

West Virginia Department of Environmental Protection

Austin Caperton
Cabinet Secretary

Title V Operating Permit Revision



For Administrative Amendment Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Action Number: AA01 **SIC:** 2869
Name of Permittee: Union Carbide Corporation
Facility Name/Location: Institute Facility
County: Kanawha
Permittee Mailing Address: P.O. Box 8361, South Charleston, WV 25303

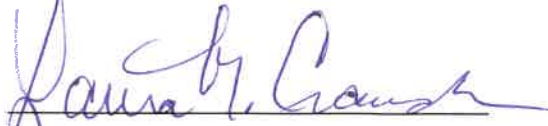
Description of Permit Revision: Separation of the EO distribution and the barge operations processes into two different Title V Permits. This Group 3 of 8 Permit will contain only the EO distribution process requirements. The barge operations will be covered under a new Group 3A of 8 Title V Permit.

Title V Permit Information:

Permit Number: R30-03900005-2017 (Group 3 of 8)
Issued Date: August 1, 2017
Effective Date: August 15, 2017
Expiration Date: August 1, 2022

Directions To Facility: From I-64, take the Institute exit, turn right onto State route 25. Plant entrance is located about 1/4 mile west on Route 25.

THIS PERMIT REVISION IS ISSUED IN ACCORDANCE WITH THE WEST VIRGINIA AIR POLLUTION CONTROL ACT (W.V.A. CODE §§ 22-5-1 ET SEQ.) AND 45CSR30 - "REQUIREMENTS FOR OPERATING PERMITS." THE PERMITTEE IDENTIFIED AT THE FACILITY ABOVE IS AUTHORIZED TO OPERATE THE STATIONARY SOURCES OF AIR POLLUTANTS IDENTIFIED HEREIN IN ACCORDANCE WITH ALL TERMS AND CONDITIONS OF THIS PERMIT.


Laura M. Crowder
Director, Division of Air Quality

September 26, 2019
Date Issued

Permit Number: **R30-03900005-2017**
Permittee: **Union Carbide Corporation**
Facility Name: **Institute Facility**
Business Unit: **Logistics (Group 3 of 8)**
Permittee Mailing Address: **P. O. Box 8361, South Charleston, WV 25303**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	Institute, Kanawha County, West Virginia
Telephone Number:	(304) 747-7000
Type of Business Entity:	Corporation
Facility Description:	Supply and services group includes for the EO distribution process, air separation process, barge operations process, tank truck and rail car operations process, and the plant lab.
SIC Codes:	2869
UTM Coordinates:	432.189 km Easting • 4,248.754 km Northing • Zone 17

Permit Writer: Mike Egnor

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

Table of Contents

1.0. Emission Units and Active R13, R14, and R19 Permits 3

2.0. General Conditions 5

3.0. Facility-Wide Requirements and Permit Shield 14

Source-specific Requirements

4.0. EO Distribution..... 21

~~**5.0. Barge/Tank Truck/Rail Car Operations 29**~~

Appendix A..... Consent Order CO-R21-97-41 ATTACHMENTS A and B

1.0 Emission Units and Active R13, R14, and R19 Permits

1.1 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Control Device
C9704	410 B or 410A	Tank 9704	1969	Primary Flare B410 or Secondary Flare A410
C9705	410B or 410A	Tank 9705	1969	Primary Flare B410 or Secondary Flare A410
C9745	410A	Flare Knock out Pot C9745	1989	Secondary Flare A410
C9746	410B	Flare Seal Pot C9746	1991	Primary Flare B410
C9747	410B	Flare Knock out Pot C9747	1990	Primary Flare B410
PMP	410B or 410A	Priming Pot	1990	Primary Flare B410 or Secondary Flare A410
EOTC	410B or 410A	EO Tank Car Rack	1988	Primary Flare B410 or Secondary Flare A410
L1B	B1L	Barge Loading	1940s	None
L1B1	2B1L	Barge Unloading includes West Suction Pot	1981	None
L1B2	2B1L	Barge Unloading includes West Knockout Pot	1981	None
TTL4¹	L4TT¹	East Rack Tank Truck Loading	1940s	None
RCL4 (aka TCL4)¹	L4RC (aka L4TC) or 040F¹	East Rack Rail Car Loading	1940s	None or Scrubber F040³
L6TF	L6TF	West Tank Truck Rack	1950s	None
L5RC (aka L5TC)²	L5RC (aka L5TC) or 163A²	West Rail Car Rack	1950s	None or Flare A163⁴

¹Requirements for Emission Units TTL4 and RCL4 (aka TCL4) are addressed in R30-03900005-2017 (Group 2 of 8).

