



GEORGIA

DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

EPD Director's Office

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

August 12, 2020

MEMORANDUM

To: Karen Hays, Air Branch Chief KH

Through: Dika Kuoh, Assistant Branch Chief

From: DeAnna Oser, Ambient Monitoring Program Manager

RE: Covington May 21 – June 8, 2020 Sampling Results for Ethylene Oxide

Samples of Ethylene Oxide (EtO) were collected during the period of May 21 – June 8, 2020 by the Ambient Monitoring Program in the Covington 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 indicates it was damaged in transit. The sample listed as AN indicates the machine malfunctioned while collecting the sample. No samples were taken at location C1, C6, C8, or C9 during this period.

Location	Date	Qualifier	EtO Concentration (ug/m ³)
C2	05/21/2020		0.44
C2	05/27/2020		0.50
C2	06/02/2020		0.43
C2	06/08/2020		BI
C3	05/21/2020		0.15
C3	05/27/2020		0.40
C3	06/02/2020		0.50
C3	06/08/2020		0.57
C4	05/21/2020		AN
C4	05/27/2020	2	0.26
C4	06/02/2020	2	0.89
C4	06/08/2020	2	0.20
C4 QA	06/08/2020	2	0.35
C5	05/21/2020		0.70
C5	05/27/2020		0.54

Location		Date		Qualifier		EtO Concentration (ug/m ³)
C5		06/02/2020				0.57
C5		06/08/2020				0.14
C7		05/27/2020				0.37

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: Covington

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 11:55 through 06/17/20 11:27.

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.



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 12:55

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

AQS SITE CODE:

SITE CODE: Covington

ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	<u>Received</u>
Covington FB	0052918-01	Air	05/22/20 23:59	05/29/20 11:55
C2	0052918-03	Air	05/21/20 23:59	05/29/20 11:55
C3	0052918-04	Air	05/21/20 23:59	05/29/20 11:55
C5	0052918-06	Air	05/21/20 23:59	05/29/20 11:55
C2	0060508-01	Air	05/27/20 23:59	06/05/20 10:59
C3	0060508-02	Air	05/27/20 23:59	06/05/20 10:59
C4	0060508-03	Air	05/27/20 23:59	06/05/20 10:59
C5	0060508-04	Air	05/27/20 23:59	06/05/20 10:59
C7 - SA	0060508-05	Air	05/27/20 23:59	06/05/20 10:59
C2	0061042-01	Air	06/02/20 23:59	06/10/20 11:55
C3	0061042-02	Air	06/02/20 23:59	06/10/20 11:55
C4	0061042-03	Air	06/02/20 23:59	06/10/20 11:55
C5	0061042-04	Air	06/02/20 23:59	06/10/20 11:55
C3	0061731-02	Air	06/08/20 23:59	06/17/20 11:27
C4	0061731-03	Air	06/08/20 23:59	06/17/20 11:27
C4 QA	0061731-04	Air	06/08/20 23:59	06/17/20 11:27
C5	0061731-05	Air	06/08/20 23:59	06/17/20 11:27



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FILE #: 4222.00

REPORTED: 07/01/20 12:55

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

AQS SITE CODE:

SITE CODE: Covington

Description: Covington FB

Lab ID: 0052918-01

Sampled: 05/22/20 23:59

Pressure @ Receipt: 29.50" Hg

Canister #: A21073

Received: 05/29/20 11:55

Comments: Field Blank

Analyzed: 06/11/20 17:36

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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FILE #: 4222.00

REPORTED: 07/01/20 12:55

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

AQS SITE CODE:

SITE CODE: Covington

Description: C5	Lab ID: 0052918-06	Sampled: 05/21/20 23:59
Pressure @ Receipt: 3.50" Hg	Canister #: SAT169	Received: 05/29/20 11:55
Comments:		Analyzed: 06/12/20 02:48

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	0.387	0.70		0.0285



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FILE #: 4222.00

REPORTED: 07/01/20 12:55

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

AQS SITE CODE:

SITE CODE: Covington

Description: C3

Lab ID: 0060508-02

Sampled: 05/27/20 23:59

Pressure @ Receipt: 6.00" Hg

Canister #: 5015

Received: 06/05/20 10:59

Comments:

Analyzed: 06/12/20 16:21

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	0.224	0.40		0.0285



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FILE #: 4222.00

REPORTED: 07/01/20 12:55

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

AQS SITE CODE:

SITE CODE: Covington

Description: C4

Lab ID: 0060508-03

Sampled: 05/27/20 23:59

Pressure @ Receipt: 8.50" Hg

Canister #: 19340

Received: 06/05/20 10:59

Comments:

Analyzed: 06/12/20 17:16

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	0.143	0.26		0.0285



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FILE #: 4222.00

REPORTED: 07/01/20 12:55

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

AQS SITE CODE:

SITE CODE: Covington

Description: C5

Lab ID: 0060508-04

Sampled: 05/27/20 23:59

Pressure @ Receipt: 4.00" Hg

Canister #: SAT057

Received: 06/05/20 10:59

Comments:

Analyzed: 06/12/20 18:11

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/m³</u>		<u>ppbv</u>
Ethylene oxide	0.298	0.54		0.0285



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FILE #: 4222.00

REPORTED: 07/01/20 12:55

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

AQS SITE CODE:

SITE CODE: Covington

Description: C7 - SA	Lab ID: 0060508-05	Sampled: 05/27/20 23:59
Pressure @ Receipt: 2.00 " Hg	Canister #: SAT100	Received: 06/05/20 10:59
Comments:		Analyzed: 06/12/20 19:06

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	0.203	0.37		0.0285



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FILE #: 4222.00

REPORTED: 07/01/20 12:55

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

AQS SITE CODE:

SITE CODE: Covington

Description: C3

Lab ID: 0061042-02

Sampled: 06/02/20 23:59

Pressure @ Receipt: 6.50" Hg

Canister #: 5137

Received: 06/10/20 11:55

Comments:

Analyzed: 06/13/20 00:37

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	0.274	0.50		0.0285



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FILE #: 4222.00

REPORTED: 07/01/20 12:55

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

AQS SITE CODE:

SITE CODE: Covington

Description: C5

Lab ID: 0061042-04

Sampled: 06/02/20 23:59

Pressure @ Receipt: 5.50" Hg

Canister #: 5042

Received: 06/10/20 11:55

Comments:

Analyzed: 06/13/20 02:27

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	0.316	0.57		0.0285



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FILE #: 4222.00

REPORTED: 07/01/20 12:55

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

AQS SITE CODE:

SITE CODE: Covington

Description: C3

Lab ID: 0061731-02

Sampled: 06/08/20 23:59

Pressure @ Receipt: 7.00" Hg

Canister #: 5115

Received: 06/17/20 11:27

Comments:

Analyzed: 06/17/20 20:03

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	0.313	0.57		0.0285



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FILE #: 4222.00

REPORTED: 07/01/20 12:55

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

AQS SITE CODE:

SITE CODE: Covington

Description: C4

Lab ID: 0061731-03

Sampled: 06/08/20 23:59

Pressure @ Receipt: 9.50" Hg

Canister #: 18872

Received: 06/17/20 11:27

Comments:

Analyzed: 06/17/20 20:59

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	0.109	0.20		0.0285



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FILE #: 4222.00

REPORTED: 07/01/20 12:55

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

AQS SITE CODE:

SITE CODE: Covington

Description: C4 QA

Lab ID: 0061731-04

Sampled: 06/08/20 23:59

Pressure @ Receipt: 8.50" Hg

Canister #: SAT171

Received: 06/17/20 11:27

Comments:

Analyzed: 06/17/20 22:49

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	0.193	0.35		0.0285



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FILE #: 4222.00

REPORTED: 07/01/20 12:55

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

AQS SITE CODE:

SITE CODE: Covington

Description: C5

Lab ID: 0061731-05

Sampled: 06/08/20 23:59

Pressure @ Receipt: 5.00" Hg

Canister #: 33275

Received: 06/17/20 11:27

Comments:

Analyzed: 06/18/20 00:40

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	0.0756	0.14		0.0285



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FILE #: 4222.00
 REPORTED: 07/01/20 12:55
 SUBMITTED: 05/29/20 to 06/17/20
 AQS SITE CODE:
 SITE CODE: Covington

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

Batch B0F0907 - Summa Canister Prep

Blank (B0F0907-BLK1)

Prepared & Analyzed: 06/09/20

Ethylene oxide	ND	ppbv				U
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Duplicate (B0F0907-DUP1)**Source: 0052849-01**

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

Ethylene oxide	0.268	ppbv	0.28	3.84	25	
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Batch B0F1107 - Summa Canister Prep

Blank (B0F1107-BLK1)

Prepared & Analyzed: 06/11/20

Ethylene oxide	ND	ppbv				U
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Duplicate (B0F1107-DUP1)**Source: 0060506-05**

Prepared: 05/27/20 Analyzed: 06/11/20

Ethylene oxide	0.604	ppbv	0.60	0.0828	25	
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Batch B0F1206 - Summa Canister Prep

Blank (B0F1206-BLK1)

Prepared & Analyzed: 06/12/20

Ethylene oxide	ND	ppbv				U
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Batch B0F1705 - Summa Canister Prep

Blank (B0F1705-BLK1)

Prepared & Analyzed: 06/17/20

Ethylene oxide	ND	ppbv				U
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REPORTED: 07/01/20 12:55
SUBMITTED: 05/29/20 to 06/17/20
AQS SITE CODE:
SITE CODE: Covington

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

Sequence 2006027

Calibration Check (2006027-CCV1)

Prepared & Analyzed: 06/09/20

Ethylene oxide	2.57	ppbv	3.0	30.00
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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 2006041

Calibration Check (2006041-CCV1)

Prepared & Analyzed: 06/12/20

Ethylene oxide	2.88	ppbv	16.6	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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CERTIFICATE OF ANALYSIS

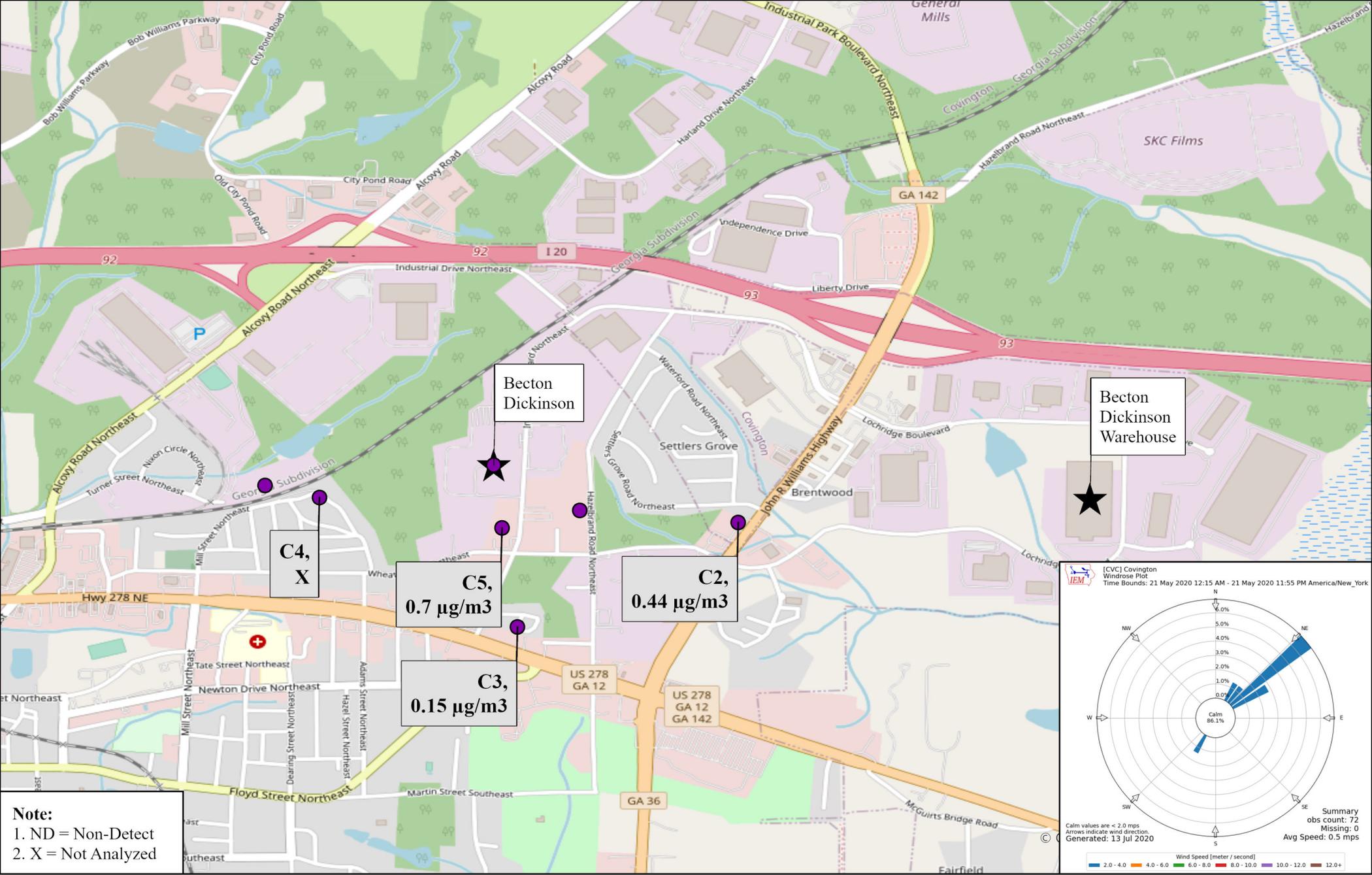
U.S. Environmental Protection Agency, Region 4
4244 International Pkwy, Suite 120
Atlanta, GA 30354
ATTN: Ms. Jaime Gore
PHONE: (404) 362-4912 **FAX:** (919) 541-0516

FILE #: 4222.00
REPORTED: 07/01/20 12:55
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AQS SITE CODE:
SITE CODE: Covington

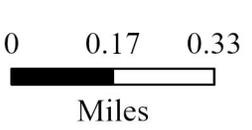
Notes and Definitions

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

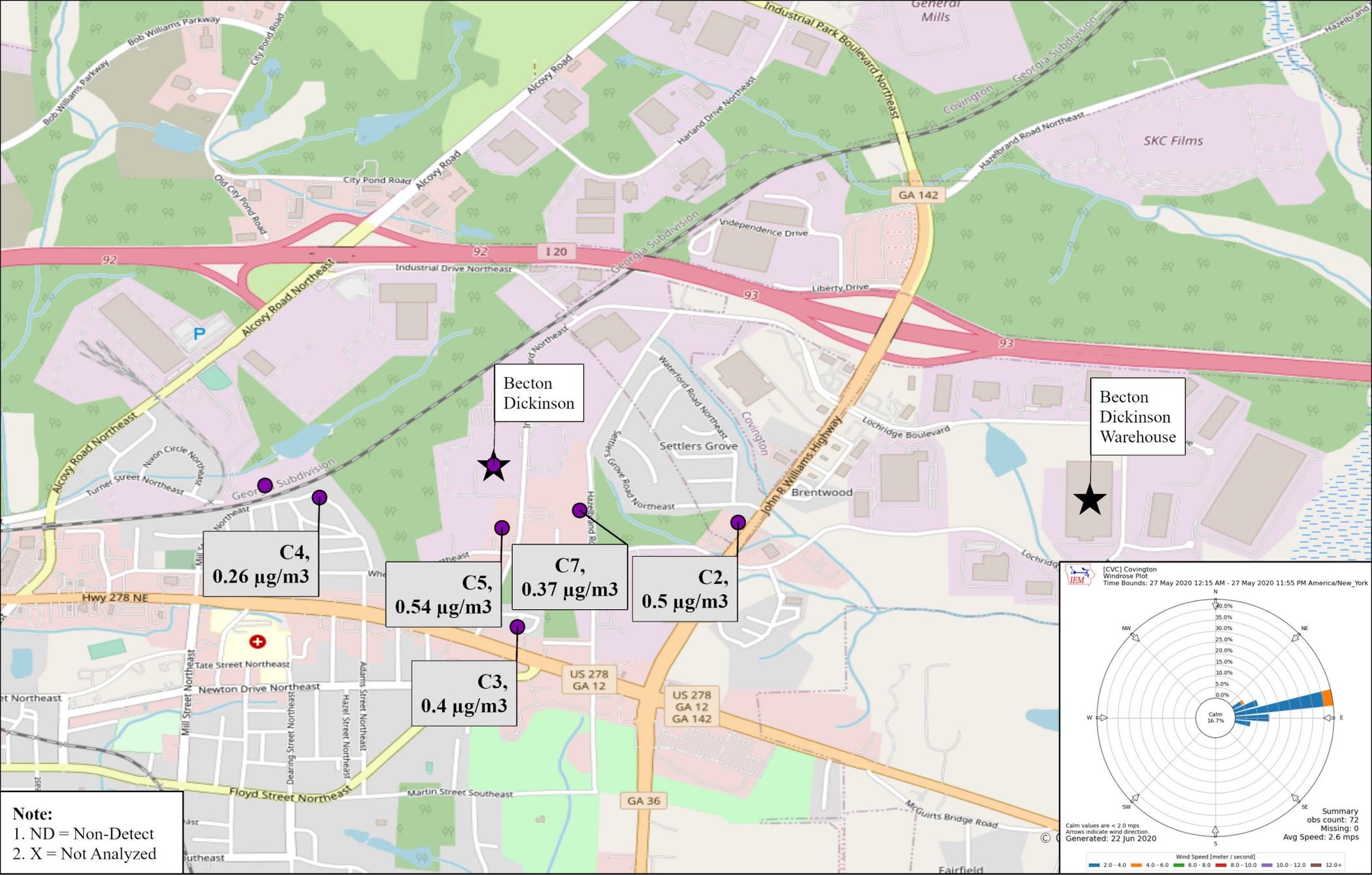


Site ID, Concentration ($\mu\text{g}/\text{m}^3$)

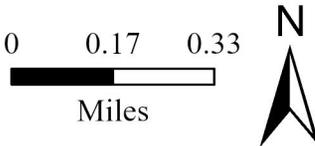
Ethylene Oxide Sampling
 Covington, GA

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





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

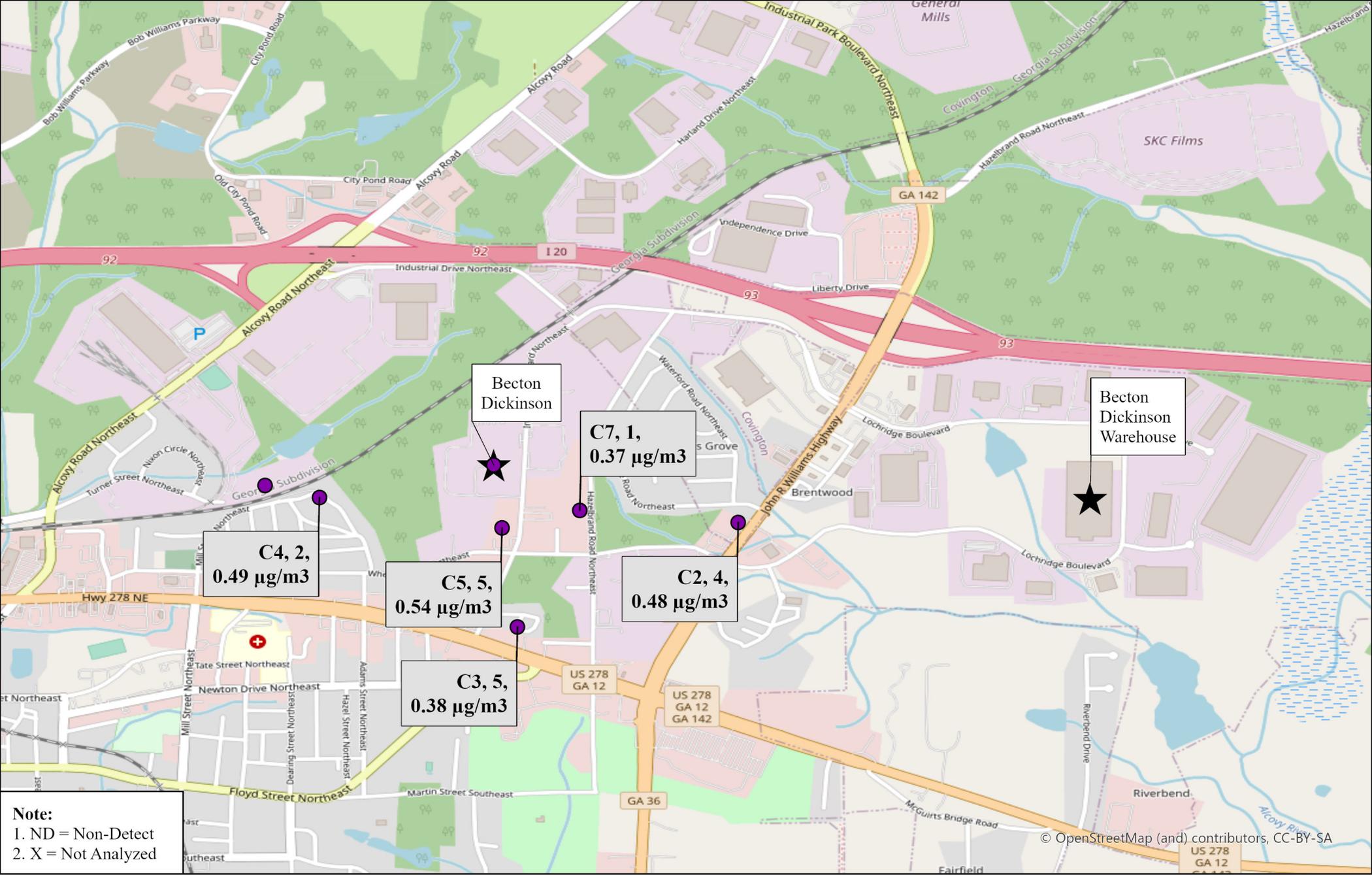


Site ID, Concentration ($\mu\text{g}/\text{m}^3$)

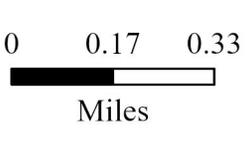
Ethylene Oxide Sampling
 Covington, GA

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



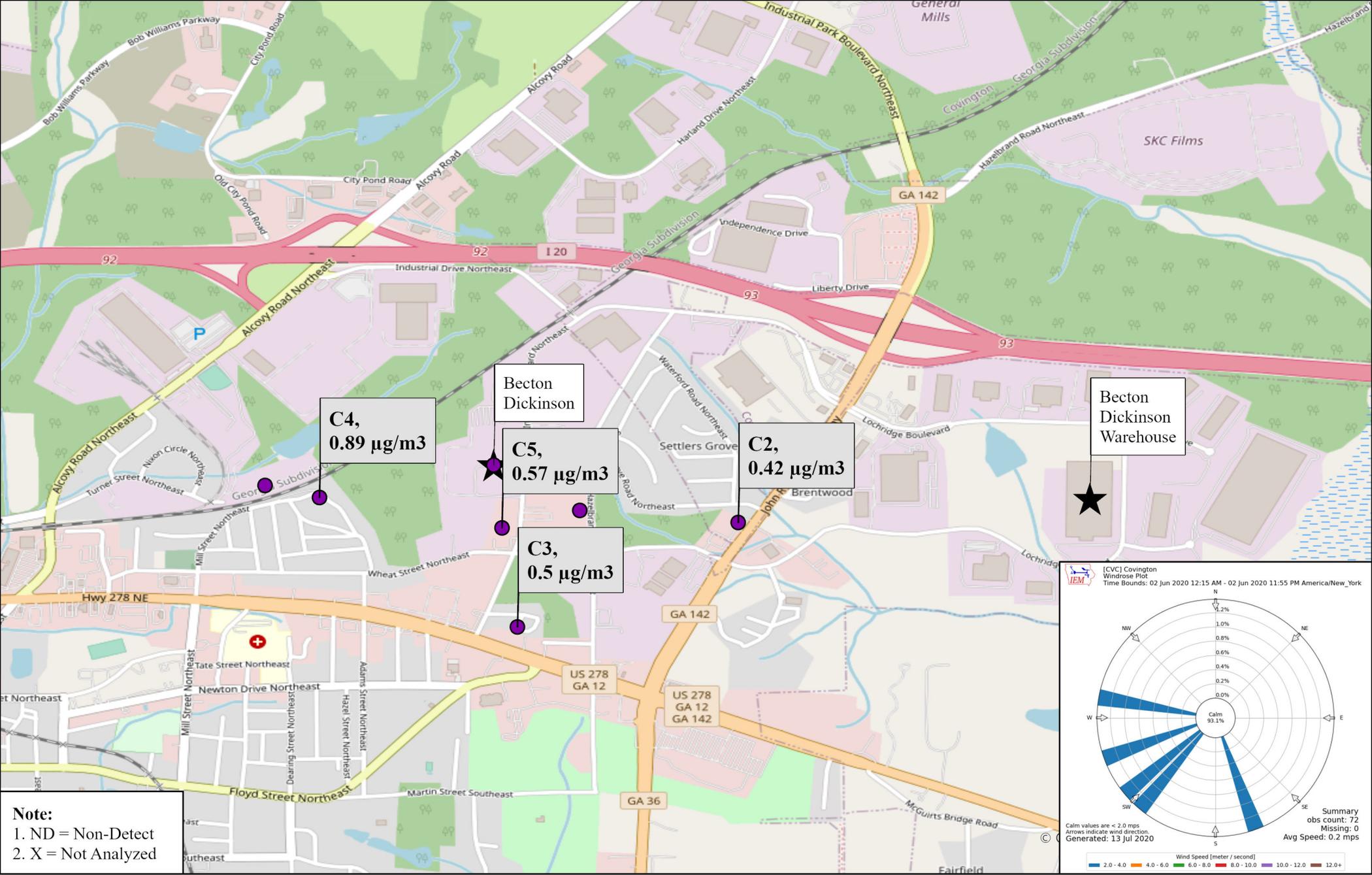


Ethylene Oxide Sampling
Covington, GA

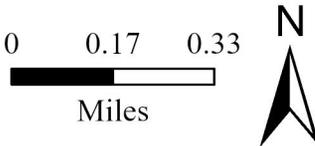


**Site ID, Number of Samples,
Concentration (µg/m3)**

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



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

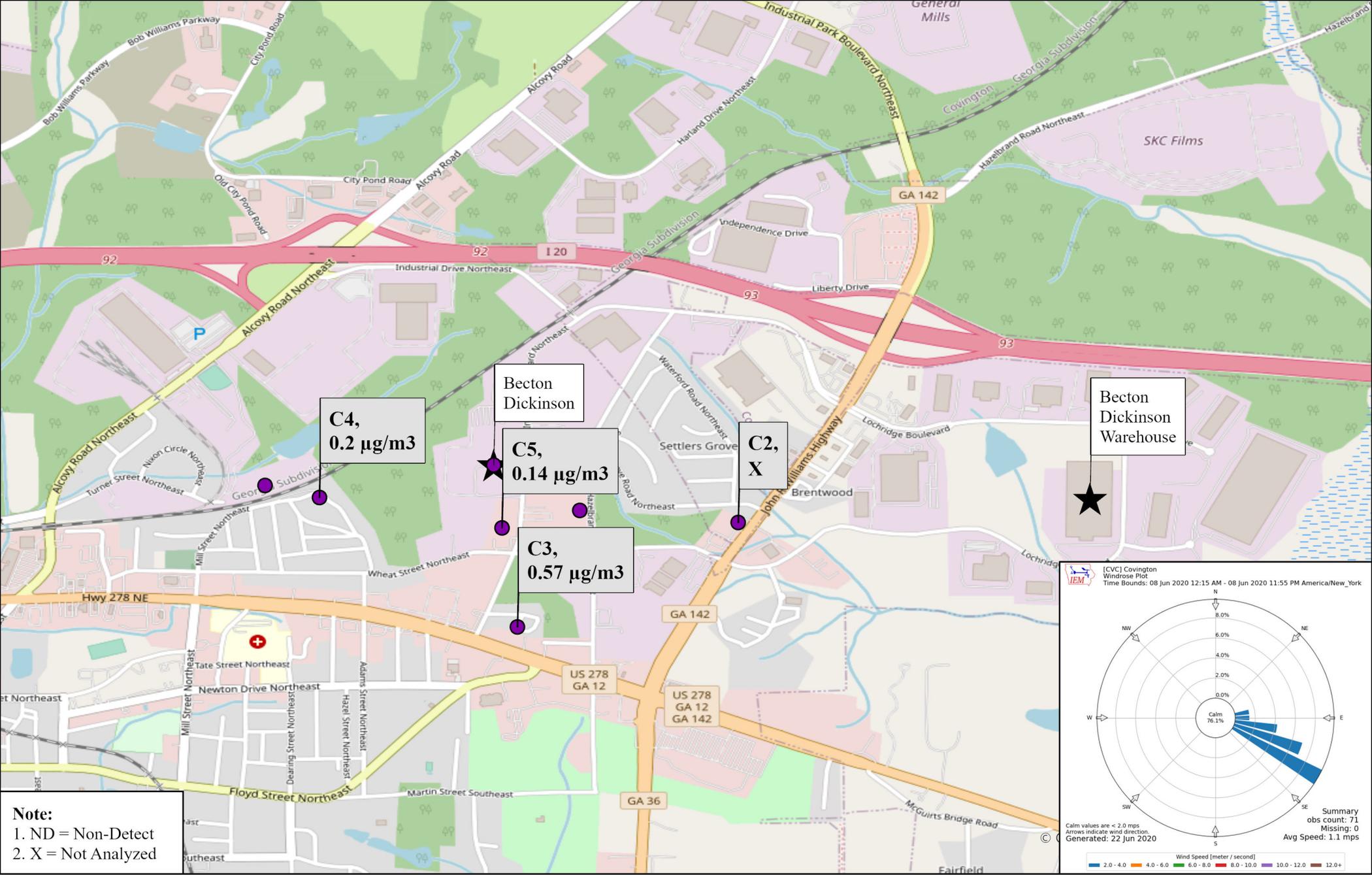


Site ID, Concentration ($\mu\text{g}/\text{m}^3$)

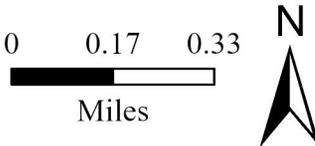
Ethylene Oxide Sampling
 Covington, GA

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 ($\mu\text{g}/\text{m}^3$)

Ethylene Oxide Sampling
 Covington, GA

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

