

September 1, 2021

MEMORANDUM

To: Karen Hays, Air Branch Chief *KH*

Through: James Boylan, Assistant Branch Chief

From: DeAnna Oser, Ambient Monitoring Program Manager

RE: South DeKalb April 16-28, 2021 and Near Road 285 April 22, 2021 Sampling Results for Ethylene Oxide

Samples of Ethylene Oxide (EtO) were taken at our South DeKalb monitoring station during the period of April 16-28, 2021. 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 Qualifier code of "LK" was given by ERG to indicate that the sample may be biased high. Please note that ERG is now providing values for levels below the detection limit.

Location	Date	Qualifier	EtO Concentration (ug/m ³)
South DeKalb	04/16/2021		0.09
South DeKalb	04/22/2021	2	0.06
South DeKalb	04/28/2021	LK	0.36

Samples were also collected on a pressurized system at our South DeKalb for comparison purposes. Samples were also collected at a nearby ambient monitoring station close to the interstate (NR-285) to see the impacts of mobile traffic on the ethylene oxide measurements. This comparison is part of the Community Scales Air Toxics Monitoring Grant awarded to Georgia EPD by EPA for evaluating new technologies for ethylene oxide measurement. These samples were also sent to Eastern Research Group for analysis. Each of the samples were sent to Eastern Research Group (ERG) for analysis. The Qualifier codes of "1" and "6" were added to data because the samplers used for collection had not been verified against an ethylene oxide standard prior to sampling. Please see above for qualifier explanations.

South DeKalb ATEC	04/16/2021	1, 6	0.18
South DeKalb ATEC	04/22/2021	1, 6	0.07
South DeKalb ATEC	04/28/2021	LK, 1, 6	0.56
NR – 285 Xontech	04/22/2021		0.05

If you have any questions, please let me know.

DGO/do



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

June 09, 2021

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

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 04/21/21 11:43 through 05/05/21 11:11.

Values below the MDL for QC results in this report are recorded as ND, however the actual values are reported in the accompanying Excel report with a "U" flag (Under the detection limit). The actual values are reported in AQS.

This test is accredited under the 2016 TNI Standard for Environmental Laboratories (FL DOH Certification # E87673). 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 #: 4022.00
REPORTED: 06/09/21 12:22
SUBMITTED: 04/21/21 to 05/05/21
AQS SITE CODE:
SITE CODE: GA EtO

ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	<u>Received</u>
South Dekalb	1042121-01	Air	04/16/21 23:59	04/21/21 11:43
South Dekalb-Atec	1042121-02	Air	04/16/21 23:59	04/21/21 11:43
South Dekalb	1042837-01	Air	04/22/21 23:59	04/28/21 11:53
South Dekalb-Atec	1042837-02	Air	04/22/21 23:59	04/28/21 11:53
South Dekalb	1050525-01	Air	04/28/21 23:59	05/05/21 11:11
South Dekalb-Atec	1050525-02	Air	04/28/21 23:59	05/05/21 11:11



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FILE #: 4022.00

REPORTED: 06/09/21 12:22

SUBMITTED: 04/21/21 to 05/05/21

AQS SITE CODE:

SITE CODE: GA EtO

Description: South Dekalb

Lab ID: 1042121-01

Sampled: 04/16/21 23:59

Pressure @ Receipt: 3.50" Hg

Canister #: 9570

Received: 04/21/21 11:43

Comments:

Analyzed: 05/11/21 22:37

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	0.0475	0.09		0.0261



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FILE #: 4022.00

REPORTED: 06/09/21 12:22

SUBMITTED: 04/21/21 to 05/05/21

AQS SITE CODE:

SITE CODE: GA EtO

Description: South Dekalb-Atec

Lab ID: 1042121-02

Sampled: 04/16/21 23:59

Pressure @ Receipt: 12.25 psig

Canister #: SAT020

Received: 04/21/21 11:43

Comments:

Analyzed: 05/12/21 00:39

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	0.0980	0.18		0.0261



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FILE #: 4022.00

REPORTED: 06/09/21 12:22

SUBMITTED: 04/21/21 to 05/05/21

AQS SITE CODE:

SITE CODE: GA EtO

Description: South Dekalb

Lab ID: 1042837-01

Sampled: 04/22/21 23:59

Pressure @ Receipt: 0.15" Hg

Canister #: 18865

Received: 04/28/21 11:53

Comments:

Analyzed: 05/13/21 00:29

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	0.0310	0.06		0.0261



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FILE #: 4022.00

REPORTED: 06/09/21 12:22

SUBMITTED: 04/21/21 to 05/05/21

AQS SITE CODE:

SITE CODE: GA EtO

Description: South Dekalb-Atec

Lab ID: 1042837-02

Sampled: 04/22/21 23:59

Pressure @ Receipt: 12.50 psig

Canister #: 110322

Received: 04/28/21 11:53

Comments:

Analyzed: 05/13/21 02:31

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	0.0397	0.07		0.0261



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FILE #: 4022.00

REPORTED: 06/09/21 12:22

SUBMITTED: 04/21/21 to 05/05/21

AQS SITE CODE:

SITE CODE: GA EtO

Description: South Dekalb

Lab ID: 1050525-01

Sampled: 04/28/21 23:59

Pressure @ Receipt: 6.00" Hg

Canister #: SAT018

Received: 05/05/21 11:11

Comments:

Analyzed: 05/20/21 00:52

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	0.200	0.36	D-F, LK	0.0261

D-F code applied in error - two different sampler types used to collect samples. Therefore, samples are not collocated.
9/1/2021 *ergo*



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FILE #: 4022.00

REPORTED: 06/09/21 12:22

SUBMITTED: 04/21/21 to 05/05/21

AQS SITE CODE:

SITE CODE: GA EtO

Description: South Dekalb-Atec

Lab ID: 1050525-02

Sampled: 04/28/21 23:59

Pressure @ Receipt: 12.75 psig

Canister #: SAT075

Received: 05/05/21 11:11

Comments:

Analyzed: 05/20/21 02:54

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	0.311	0.56	D-F, LK	0.0261

D-F code applied in error - two different sampler types used to collect samples. Therefore, samples are not collocated.
9/1/2021 *zgo*



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4244 International Pkwy, Suite 120
Atlanta, GA 30354
ATTN: Ms. Jaime Gore
PHONE: (404) 362-4912 **FAX:** (919) 541-0516

FILE #: 4022.00
REPORTED: 06/09/21 12:22
SUBMITTED: 04/21/21 to 05/05/21
AQS SITE CODE:
SITE CODE: GA EtO

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

Batch B1E1108 - Summa Canister Prep

Blank (B1E1108-BLK1)

Prepared & Analyzed: 05/11/21

Ethylene oxide	ND	ppbv				U
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Duplicate (B1E1108-DUP1)

Source: 1042121-01

Prepared: 04/16/21 Analyzed: 05/11/21

Ethylene oxide	0.0391	ppbv	0.05	19.4	25	
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Duplicate (B1E1108-DUP2)

Source: 1042121-02

Prepared: 04/16/21 Analyzed: 05/12/21

Ethylene oxide	0.0981	ppbv	0.10	0.102	25	
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Batch B1E1206 - Summa Canister Prep

Blank (B1E1206-BLK1)

Prepared & Analyzed: 05/12/21

Ethylene oxide	ND	ppbv				U
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Duplicate (B1E1206-DUP1)

Source: 1042837-01

Prepared: 04/22/21 Analyzed: 05/13/21

Ethylene oxide	0.0382	ppbv	0.03	20.8	25	
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Duplicate (B1E1206-DUP2)

Source: 1042837-02

Prepared: 04/22/21 Analyzed: 05/13/21

Ethylene oxide	0.0351	ppbv	0.04	12.3	25	
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Batch B1E1908 - Summa Canister Prep

Blank (B1E1908-BLK1)

Prepared & Analyzed: 05/19/21

Ethylene oxide	ND	ppbv				U
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Duplicate (B1E1908-DUP4)

Source: 1050525-01

Prepared: 04/28/21 Analyzed: 05/20/21

Ethylene oxide	0.205	ppbv	0.20	2.27	25	LK
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Duplicate (B1E1908-DUP5)

Source: 1050525-02

Prepared: 04/28/21 Analyzed: 05/20/21

Ethylene oxide	0.311	ppbv	0.31	0.129	25	LK
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4244 International Pkwy, Suite 120
Atlanta, GA 30354
ATTN: Ms. Jaime Gore
PHONE: (404) 362-4912 **FAX:** (919) 541-0516