²Requirements for Emission Unit L5RC (aka L5TC) are addressed in R30-03900005-2017 (Group 4 of 8).

~~³A CAM applicability discussion for Scrubber F040 is provided in the Fact Sheet for R30-03900005-2012 (Group 2 of 5).~~

~~⁴A CAM applicability discussion for Flare A163 is provided in the Fact Sheet for R30-03900005-2012 (Group 4 of 5).~~

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-2646A None	August 8, 2006

5.0 — Barge/Tank Truck/Rail Car Operations

5.1. — Limitations and Standards

- 5.1.1. — VOC emissions, which include HAPs, released to the atmosphere through emission point B1L as the result of loading operations as noted in 5.1.3 of this permit shall not exceed 9.6 pounds per hour and 1.3 tons per year. Loading operations shall include activities associated with line cleaning/line flushing. [45CSR13, R13-2646, 4.1.1]
- 5.1.2. — Emissions of Methyl Isobutyl Ketone (MIBK) and ethylene glycol as the result of barge loading operations shall not exceed 1.1 and 0.01 tons per year respectively. [45CSR13, R13-2646, 4.1.2]
- 5.1.3. — The permittee shall not exceed an hourly loading rate of 17,100 gallon per hour of any product or material that has the potential to emit a regulated air pollutant and shall not exceed the following annual limits for the corresponding chemical or non-HAP materials listed in Table 5.1.3.

Chemical Name	Methyl Isobutyl Ketone	Ethylene Glycol	Non-HAP Materials ¹
Annual Throughput gal/year*	10,000,000	7,500,000	7,000,000

* Compliance shall be determined using a 12 month rolling total.

¹ Non HAP Materials shall mean volatile organic compounds that do not contain any HAPs except for methyl isobutyl ketone that may be present at a concentration not to exceed 0.5 % by weight.

[45CSR13, R13-2646, 4.1.3]

- 5.1.4. — VOC and total HAP emissions, which include ethylene glycol and methanol, released to the atmosphere through emission point 2B1L as the result of unloading operations which requires the operation of the vacuum pump shall not exceed 26.2 pounds per hour on an hourly basis and 2.0 tons per year on an annual basis. Unloading operations shall include line clear/line flushing activities. Compliance with this limit shall be established by limiting the number of barges that undergo unloading activities to no more than 121 per year. Compliance with this limit shall be determined using a 12 month rolling total. [45CSR13, R13-2646, 4.1.4]
- 5.1.5. — The permittee shall install, operate and maintain a nitrogen blanketing system when unloading barges containing flammable organic liquids (organic liquid with a flash point less than 140 °F) that contain VOCs in the vapor space of the storage compartment. The permittee is prohibited from purging empty barges that contain VOC laden vapors that would result in the release of the discharge of VOCs into the atmosphere. [45CSR13, R13-2646, 4.1.5]
- 5.1.6. — Compliance with all annual emission limits stated in 5.1.1, 5.1.2, and 5.1.4 shall be determined using a 12 month rolling total. A rolling 12 month total shall mean the sum of the emissions by pollutant for the previous twelve consecutive calendar months. [45CSR13, R13-2646, 4.1.6]

5.2. — Monitoring Requirements

- 5.2.1. — None.

5.3. Testing Requirements

5.3.1. None

5.4. Recordkeeping Requirements

5.4.1. For the purposes of demonstrating compliance with the emission limits and other limitations stated in Section 5.1 of this permit, the permittee shall record the following information and maintain it in accordance with 3.4.2 of this permit:

a. Loading Activities.

- i. Date;
- ii. Amount; and
- iii. Name of chemical/material that was loaded.

b. Unloading Activities.

- i. Date;
- ii. Number of barges by chemical that was unloaded; and
- iii. Name of chemical/material that was unloaded.

[45CSR13, R13-2646, 4.4.4]

5.4.2. For the purposes of determining compliance with all of the annual emission limits stated in Section 5.1 of this permit, the permittee shall review and determine that the actual number of activities are within the stated limits as defined in 5.1.3 and 5.1.4 of this permit. The permittee shall conduct these determinations on a monthly basis. All records and calculations shall be maintained in accordance with Section 3.4.2. [45CSR13, R13-2646, 4.4.5; 45CSR§30-5.1.e]

5.5. Reporting Requirements

5.5.1. None.

5.6. Compliance Plan

5.6.1. None.