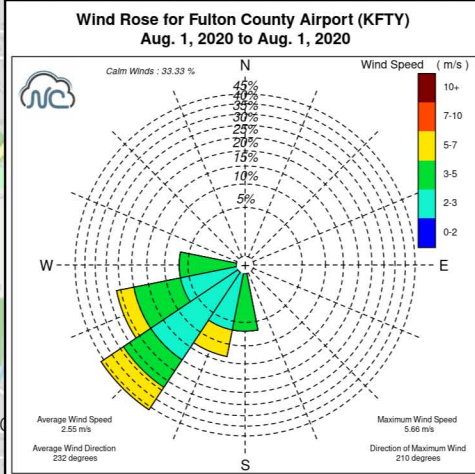




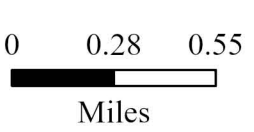
Sterilization
Services
of Georgia

F2,
0.19 µg/m3

F1,
0.78 µg/m3



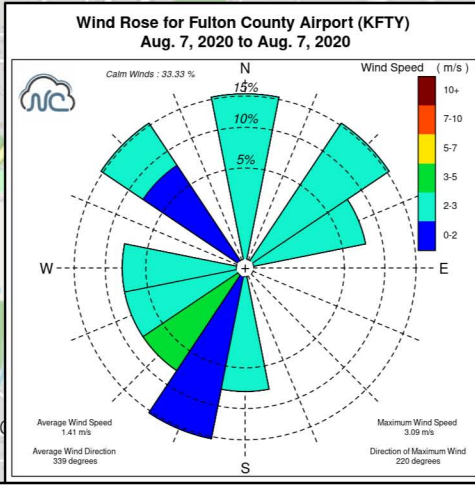
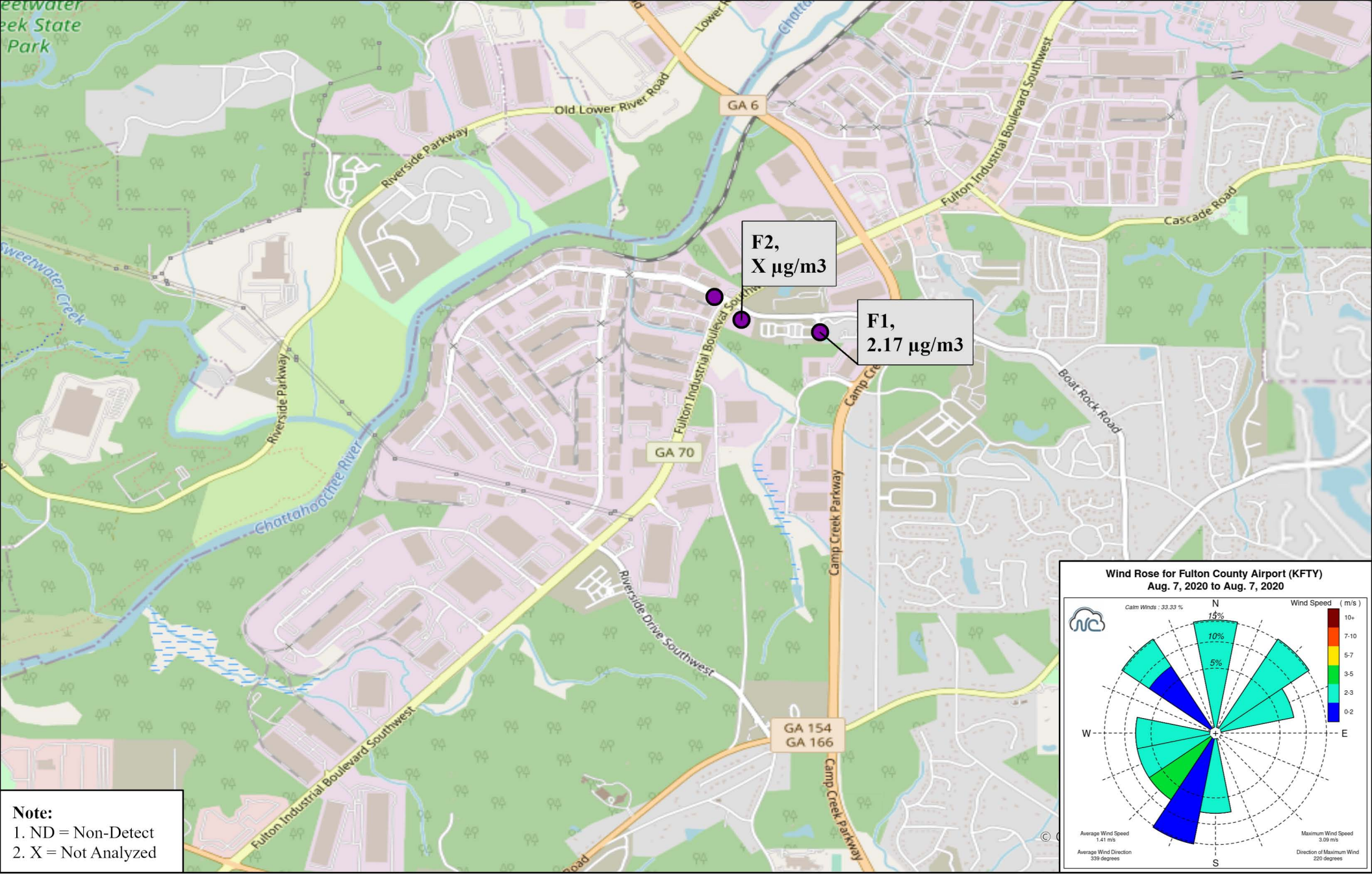
Note:
1. ND = Non-Detect
2. X = Not Analyzed



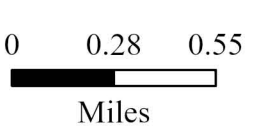
Site ID, Concentration (µg/m3)

Ethylene Oxide Sampling
Fulton County, GA

08/01/2020
Sampled By: Georgia Environmental Protection Division
Analyzed By: Eastern Research Group



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

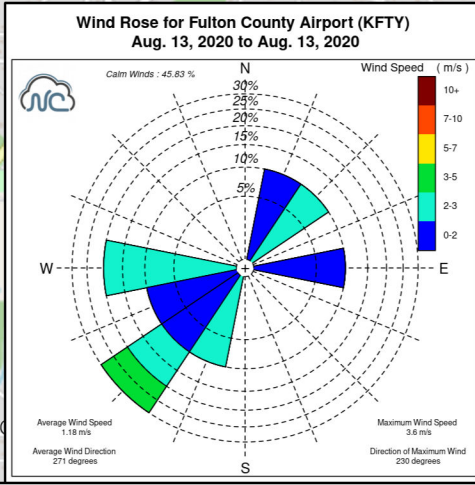
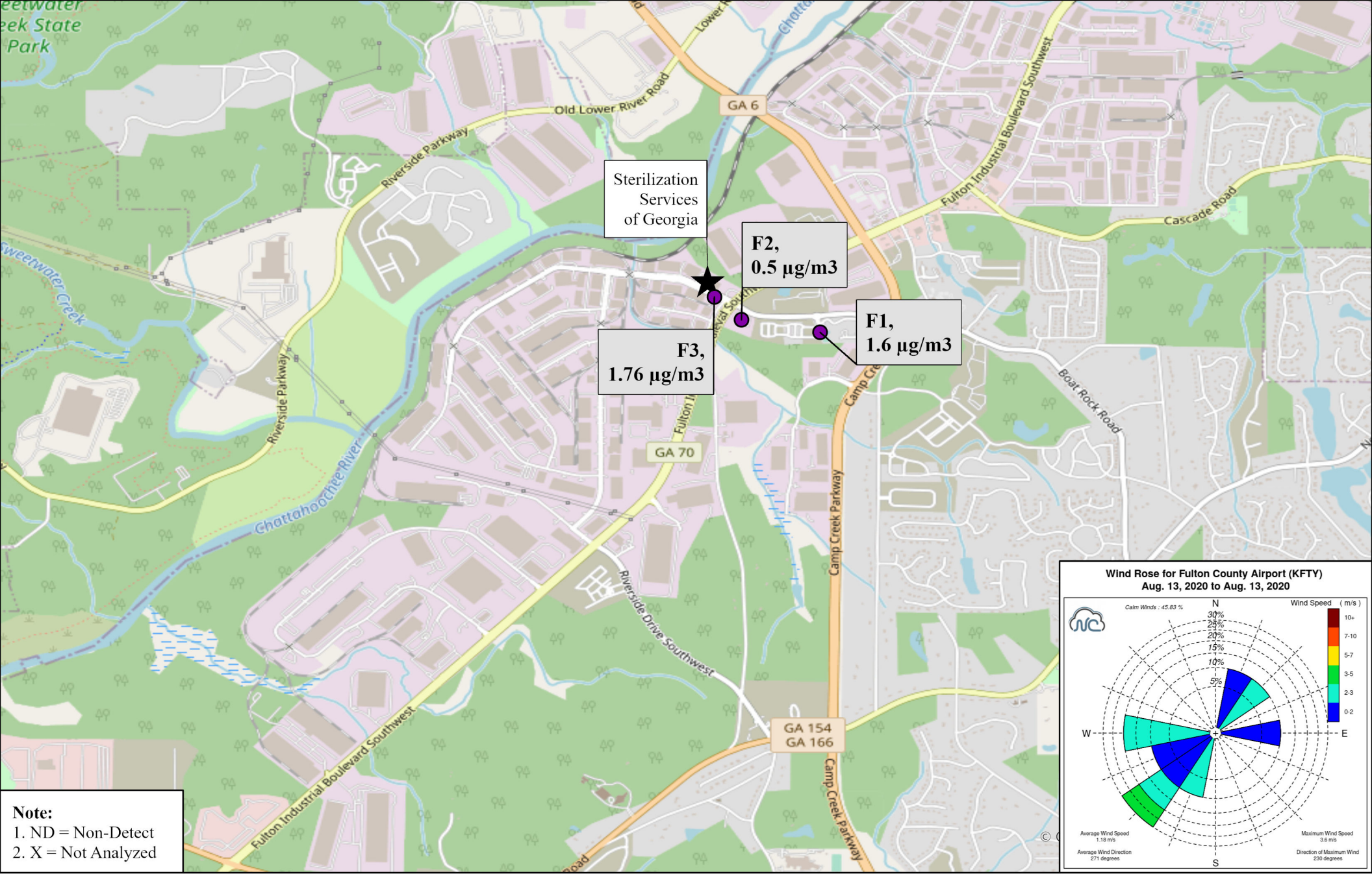


Site ID, Concentration (µg/m3)

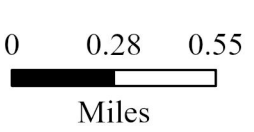
Ethylene Oxide Sampling
 Fulton County, GA

08/07/2020
 Sampled By: Georgia Environmental Protection Division
 Analyzed By: Eastern Research Group





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



Site ID, Concentration (µg/m3)

Ethylene Oxide Sampling
 Fulton County, GA

08/13/2020
 Sampled By: Georgia Environmental Protection Division
 Analyzed By: Eastern Research Group