



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

May 11, 2022

Ms. Renu Chakrabarty
WV Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304
Project Name: WV EtO

Dear Ms. Renu Chakrabarty,

This report contains the analytical results for the sample(s) received under chain(s) of custody by Eastern Research Group on 03/29/22 11:24.

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 3
 601 57th Street, SE
 Charleston, WV 25304
ATTN: Ms. Renu Chakrabarty
PHONE: (303) 414-1249 **FAX:**

FILE #: 0344.00
REPORTED: 05/11/22 14:59
SUBMITTED: 03/29/22
AQS SITE CODE:
SITE CODE: WV EtO

ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	<u>Received</u>
#15 Institute, WV	2032918-01	Air	03/23/22 11:13	03/29/22 11:24
#13 Institute, WV C2	2032918-03	Air	03/23/22 09:47	03/29/22 11:24
#3 North Charleston, WV	2032918-04	Air	03/23/22 12:09	03/29/22 11:24
#0 South Charleston, WV	2032918-05	Air	03/23/22 12:35	03/29/22 11:24
#4 North Charleston, WV	2032918-06	Air	03/23/22 11:43	03/29/22 11:24
#10 Institute, WV	2032918-07	Air	03/23/22 10:13	03/29/22 11:24
#14 Institute, WV	2032918-08	Air	03/23/22 10:46	03/29/22 11:24
WV Eto	2032918-09	Air	03/24/22 01:55	03/29/22 11:24



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 3

601 57th Street, SE

Charleston, WV 25304

ATTN: Ms. Renu Chakrabarty

PHONE: (303) 414-1249 FAX:

FILE #: 0344.00

REPORTED: 05/11/22 14:59

SUBMITTED: 03/29/22

AQS SITE CODE:

SITE CODE: WV EtO

Description: #15 Institute, WV

Lab ID: 2032918-01

Sampled: 03/23/22 11:13

Pressure @ Receipt: 3.00 "Hg

Canister #: 41614

Received: 03/29/22 11:24

Comments: PR-79

Analyzed: 04/14/22 08:08

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	0.447	0.81		0.0261



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 3

601 57th Street, SE

Charleston, WV 25304

ATTN: Ms. Renu Chakrabarty

PHONE: (303) 414-1249 FAX:

FILE #: 0344.00

REPORTED: 05/11/22 14:59

SUBMITTED: 03/29/22

AQS SITE CODE:

SITE CODE: WV EtO

Description: #13 Institute, WV C2

Lab ID: 2032918-03

Sampled: 03/23/22 09:47

Pressure @ Receipt: 7.50 "Hg

Canister #: 18876

Received: 03/29/22 11:24

Comments: PR-41, Col 2

Analyzed: 04/15/22 16:07

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	0.0714	0.13		0.0261



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 3

601 57th Street, SE

Charleston, WV 25304

ATTN: Ms. Renu Chakrabarty

PHONE: (303) 414-1249 FAX:

FILE #: 0344.00

REPORTED: 05/11/22 14:59

SUBMITTED: 03/29/22

AQS SITE CODE:

SITE CODE: WV EtO

Description: #3 North Charleston, WV

Lab ID: 2032918-04

Sampled: 03/23/22 12:09

Pressure @ Receipt: 3.00 "Hg

Canister #: 33506

Received: 03/29/22 11:24

Comments: PR-87

Analyzed: 04/14/22 09:09

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	0.155	0.28		0.0261



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 3

601 57th Street, SE

Charleston, WV 25304

ATTN: Ms. Renu Chakrabarty

PHONE: (303) 414-1249 FAX:

FILE #: 0344.00

REPORTED: 05/11/22 14:59

SUBMITTED: 03/29/22

AQS SITE CODE:

SITE CODE: WV EtO

Description: #0 South Charleston, WV

Lab ID: 2032918-05

Sampled: 03/23/22 12:35

Pressure @ Receipt: 7.00 "Hg

Canister #: 19296

Received: 03/29/22 11:24

Comments: PR-77

Analyzed: 04/15/22 18:10

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	0.0800	0.14		0.0261



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 3

601 57th Street, SE

Charleston, WV 25304

ATTN: Ms. Renu Chakrabarty

PHONE: (303) 414-1249 FAX:

FILE #: 0344.00

REPORTED: 05/11/22 14:59

SUBMITTED: 03/29/22

AQS SITE CODE:

SITE CODE: WV EtO

Description: #4 North Charleston, WV

Lab ID: 2032918-06

Sampled: 03/23/22 11:43

Pressure @ Receipt: 3.00 "Hg

Canister #: 18879

Received: 03/29/22 11:24

Comments: PR-85

Analyzed: 04/15/22 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	0.0794	0.14		0.0261



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 3

601 57th Street, SE

Charleston, WV 25304

ATTN: Ms. Renu Chakrabarty

PHONE: (303) 414-1249 FAX:

FILE #: 0344.00

REPORTED: 05/11/22 14:59

SUBMITTED: 03/29/22

AQS SITE CODE:

SITE CODE: WV EtO

Description: #10 Institute, WV

Lab ID: 2032918-07

Sampled: 03/23/22 10:13

Pressure @ Receipt: 2.50 "Hg

Canister #: 19661

Received: 03/29/22 11:24

Comments: PR-91

Analyzed: 04/15/22 20:12

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	0.182	0.33		0.0261



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 3

601 57th Street, SE

Charleston, WV 25304

ATTN: Ms. Renu Chakrabarty

PHONE: (303) 414-1249 FAX:

FILE #: 0344.00

REPORTED: 05/11/22 14:59

SUBMITTED: 03/29/22

AQS SITE CODE:

SITE CODE: WV EtO

Description: #14 Institute, WV

Lab ID: 2032918-08

Sampled: 03/23/22 10:46

Pressure @ Receipt: 3.50 "Hg

Canister #: 18878

Received: 03/29/22 11:24

Comments: PR-75

Analyzed: 04/15/22 21:13

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	0.119	0.22		0.0261



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 3

601 57th Street, SE

Charleston, WV 25304

ATTN: Ms. Renu Chakrabarty

PHONE: (303) 414-1249 FAX:

FILE #: 0344.00

REPORTED: 05/11/22 14:59

SUBMITTED: 03/29/22

AQS SITE CODE:

SITE CODE: WV EtO

Description: WV Eto	Lab ID: 2032918-09	Sampled: 03/24/22 01:55
Pressure @ Receipt: 2.50 "Hg	Canister #: 19300	Received: 03/29/22 11:24
Comments: Regulator SN 15586		Analyzed: 04/15/22 22:14

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	0.0321	0.06		0.0261



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 3
 601 57th Street, SE
 Charleston, WV 25304
ATTN: Ms. Renu Chakrabarty
PHONE: (303) 414-1249 **FAX:**

FILE #: 0344.00
REPORTED: 05/11/22 14:59
SUBMITTED: 03/29/22
AQS SITE CODE:
SITE CODE: WV EtO

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Air Toxics by EPA Compendium Method TO-15 - Quality Control						
<i>Batch B2D1306 - Summa Canister Prep</i>						
Blank (B2D1306-BLK1)			Prepared & Analyzed: 04/13/22			
Ethylene oxide	ND	ppbv				U
<i>Batch B2D1504 - Summa Canister Prep</i>						
Blank (B2D1504-BLK1)			Prepared & Analyzed: 04/15/22			
Ethylene oxide	ND	ppbv				U
Duplicate (B2D1504-DUP1)			Source: 2032918-02 Prepared: 03/23/22 Analyzed: 04/15/22			
Ethylene oxide	ND	ppbv	ND		25	U
Duplicate (B2D1504-DUP2)			Source: 2032918-03 Prepared: 03/23/22 Analyzed: 04/15/22			
Ethylene oxide	0.0675	ppbv	0.07	5.62	25	



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 3

601 57th Street, SE

Charleston, WV 25304

ATTN: Ms. Renu Chakrabarty

PHONE: (303) 414-1249 FAX:

FILE #: 0344.00

REPORTED: 05/11/22 14:59

SUBMITTED: 03/29/22

AQS SITE CODE:

SITE CODE: WV EtO

Analyte	Result	Units	% Difference	Limit (%)	Notes
---------	--------	-------	--------------	-----------	-------

Air Toxics by EPA Compendium Method TO-15 - Quality Control

Sequence 2204035

Calibration Check (2204035-CCV1)

Prepared & Analyzed: 04/13/22

Ethylene oxide	2.19	ppbv	-9.2	30.00	
----------------	------	------	------	-------	--

Sequence 2204039

Calibration Check (2204039-CCV1)

Prepared & Analyzed: 04/15/22

Ethylene oxide	2.21	ppbv	-8.3	30.00	
----------------	------	------	------	-------	--



CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 3

601 57th Street, SE

Charleston, WV 25304

ATTN: Ms. Renu Chakrabarty

PHONE: (303) 414-1249 **FAX:**

FILE #: 0344.00

REPORTED: 05/11/22 14:59

SUBMITTED: 03/29/22

AQS SITE CODE:

SITE CODE: WV EtO

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.