FILE #: 4022.00
REPORTED: 06/09/21 12:22
SUBMITTED: 04/21/21 to 05/05/21
AQS SITE CODE:
SITE CODE: GA EtO

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

Sequence 2105022

Calibration Check (2105022-CCV1)

Prepared & Analyzed: 05/11/21

Ethylene oxide	2.09	ppbv	-13.4	30.00
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Sequence 2105025

Calibration Check (2105025-CCV1)

Prepared & Analyzed: 05/12/21

Ethylene oxide	2.09	ppbv	-13.7	30.00
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Sequence 2105048

Calibration Check (2105048-CCV1)

Prepared & Analyzed: 05/19/21

Ethylene oxide	2.16	ppbv	-10.7	30.00
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4244 International Pkwy, Suite 120
Atlanta, GA 30354
ATTN: Ms. Jaime Gore
PHONE: (404) 362-4912 **FAX:** (919) 541-0516

FILE #: 4022.00
REPORTED: 06/09/21 12:22
SUBMITTED: 04/21/21 to 05/05/21
AQS SITE CODE:
SITE CODE: GA EtO

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
LK	Analyte Identified: Reported Value May Be Biased High

Note: This test is accredited under the 2016 TNI Standard; however the following analytes are not accredited: acetylene, bromodichloroethane, dichlorotetrafluoromethane, ethyl tert butyl ether, n-octane, tert amyl methyl ether, trichlorofluoroethane, and bromochloromethane.



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

June 09, 2021

Ms. Jaime Gore
U.S. Environmental Protection Agency, Region 4
4244 International Pkwy, Suite 120
Atlanta, GA 30354
Project Name: NR285

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 04/30/21 11:20.

Values below the MDL for QC results in this report are recorded as ND, however the actual values are reported in the accompanying Excel report with a "U" flag (Under the detection limit). The actual values are reported in AQS.

This test is accredited under the 2016 TNI Standard for Environmental Laboratories (FL DOH Certification # E87673). 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.



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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: 06/09/21 12:47
SUBMITTED: 04/30/21
AQS SITE CODE:
SITE CODE: NR285

ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	<u>Received</u>
NR285	1050320-01	Air	04/22/21 23:59	04/30/21 11:20

Description: NR285	Lab ID: 1050320-01	Sampled: 04/22/21 23:59
Pressure @ Receipt: 18.50 psi	Canister #: 19295	Received: 04/30/21 11:20
Comments:		Analyzed: 05/13/21 07:35

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	0.0280	0.05		0.0261



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: 06/09/21 12:47
SUBMITTED: 04/30/21
AQS SITE CODE:
SITE CODE: NR285

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

Batch B1E1206 - Summa Canister Prep

Blank (B1E1206-BLK1)

Prepared & Analyzed: 05/12/21

Ethylene oxide	ND	ppbv				U
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ATTN: Ms. Jaime Gore
PHONE: (404) 362-4912 **FAX:** (919) 541-0516

FILE #: 4222.00
REPORTED: 06/09/21 12:47
SUBMITTED: 04/30/21
AQS SITE CODE:
SITE CODE: NR285

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

Sequence 2105025

Calibration Check (2105025-CCV1)

Prepared & Analyzed: 05/12/21

Ethylene oxide	2.09	ppbv	-13.7	30.00	
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CERTIFICATE OF ANALYSIS

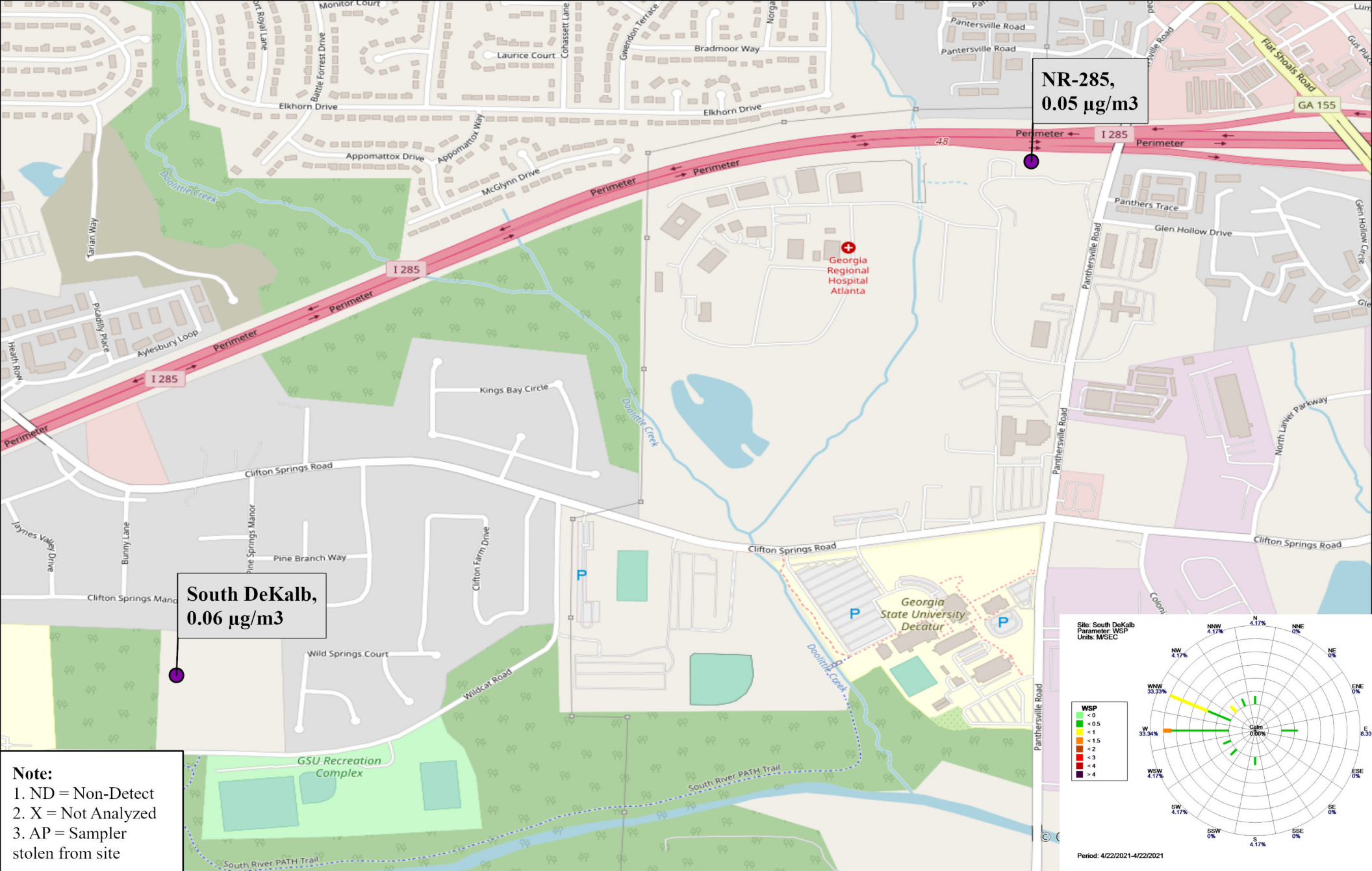
U.S. Environmental Protection Agency, Region 4
4244 International Pkwy, Suite 120
Atlanta, GA 30354
ATTN: Ms. Jaime Gore
PHONE: (404) 362-4912 **FAX:** (919) 541-0516

FILE #: 4222.00
REPORTED: 06/09/21 12:47
SUBMITTED: 04/30/21
AQS SITE CODE:
SITE CODE: NR285

Notes and Definitions

U	Under Detection Limit
ND	Analyte NOT DETECTED
NR	Not Reported
MDL	Method Detection Limit
RPD	Relative Percent Difference

Note: This test is accredited under the 2016 TNI Standard; however the following analytes are not accredited: acetylene, bromodichloroethane, dichlorotetrafluoromethane, ethyl tert butyl ether, n-octane, tert amyl methyl ether, trichlorofluoroethane, and bromochloromethane.



0 0.1 0.19
Miles



Site ID, Concentration (µg/m3)

Ethylene Oxide Sampling
DeKalb County, GA

04/22/2021

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



GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION