

July 13, 2020

MEMORANDUM

To: Karen Hays, Air Branch Chief *KH*

Through: Dika Kuoh, Assistant Branch Chief

From: DeAnna Oser, Ambient Monitoring Program Manager

RE: Cobb May 09- May 21, 2020 Sampling Results for Ethylene Oxide

Samples of Ethylene Oxide (EtO) were collected during the period of May 09- May 21, 2020 by the Ambient Monitoring Program in the Cobb area to characterize the EtO concentration. Each of the samples were sent to Eastern Research Group (ERG) for analysis. The Qualifier code of "2" was given to samples to indicate that the collection deviated from established procedures, but the integrity of the sample was not compromised. The sample listed as BI indicate that it was damaged in transit. Please note that ERG is now providing values for levels below the detection limit.

Location	Date	Qualifier	EtO Concentration (ug/m ³)
S1	05/09/2020		1.21
S1	05/15/2020		0.11
S1	05/21/2020		0.07
S2	05/09/2020		BI
S2	05/15/2020		0.57
S2	05/21/2020		0.78
S3	05/09/2020		0.47
S3	05/15/2020	2	0.20
S3	05/21/2020		0.50
S4	05/09/2020		0.53
S4	05/15/2020		0.29
S4	05/21/2020		0.26
S4 QA	05/09/2020		0.72
S6 SA	05/15/2020		0.86
S7 SA	05/15/2020	2	1.46

If you have any questions, please let me know.

DGO/do



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

June 22, 2020

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

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 05/15/20 11:22 through 05/29/20 11:47.

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: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	<u>Received</u>
S3	0051505-02	Air	05/09/20 23:59	05/15/20 11:22
S4	0051505-03	Air	05/09/20 23:59	05/15/20 11:22
S4 QA	0051505-04	Air	05/09/20 23:59	05/15/20 11:22
S1	0051830-01	Air	05/09/20 23:59	05/18/20 10:56
S1	0052846-01	Air	05/15/20 23:59	05/28/20 12:06
S2	0052846-02	Air	05/15/20 23:59	05/28/20 12:06
S3	0052846-03	Air	05/15/20 23:59	05/28/20 12:06
S4	0052846-04	Air	05/15/20 23:59	05/28/20 12:06
S6-SA	0052846-05	Air	05/15/20 23:59	05/28/20 12:06
S7-SA	0052846-06	Air	05/15/20 23:59	05/28/20 12:06
S1	0052917-02	Air	05/21/20 23:59	05/29/20 11:47
S2	0052917-03	Air	05/21/20 23:59	05/29/20 11:47
S3	0052917-04	Air	05/21/20 23:59	05/29/20 11:47
S4	0052917-05	Air	05/21/20 23:59	05/29/20 11:47



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REPORTED: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

Description: S3

Lab ID: 0051505-02

Sampled: 05/09/20 23:59

Pressure @ Receipt: 5.00" Hg

Canister #: 5085

Received: 05/15/20 11:22

Comments:

Analyzed: 06/07/20 01:31

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	0.258	0.47		0.0285



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REPORTED: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

Description: S4	Lab ID: 0051505-03	Sampled: 05/09/20 23:59
Pressure @ Receipt: 0.00" Hg	Canister #: 5124	Received: 05/15/20 11:22
Comments: ambient at lab recovery.		Analyzed: 06/07/20 02:26

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	0.294	0.53		0.0285



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REPORTED: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

Description: S4 QA	Lab ID: 0051505-04	Sampled: 05/09/20 23:59
Pressure @ Receipt: 0.0" Hg	Canister #: SAT071	Received: 05/15/20 11:22
Comments: ambient at lab recovery.		Analyzed: 06/07/20 04:17

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	0.397	0.72		0.0285



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FILE #: 4222.00

REPORTED: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

Description: S1	Lab ID: 0051830-01	Sampled: 05/09/20 23:59
Pressure @ Receipt: 4.00" Hg	Canister #: 5040	Received: 05/18/20 10:56
Comments:		Analyzed: 06/08/20 15:46

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	0.672	1.21		0.0285



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FILE #: 4222.00

REPORTED: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

Description: S1

Lab ID: 0052846-01

Sampled: 05/15/20 23:59

Pressure @ Receipt: 4.50" Hg

Canister #: 18870

Received: 05/28/20 12:06

Comments:

Analyzed: 06/08/20 21:17

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	0.0634	0.11		0.0285



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FILE #: 4222.00

REPORTED: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

Description: S2

Lab ID: 0052846-02

Sampled: 05/15/20 23:59

Pressure @ Receipt: 5.50" Hg

Canister #: SAT183

Received: 05/28/20 12:06

Comments:

Analyzed: 06/08/20 22:12

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	0.317	0.57		0.0285



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FILE #: 4222.00

REPORTED: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

Description: S3	Lab ID: 0052846-03	Sampled: 05/15/20 23:59
Pressure @ Receipt: 6.00" Hg	Canister #: 33554	Received: 05/28/20 12:06
Comments:		Analyzed: 06/08/20 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/m³</u>		<u>ppbv</u>
Ethylene oxide	0.111	0.20		0.0285



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FILE #: 4222.00

REPORTED: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

Description: S4	Lab ID: 0052846-04	Sampled: 05/15/20 23:59
Pressure @ Receipt: 0.00" Hg	Canister #: A21025	Received: 05/28/20 12:06
Comments: Received at ambient pressure.		Analyzed: 06/09/20 00:02

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	0.162	0.29		0.0285



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FILE #: 4222.00

REPORTED: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

Description: S6-SA

Lab ID: 0052846-05

Sampled: 05/15/20 23:59

Pressure @ Receipt: 2.50" Hg

Canister #: SAT088

Received: 05/28/20 12:06

Comments:

Analyzed: 06/09/20 02:48

Air Toxics by EPA Compendium Method TO-15

Analyte	Results		Flag	MDL
	ppbv	ug/m ³		ppbv
Ethylene oxide	0.474	0.86		0.0285



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FILE #: 4222.00

REPORTED: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

Description: S7-SA

Lab ID: 0052846-06

Sampled: 05/15/20 23:59

Pressure @ Receipt: 8.50" Hg

Canister #: 5075

Received: 05/28/20 12:06

Comments:

Analyzed: 06/09/20 00:57

Air Toxics by EPA Compendium Method TO-15

Analyte	Results		Flag	MDL
	ppbv	ug/m ³		ppbv
Ethylene oxide	0.808	1.46		0.0285



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FILE #: 4222.00

REPORTED: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

Description: S1

Lab ID: 0052917-02

Sampled: 05/21/20 23:59

Pressure @ Receipt: 4.50" Hg

Canister #: 19280

Received: 05/29/20 11:47

Comments:

Analyzed: 06/09/20 17:53

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	0.0409	0.07		0.0285



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FILE #: 4222.00

REPORTED: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

Description: S2

Lab ID: 0052917-03

Sampled: 05/21/20 23:59

Pressure @ Receipt: 4.50" Hg

Canister #: SAT184

Received: 05/29/20 11:47

Comments:

Analyzed: 06/09/20 18:48

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: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

Description: S3	Lab ID: 0052917-04	Sampled: 05/21/20 23:59
Pressure @ Receipt: 5.50" Hg	Canister #: A21106	Received: 05/29/20 11:47
Comments:		Analyzed: 06/09/20 19:43

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	0.277	0.50		0.0285



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FILE #: 4222.00

REPORTED: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

Description: S4	Lab ID: 0052917-05	Sampled: 05/21/20 23:59
Pressure @ Receipt: 0.00" Hg	Canister #: A22328	Received: 05/29/20 11:47
Comments: Received at ambient pressure.		Analyzed: 06/09/20 20:38

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/m³</u>		<u>ppbv</u>
Ethylene oxide	0.144	0.26		0.0285



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FILE #: 4222.00

REPORTED: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
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Air Toxics by EPA Compendium Method TO-15 - Quality Control

Batch B0E2706 - Summa Canister Prep

Blank (B0E2706-BLK1)

Prepared: 05/27/20 Analyzed: 06/06/20

Ethylene oxide	ND	ppbv				U
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Duplicate (B0E2706-DUP3)

Source: 0051505-03

Prepared: 05/09/20 Analyzed: 06/07/20

Ethylene oxide	0.318	ppbv	0.29	7.68	25	
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Duplicate (B0E2706-DUP4)

Source: 0051505-04

Prepared: 05/09/20 Analyzed: 06/07/20

Ethylene oxide	0.377	ppbv	0.40	5.24	25	
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Batch B0F0808 - Summa Canister Prep

Blank (B0F0808-BLK1)

Prepared & Analyzed: 06/08/20

Ethylene oxide	ND	ppbv				U
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Duplicate (B0F0808-DUP3)

Source: 0052846-06

Prepared: 05/15/20 Analyzed: 06/09/20

Ethylene oxide	0.830	ppbv	0.81	2.75	25	
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Duplicate (B0F0808-DUP4)

Source: 0052846-05

Prepared: 05/15/20 Analyzed: 06/09/20

Ethylene oxide	0.472	ppbv	0.47	0.360	25	
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Batch B0F0907 - Summa Canister Prep

Blank (B0F0907-BLK1)

Prepared & Analyzed: 06/09/20

Ethylene oxide	ND	ppbv				U
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FILE #: 4222.00

REPORTED: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

AQS SITE CODE:

SITE CODE: Cobb

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

Sequence 2005060

Calibration Check (2005060-CCV1)

Prepared & Analyzed: 06/06/20

Ethylene oxide	2.45	ppbv	-0.9	30.00
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Sequence 2006022

Calibration Check (2006022-CCV1)

Prepared & Analyzed: 06/08/20

Ethylene oxide	2.61	ppbv	4.2	30.00
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Sequence 2006027

Calibration Check (2006027-CCV1)

Prepared & Analyzed: 06/09/20

Ethylene oxide	2.57	ppbv	3.0	30.00
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FILE #: 4222.00

REPORTED: 06/22/20 12:34

SUBMITTED: 05/15/20 to 05/29/20

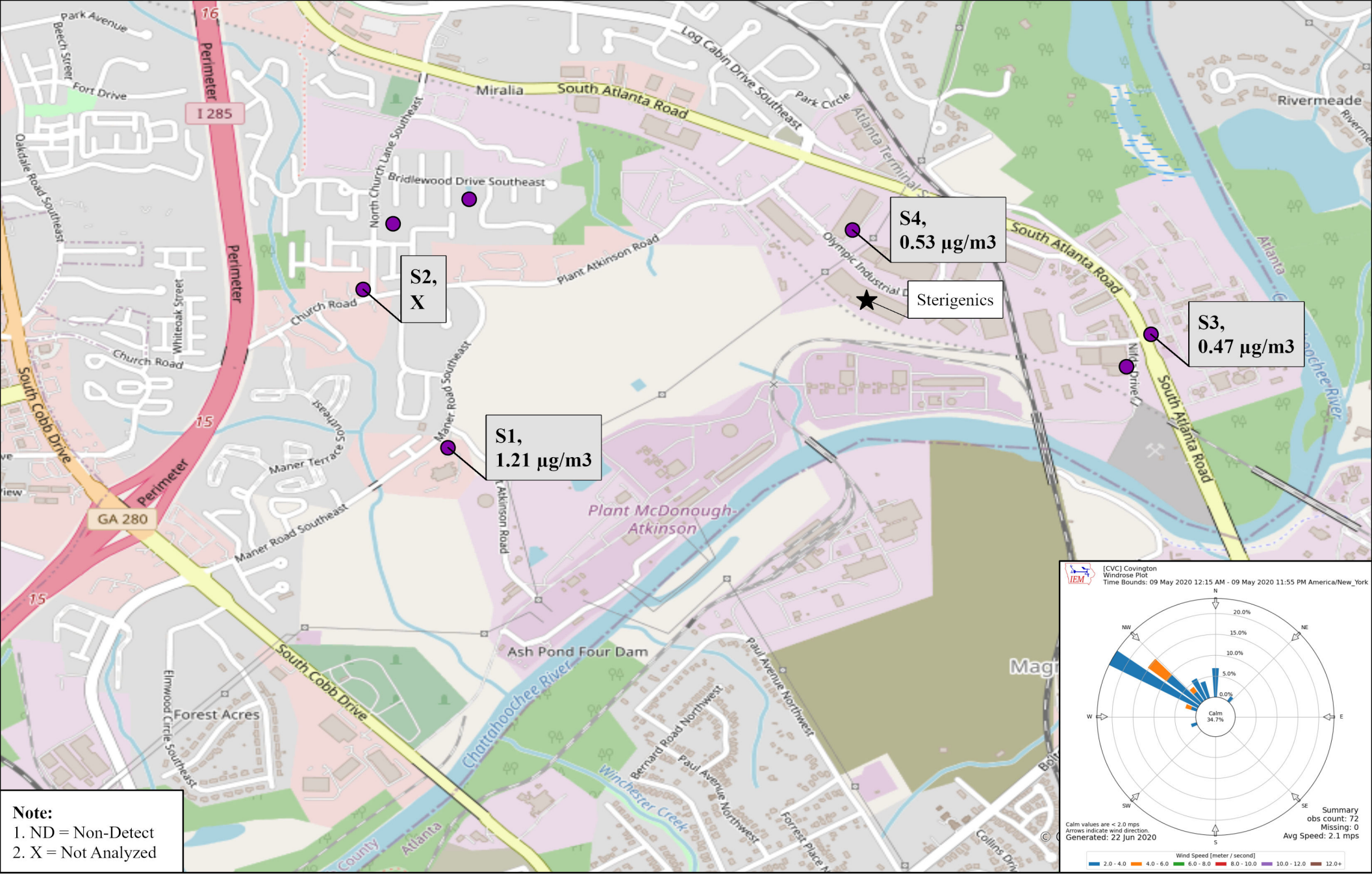
AQS SITE CODE:

SITE CODE: Cobb

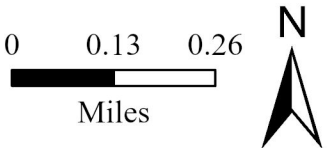
Notes and Definitions

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.



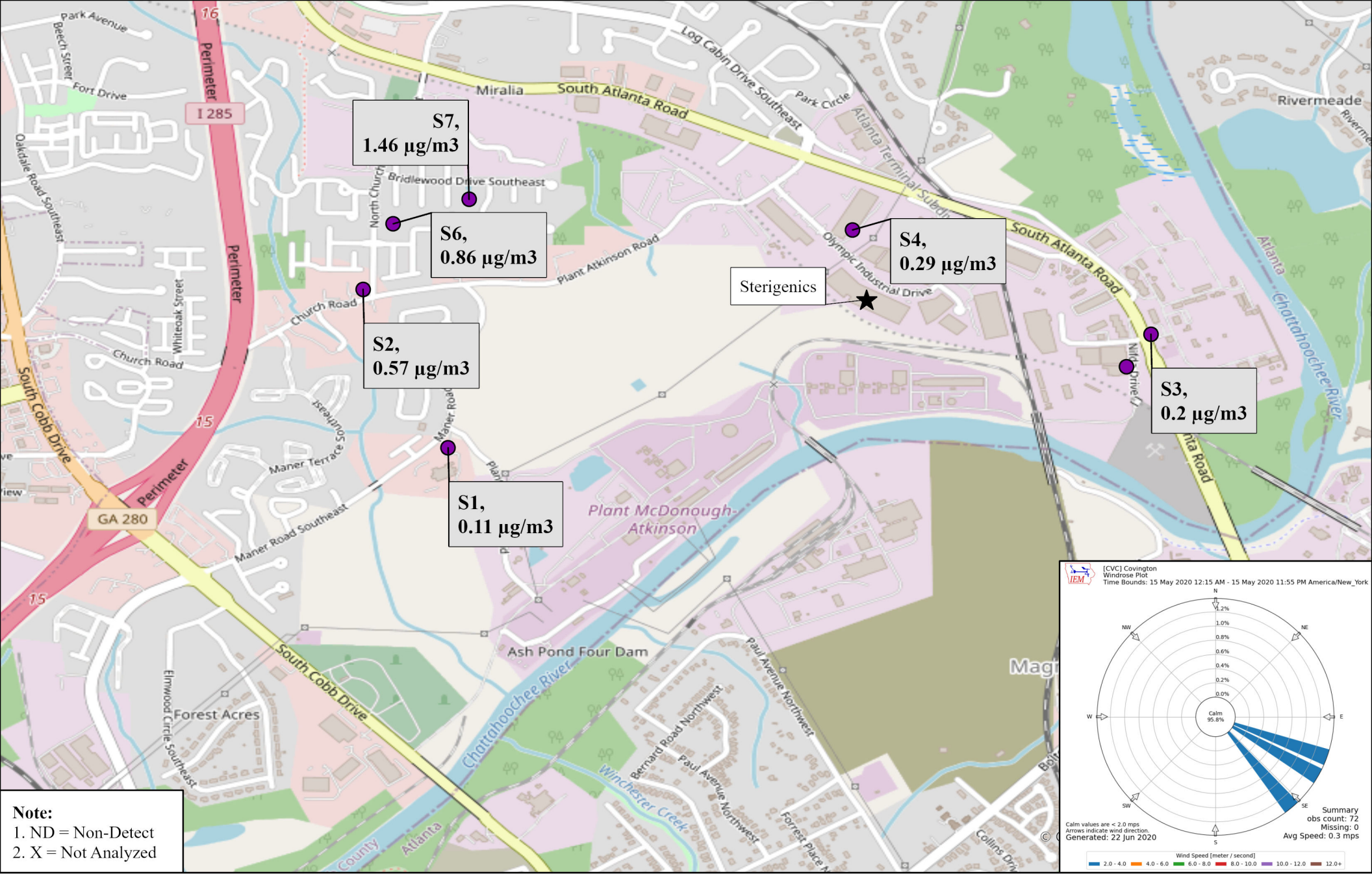
Note:
 1. ND = Non-Detect
 2. X = Not Analyzed



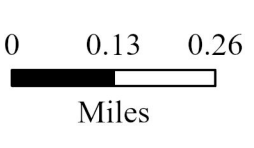
Ethylene Oxide Sampling
 Cobb County, GA

05/09/2020
 Sampled By: Georgia Environmental Protection Division
 Analyzed By: Eastern Research Group





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

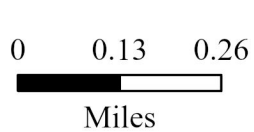
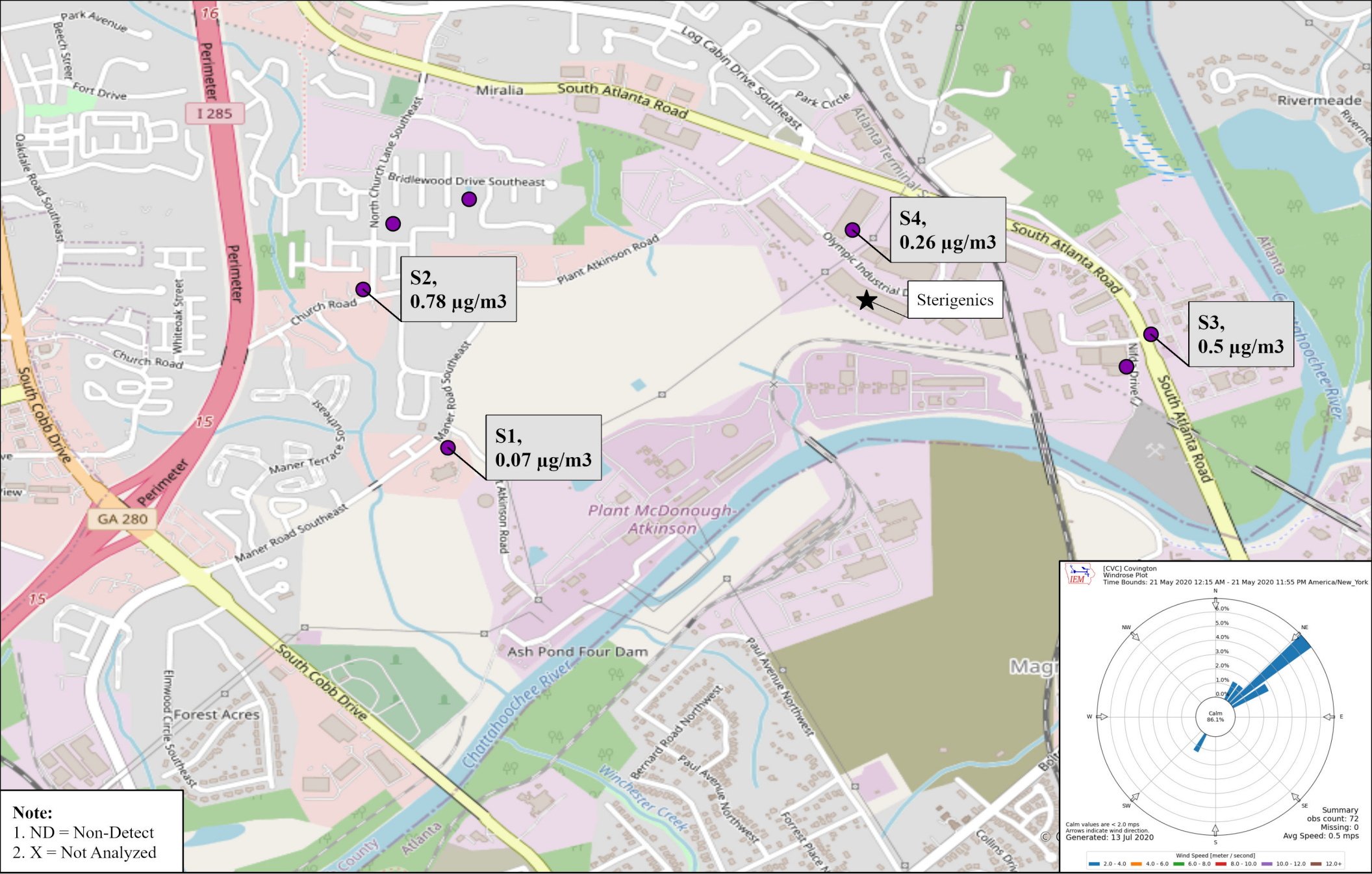


Site ID, Concentration (µg/m³)

Ethylene Oxide Sampling
 Cobb County, GA

05/15/2020
 Sampled By: Georgia Environmental Protection Division
 Analyzed By: Eastern Research Group





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

Ethylene Oxide Sampling
 Cobb County, GA

05/21/2020
 Sampled By: Georgia Environmental Protection Division
 Analyzed By: Eastern Research Group



GEORGIA
 DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION