


May 13, 2020

MEMORANDUM

To: Karen Hays, Air Branch Chief 

Through: Dika Kuoh, Assistant Branch Chief

From: DeAnna Oser, Ambient Monitoring Program Manager

RE: Covington March 4- 16, 2020 Sampling Results for Ethylene Oxide

Samples of Ethylene Oxide (EtO) were taken at our Covington monitoring station in March 2020. Each of the samples were sent to Eastern Research Group (ERG) for analysis.

The Qualifier code of "LK" was given by ERG to indicate that the sample may be biased high. The Qualifier code of "2" was given two samples to indicate that the collection deviated from established procedures, but the integrity of the sample was not compromised. No samples were taken at location C1, C6, C7, C8, or C9 during this period.

Location	Date	Qualifier	EtO Concentration (ug/m3)
C2	3/4/20	LK	0.32
C2	3/10/20		0.55
C2	3/16/20		0.09
C3	3/4/20		0.52
C3	3/10/20		0.09
C3	3/16/20		0.66
C4	3/4/20	2	0.65
C4	3/10/20	2	0.39
C4	3/16/20	2	1.04
C5	3/4/20	LK	0.32
C5	3/10/20		0.63
C5	3/16/20	2	0.14

If you have any questions, please let me know.

DGO/do



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

April 15, 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 03/10/20 11:22 through 03/23/20 10:38.

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: 04/15/20 15:37

SUBMITTED: 03/10/20 to 03/23/20

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>
C2	0031012-01	Air	03/04/20 23:59	03/10/20 11:22
C3	0031012-02	Air	03/04/20 23:59	03/10/20 11:22
C4	0031012-03	Air	03/04/20 23:59	03/10/20 11:22
C5	0031012-04	Air	03/04/20 23:59	03/10/20 11:22
C2	0031836-01	Air	03/10/20 23:59	03/18/20 12:11
C3	0031836-02	Air	03/10/20 23:59	03/18/20 12:11
C4	0031836-03	Air	03/10/20 23:59	03/18/20 12:11
C5	0031836-04	Air	03/10/20 23:59	03/18/20 12:11
C2	0032321-01	Air	03/16/20 23:59	03/23/20 10:38
C3	0032321-02	Air	03/16/20 23:59	03/23/20 10:38
C4	0032321-03	Air	03/16/20 23:59	03/23/20 10:38
C5	0032321-04	Air	03/16/20 23:59	03/23/20 10:38



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FILE #: 4222.00

REPORTED: 04/15/20 15:37

SUBMITTED: 03/10/20 to 03/23/20

AQS SITE CODE:

SITE CODE: Covington

Description: C2

Lab ID: 0031012-01

Sampled: 03/04/20 23:59

Pressure @ Receipt: 4.00" Hg

Canister #: 5100

Received: 03/10/20 11:22

Comments:

Analyzed: 03/17/20 06:02

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	0.178	0.32	LK	0.0285



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FILE #: 4222.00

REPORTED: 04/15/20 15:37

SUBMITTED: 03/10/20 to 03/23/20

AQS SITE CODE:

SITE CODE: Covington

Description: C3

Lab ID: 0031012-02

Sampled: 03/04/20 23:59

Pressure @ Receipt: 6.50" Hg

Canister #: SAT107

Received: 03/10/20 11:22

Comments:

Analyzed: 03/23/20 15:49

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	0.286	0.52		0.0285



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FILE #: 4222.00

REPORTED: 04/15/20 15:37

SUBMITTED: 03/10/20 to 03/23/20

AQS SITE CODE:

SITE CODE: Covington

Description: C4

Lab ID: 0031012-03

Sampled: 03/04/20 23:59

Pressure @ Receipt: 10.00" Hg

Canister #: 5006

Received: 03/10/20 11:22

Comments:

Analyzed: 03/23/20 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/m³</u>		<u>ppbv</u>
Ethylene oxide	0.357	0.65		0.0285



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FILE #: 4222.00

REPORTED: 04/15/20 15:37

SUBMITTED: 03/10/20 to 03/23/20

AQS SITE CODE:

SITE CODE: Covington

Description: C5

Lab ID: 0031012-04

Sampled: 03/04/20 23:59

Pressure @ Receipt: 4.50" Hg

Canister #: A21044

Received: 03/10/20 11:22

Comments:

Analyzed: 03/23/20 19:03

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	0.176	0.32	LK	0.0285



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FILE #: 4222.00

REPORTED: 04/15/20 15:37

SUBMITTED: 03/10/20 to 03/23/20

AQS SITE CODE:

SITE CODE: Covington

Description: C2

Lab ID: 0031836-01

Sampled: 03/10/20 23:59

Pressure @ Receipt: 2.00" Hg

Canister #: SAT108

Received: 03/18/20 12:11

Comments:

Analyzed: 04/03/20 00:07

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	0.305	0.55		0.0285



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FILE #: 4222.00

REPORTED: 04/15/20 15:37

SUBMITTED: 03/10/20 to 03/23/20

AQS SITE CODE:

SITE CODE: Covington

Description: C3

Lab ID: 0031836-02

Sampled: 03/10/20 23:59

Pressure @ Receipt: 5.50" Hg

Canister #: 19298

Received: 03/18/20 12:11

Comments:

Analyzed: 04/03/20 01:02

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	0.0516	0.09		0.0285



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FILE #: 4222.00

REPORTED: 04/15/20 15:37

SUBMITTED: 03/10/20 to 03/23/20

AQS SITE CODE:

SITE CODE: Covington

Description: C4

Lab ID: 0031836-03

Sampled: 03/10/20 23:59

Pressure @ Receipt: 9.50" Hg

Canister #: SAT035

Received: 03/18/20 12:11

Comments:

Analyzed: 04/03/20 01:58

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	0.213	0.39		0.0285



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FILE #: 4222.00

REPORTED: 04/15/20 15:37

SUBMITTED: 03/10/20 to 03/23/20

AQS SITE CODE:

SITE CODE: Covington

Description: C5

Lab ID: 0031836-04

Sampled: 03/10/20 23:59

Pressure @ Receipt: 5.00" Hg

Canister #: AZ40

Received: 03/18/20 12:11

Comments:

Analyzed: 04/03/20 02:53

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	0.350	0.63		0.0285



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FILE #: 4222.00

REPORTED: 04/15/20 15:37

SUBMITTED: 03/10/20 to 03/23/20

AQS SITE CODE:

SITE CODE: Covington

Description: C2

Lab ID: 0032321-01

Sampled: 03/16/20 23:59

Pressure @ Receipt: 2.00" Hg

Canister #: 18874

Received: 03/23/20 10:38

Comments:

Analyzed: 04/03/20 16:25

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	0.0494	0.09		0.0285



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FILE #: 4222.00

REPORTED: 04/15/20 15:37

SUBMITTED: 03/10/20 to 03/23/20

AQS SITE CODE:

SITE CODE: Covington

Description: C3

Lab ID: 0032321-02

Sampled: 03/16/20 23:59

Pressure @ Receipt: 5.50" Hg

Canister #: SAT013

Received: 03/23/20 10:38

Comments:

Analyzed: 04/03/20 17:20

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	0.366	0.66		0.0285



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FILE #: 4222.00

REPORTED: 04/15/20 15:37

SUBMITTED: 03/10/20 to 03/23/20

AQS SITE CODE:

SITE CODE: Covington

Description: C4

Lab ID: 0032321-03

Sampled: 03/16/20 23:59

Pressure @ Receipt: 9.50" Hg

Canister #: A21103

Received: 03/23/20 10:38

Comments:

Analyzed: 04/03/20 18:16

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	0.578	1.04		0.0285



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FILE #: 4222.00

REPORTED: 04/15/20 15:37

SUBMITTED: 03/10/20 to 03/23/20

AQS SITE CODE:

SITE CODE: Covington

Description: C5

Lab ID: 0032321-04

Sampled: 03/16/20 23:59

Pressure @ Receipt: 0.00" Hg

Canister #: A21010

Received: 03/23/20 10:38

Comments: Received at ambient

Analyzed: 04/03/20 19:11

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	0.0768	0.14		0.0285



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FILE #: 4222.00

REPORTED: 04/15/20 15:37

SUBMITTED: 03/10/20 to 03/23/20

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 B0C1605 - Summa Canister Prep

Blank (B0C1605-BLK1)

Prepared: 03/09/20 Analyzed: 03/16/20

Ethylene oxide	ND	ppbv				U
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Duplicate (B0C1605-DUP1)

Source: 0030536-01

Prepared: 02/27/20 Analyzed: 03/16/20

Ethylene oxide	0.269	ppbv	0.25	6.02	25	LK
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Batch B0C2305 - Summa Canister Prep

Blank (B0C2305-BLK1)

Prepared: 03/09/20 Analyzed: 03/23/20

Ethylene oxide	ND	ppbv				U
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Duplicate (B0C2305-DUP1)

Source: 0031012-02

Prepared: 03/04/20 Analyzed: 03/23/20

Ethylene oxide	0.251	ppbv	0.29	13.0	25	
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Batch B0D0204 - Summa Canister Prep

Blank (B0D0204-BLK1)

Prepared & Analyzed: 04/02/20

Ethylene oxide	ND	ppbv				U
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Batch B0D0302 - Summa Canister Prep

Blank (B0D0302-BLK1)

Prepared & Analyzed: 04/03/20

Ethylene oxide	ND	ppbv				U
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REPORTED: 04/15/20 15:37

SUBMITTED: 03/10/20 to 03/23/20

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 2003031

Calibration Check (2003031-CCV1)

Prepared & Analyzed: 03/16/20

Ethylene oxide	2.77	ppbv	12.1	30.00
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Sequence 2003049

Calibration Check (2003049-CCV1)

Prepared & Analyzed: 03/23/20

Ethylene oxide	2.72	ppbv	10.0	30.00
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Sequence 2004009

Calibration Check (2004009-CCV1)

Prepared & Analyzed: 04/02/20

Ethylene oxide	2.56	ppbv	3.4	30.00
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Sequence 2004013

Calibration Check (2004013-CCV1)

Prepared & Analyzed: 04/03/20

Ethylene oxide	2.45	ppbv	-0.8	30.00
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FILE #: 4222.00

REPORTED: 04/15/20 15:37

SUBMITTED: 03/10/20 to 03/23/20

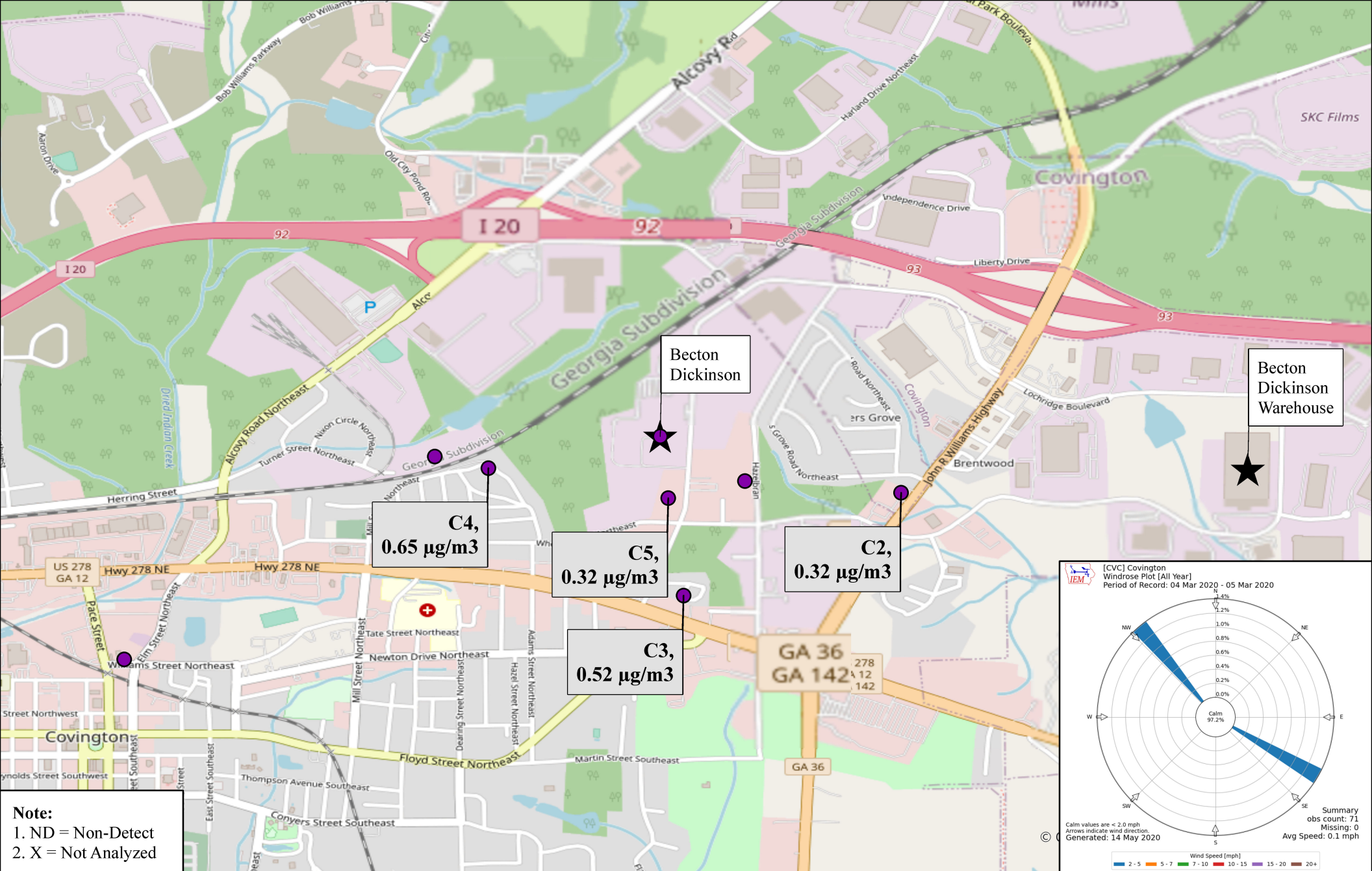
AQS SITE CODE:

SITE CODE: Covington

Notes and Definitions

U	Under Detection Limit
LK	Analyte identified; Reported value may be biased high.
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.



0 0.17 0.34
Miles



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

Ethylene Oxide Sampling
Covington, GA

03/04/2020

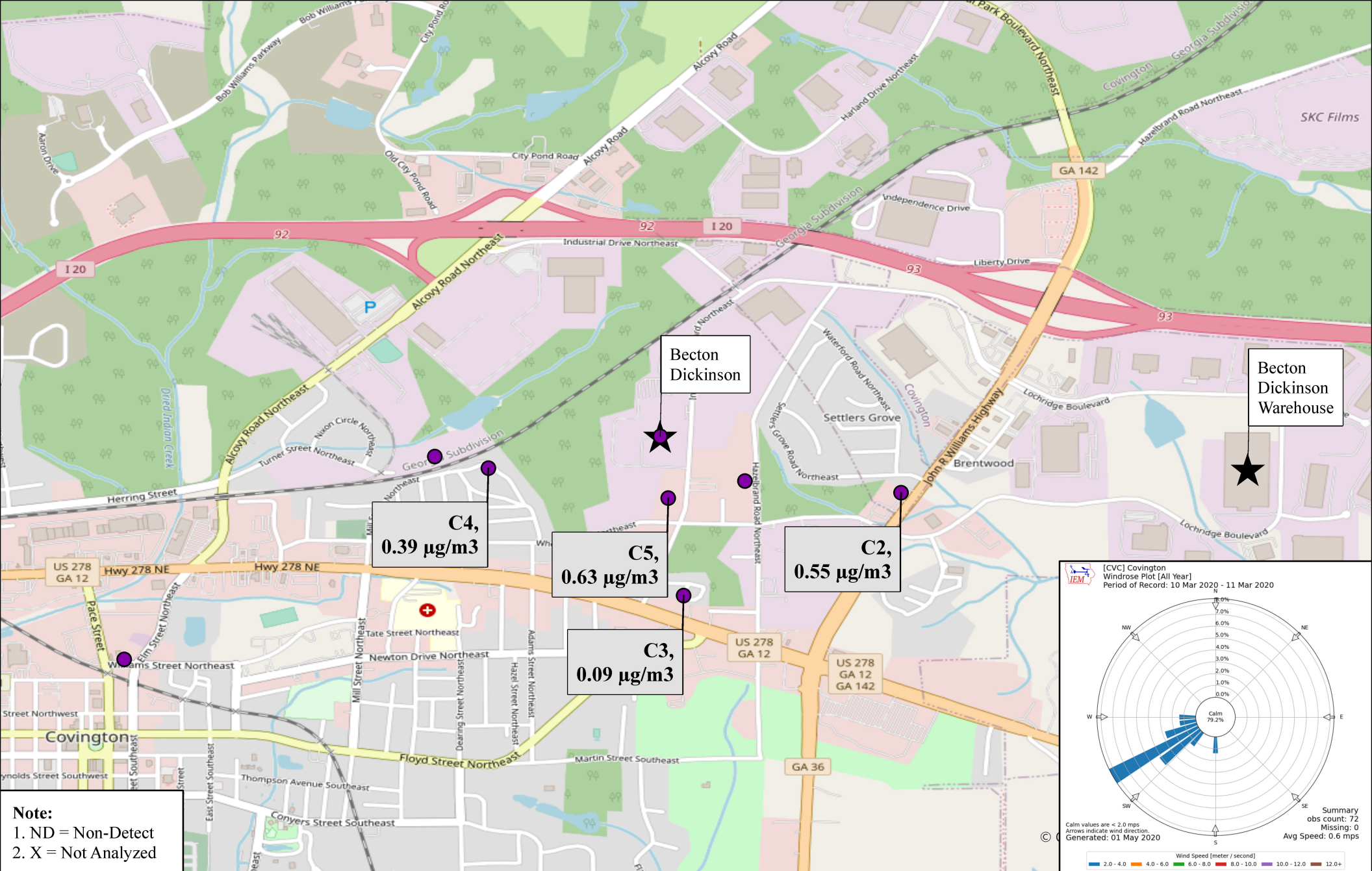
Sampled By: Georgia Environmental Protection Division

Analyzed By: Eastern Research Group



GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION



0 0.17 0.34
 Miles



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

Ethylene Oxide Sampling
 Covington, GA

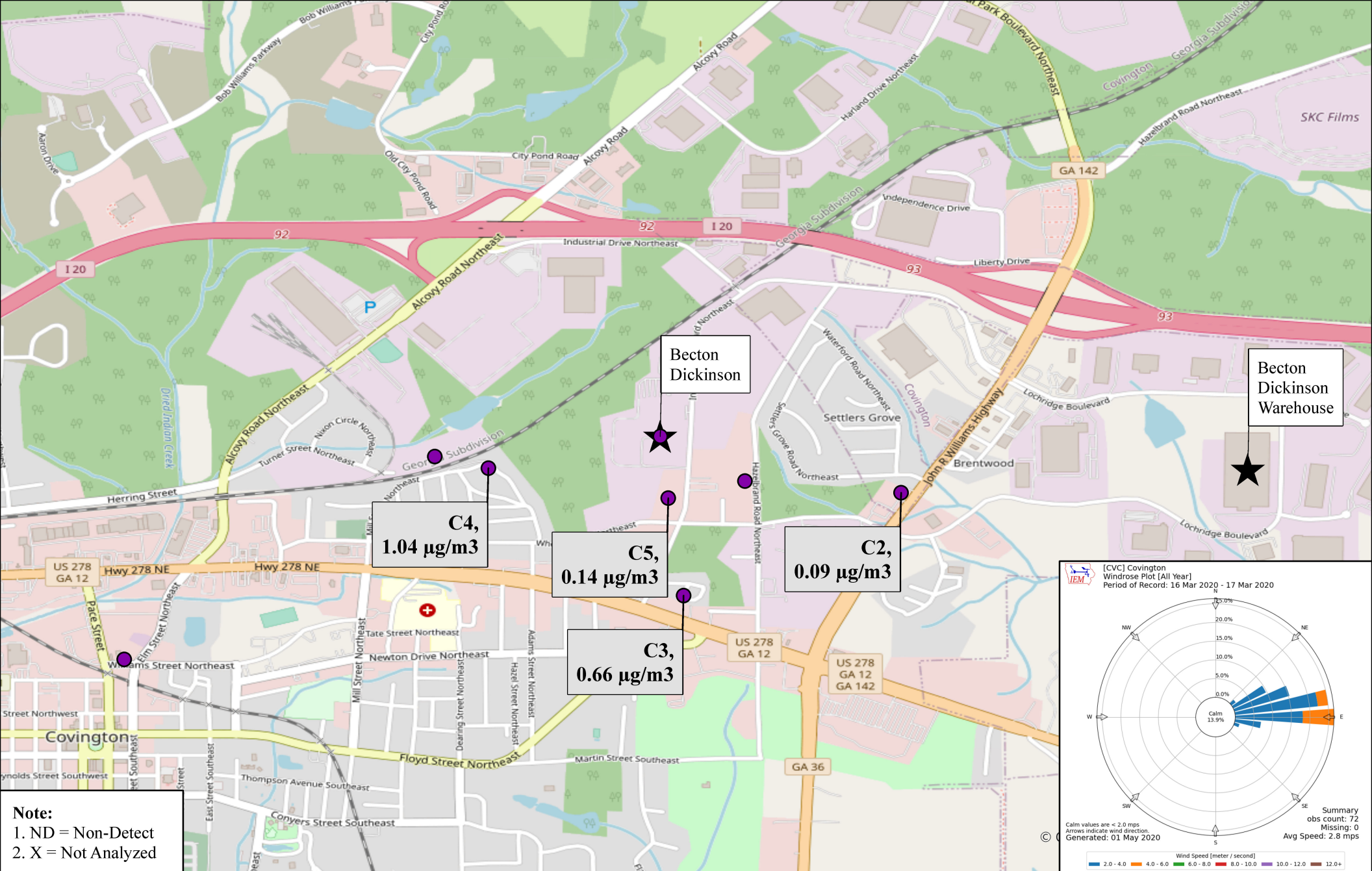
03/10/2020

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



GEORGIA
 DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION



0 0.17 0.34
 Miles



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

Ethylene Oxide Sampling
 Covington, GA

03/16/2020

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



GEORGIA
 DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION