



**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**  
#7012 2920 0000 2048 1950

Union Carbide Corporation  
A Subsidiary of The Dow Chemical Company  
P. O. Box 8361  
437 MacCorkle Avenue, SW  
South Charleston, WV 25303  
USA

January 20, 2016

Mr. William F. Durham, Director  
WV Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

Dear Director Durham,

**Attention: Ms. Beverly McKeone**  
**NSR Permits Program Manager**

**Ms. Carrie McCumbers**  
**Title V Program Manager**

RE: Union Carbide Corporation (UCC) Technology Park Operations  
Polyolefins Process R&D - Facility ID# 039-00004  
45CSR13 Class II Administrative Update to Permit No. R13-1858  
45CSR30 Minor Modification to Permit No. R30-03900004-2015 (Group 1 of 2)

Enclosed are two hard copies and two CDs of a combined 45CSR13/45CSR30 application for a Class II Administrative Update/Minor Modification to clarify monitoring, record keeping, and reporting language for the facility's flare, to remove an obsolete requirement for two reactors, and to sync the R13 permit language with the current R30 permit language.

A printed copy of the Class 1 Legal Advertisement to be published in a local newspaper is included with the application. When published, the affidavit of publication will be provided to your office.

A check in the amount of \$300 is enclosed for payment of application fees in accordance with 45CSR§13-4.4.

If there are any questions regarding the attached permit application, please call me at (304) 747-1354.

Sincerely yours,

Jay Fedczak  
WVO EH&S Environmental Specialist

Attachments

# Table of Contents

Application Form

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Attachment S: Title V Permit Revision Information

Application Fee



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**DIVISION OF AIR QUALITY**

601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
(304) 926-0475  
[www.dep.wv.gov/dag](http://www.dep.wv.gov/dag)

**APPLICATION FOR NSR PERMIT  
AND  
TITLE V PERMIT REVISION  
(OPTIONAL)**

PLEASE CHECK ALL THAT APPLY TO NSR (45CSR13) (IF KNOWN):

- CONSTRUCTION     MODIFICATION     RELOCATION  
 CLASS I ADMINISTRATIVE UPDATE     TEMPORARY  
 CLASS II ADMINISTRATIVE UPDATE     AFTER-THE-FACT

PLEASE CHECK TYPE OF 45CSR30 (TITLE V) REVISION (IF ANY):

- ADMINISTRATIVE AMENDMENT     MINOR MODIFICATION  
 SIGNIFICANT MODIFICATION

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS ATTACHMENT S TO THIS APPLICATION

**FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.**

**Section I. General**

1. Name of applicant (as registered with the WV Secretary of State's Office): Union Carbide Corporation		2. Federal Employer ID No. (FEIN): 131421730	
3. Name of facility (if different from above): Technology Park Operations		4. The applicant is the: <input type="checkbox"/> OWNER <input type="checkbox"/> OPERATOR <input checked="" type="checkbox"/> BOTH	
5A. Applicant's mailing address: P. O. Box 8361 South Charleston, WV 25303		5B. Facility's present physical address: 1840 Union Carbide Drive South Charleston, WV 25303	
6. West Virginia Business Registration. Is the applicant a resident of the State of West Virginia? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO – If YES, provide a copy of the Certificate of Incorporation/Organization/Limited Partnership (one page) including any name change amendments or other Business Registration Certificate as Attachment A. – If NO, provide a copy of the Certificate of Authority/Authority of L.L.C./Registration (one page) including any name change amendments or other Business Certificate as Attachment A.			
7. If applicant is a subsidiary corporation, please provide the name of parent corporation: The Dow Chemical Company			
8. Does the applicant own, lease, have an option to buy or otherwise have control of the proposed site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO – If YES, please explain:    Owner and Operator – If NO, you are not eligible for a permit for this source.			
9. Type of plant or facility (stationary source) to be constructed, modified, relocated, administratively updated or temporarily permitted (e.g., coal preparation plant, primary crusher, etc.): Flare		10. North American Industry Classification System (NAICS) code for the facility: 325211	
11A. DAQ Plant ID No. (for existing facilities only): 039-00004		11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): R13-1858, R30-03900004-2015 (Group 1 of 2)	

**All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.**

12A.

- For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- For **Construction** or **Relocation permits**, please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

From Charleston take I-64 West toward Huntington. Take Kanawha Turnpike exit. Travel approximately ½ mile on Kanawha Turnpike. UCC Technology Park Operations is located at the West Virginia Regional Technology Park (WVRTP).

12.B. New site address (if applicable): N/A	12C. Nearest city or town: South Charleston	12D. County: Kanawha
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12.E. UTM Northing (KM): 4,245.5	12F. UTM Easting (KM): 438.7	12G. UTM Zone: 17
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13. Briefly describe the proposed change(s) at the facility:  
Revise monitoring language in R13-1858, (B) 3 to clarify monitoring, record keeping, and recording of the flare operating temperature, to remove condition number (A) 2 which is obsolete, and to sync other R13 permit language with the current R30 permit.

14A. Provide the date of anticipated installation or change: / / – If this is an <b>After-The-Fact</b> permit application, provide the date upon which the proposed change did happen: <b>Change upon permit issuance</b>	14B. Date of anticipated Start-Up if a permit is granted: N/A
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14C. Provide a **Schedule** of the planned **Installation of/Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved). N/A

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:  
Hours Per Day 24 Days Per Week 7 Weeks Per Year 52

16. Is demolition or physical renovation at an existing facility involved?  YES  NO

17. **Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see [www.epa.gov/ceppo](http://www.epa.gov/ceppo)), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18. **Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process (*if known*). A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance (*if known*). Provide this information as **Attachment D**.

**Section II. Additional attachments and supporting documents.**

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to **Plot Plan Guidance**).

- Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F**. Not Applicable (unit is existing and not being modified)

23. Provide a **Process Description** as **Attachment G**.

- Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

**All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.**

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H**.  
 – For chemical processes, provide a MSDS for each compound emitted to the air. **Not Applicable**

25. Fill out the **Emission Units Table** and provide it as **Attachment I**. **Not Applicable**

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J**. **Not Applicable**

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K**. **Not Applicable**

28. Check all applicable **Emissions Unit Data Sheets** listed below:

<input type="checkbox"/> Bulk Liquid Transfer Operations	<input type="checkbox"/> Haul Road Emissions	<input type="checkbox"/> Quarry
<input type="checkbox"/> Chemical Processes	<input type="checkbox"/> Hot Mix Asphalt Plant	<input type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities
<input type="checkbox"/> Concrete Batch Plant	<input type="checkbox"/> Incinerator	<input type="checkbox"/> Storage Tanks
<input type="checkbox"/> Grey Iron and Steel Foundry	<input type="checkbox"/> Indirect Heat Exchanger	
<input type="checkbox"/> General Emission Unit, specify:		

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L**. **Not Applicable**

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

<input type="checkbox"/> Absorption Systems	<input type="checkbox"/> Baghouse	<input type="checkbox"/> Flare
<input type="checkbox"/> Adsorption Systems	<input type="checkbox"/> Condenser	<input type="checkbox"/> Mechanical Collector
<input type="checkbox"/> Afterburner	<input type="checkbox"/> Electrostatic Precipitator	<input type="checkbox"/> Wet Collecting System
<input type="checkbox"/> Other Collectors, specify		

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M**. **Not applicable – no changes made**

30. Provide all **Supporting Emissions Calculations** as **Attachment N**, or attach the calculations directly to the forms listed in Items 28 through 31. **Not applicable**

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O**.

➤ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and **Example Legal Advertisement** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33. **Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

YES       NO

➤ If **YES**, identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's **"Precautionary Notice – Claims of Confidentiality"** guidance found in the **General Instructions** as **Attachment Q**.

### **Section III. Certification of Information**

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

<input type="checkbox"/> Authority of Corporation or Other Business Entity	<input type="checkbox"/> Authority of Partnership
<input type="checkbox"/> Authority of Governmental Agency	<input type="checkbox"/> Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R**.

**All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.**

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

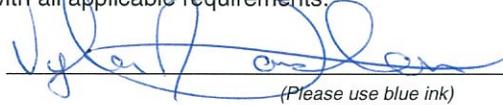
**Certification of Truth, Accuracy, and Completeness**

I, the undersigned **Responsible Official**, hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

**Compliance Certification**

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE \_\_\_\_\_



(Please use blue ink)

DATE: \_\_\_\_\_

1/15/2016  
(Please use blue ink)

35B. Printed name of signee: Tyler J. London

35C. Title: WVO Site Leader

35D. E-mail: TJLondon@dow.com

36E. Phone: 304.747.3973

36F. FAX: 304.747.3147

36A. Printed name of contact person (if different from above): Jay Fedczak

36B. Title: Environmental Specialist

36C. E-mail: JPFedczak@dow.com

36D. Phone: 304.747.1354

36E. FAX: 304.747.7158

**PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Attachment A: Business Certificate    | <input type="checkbox"/> Attachment K: Fugitive Emissions Data Summary Sheet                       |
| <input type="checkbox"/> Attachment B: Map(s)                             | <input type="checkbox"/> Attachment L: Emissions Unit Data Sheet(s)                                |
| <input type="checkbox"/> Attachment C: Installation and Start Up Schedule | <input type="checkbox"/> Attachment M: Air Pollution Control Device Sheet(s)                       |
| <input checked="" type="checkbox"/> Attachment D: Regulatory Discussion   | <input type="checkbox"/> Attachment N: Supporting Emissions Calculations                           |
| <input checked="" type="checkbox"/> Attachment E: Plot Plan               | <input checked="" type="checkbox"/> Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans |
| <input type="checkbox"/> Attachment F: Detailed Process Flow Diagram(s)   | <input checked="" type="checkbox"/> Attachment P: Public Notice                                    |
| <input checked="" type="checkbox"/> Attachment G: Process Description     | <input type="checkbox"/> Attachment Q: Business Confidential Claims                                |
| <input type="checkbox"/> Attachment H: Material Safety Data Sheets (MSDS) | <input type="checkbox"/> Attachment R: Authority Forms   |
| <input type="checkbox"/> Attachment I: Emission Units Table               | <input checked="" type="checkbox"/> Attachment S: Title V Permit Revision Information              |
| <input type="checkbox"/> Attachment J: Emission Points Data Summary Sheet | <input checked="" type="checkbox"/> Application Fee  |

*Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.*

**FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:**

- Forward 1 copy of the application to the Title V Permitting Group and:
- For Title V Administrative Amendments:
  - NSR permit writer should notify Title V permit writer of draft permit,
- For Title V Minor Modifications:
  - Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,
  - NSR permit writer should notify Title V permit writer of draft permit.
- For Title V Significant Modifications processed in parallel with NSR Permit revision:
  - NSR permit writer should notify a Title V permit writer of draft permit,
  - Public notice should reference both 45CSR13 and Title V permits,
  - EPA has 45 day review period of a draft permit.

*All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.*

# Attachment A

## Business Registration Certificate

**WEST VIRGINIA  
STATE TAX DEPARTMENT  
BUSINESS REGISTRATION  
CERTIFICATE**

ISSUED TO:  
**UNION CARBIDE POLYOLEFINS DEVELOPMENT COMPANY INC  
3200 KANAWHA TPKE  
S CHARLESTON, WV 25303-2544**

BUSINESS REGISTRATION ACCOUNT NUMBER: **1006-8527**

This certificate is issued on: **06/22/2010**

*This certificate is issued by  
the West Virginia State Tax Commissioner  
in accordance with W.Va. Code § 11-12.*

*The person or organization identified on this certificate is registered  
to conduct business in the State of West Virginia at the location above.*

This certificate is not transferrable and must be displayed at the location for which issued.

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.  
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.

Union Carbide Corporation – Technology Park Operations  
Polyolefins Process R&D: Flare  
Attachment D – Regulatory Discussion

Permit R13-1858 includes a condition, (B) 3, which requires continuous monitoring and recording of the flare (73F) operating temperature. This administrative update request is submitted to establish specific language to clarify the temperature monitoring, recording, and record keeping which demonstrates compliance.

Also, condition (A) 2 of the permit should be deleted. Reactors G9 and G10 have been demolished. The Title V permit for this facility already reflects this change.

At times, the computer systems in place for monitoring the flare temperature must be brought down for maintenance or updating of software. During these times, data of such are unavailable and, as an alternative, UCC proposes to monitor the flare pilot flame and record whether the flame is present. The proposed permit language is as follows.

(B) 3 The permittee shall continuously monitor and record the flare (73F) operating temperature on an hourly basis when volatile organic compounds are vented to the flare. In the event that the flare operating temperature monitoring and recording system is not operable, the permittee shall monitor and record, on a once per hour frequency, the status of the pilot flame (presence or absence). Such records shall be maintained on site for a period of no less than five (5) years and shall be made available to the Secretary or his duly authorized representative upon request.

Please see the following pages that show a marked up R13 permit for the changes noted above and for other revisions to sync the R13 permit with the R30 permit. Included in these changes, is a strike-through version of the attachment to the R13 permit that reflects equipment that no longer exists, and changes to the R13 permit language to more closely follow the language in the R30 permit.

WVDAQ Rule 30:

The current Title V permit fact sheet states that CAM is not applicable because a continuous compliance determination method is applied (continuous monitoring and recording of flare temperature).

*Continuous compliance determination method* is defined in 40 C.F.R. §64.1 as a method, specified by the applicable standard or an applicable permit condition, which (1) is used to determine compliance with an emission limitation or standard on a continuous basis, consistent with the averaging period established for the emission limitation or standard, and (2) provides data either in units of the standard or correlated directly with the compliance limit.

Whereas the VOC limit is on a lb/hr basis, monitoring the flare on a once per hour frequency meets the hourly standard averaging period and meets the criteria for a continuous compliance demonstration method per the exemption in 40 C.F.R. §64.2(b)(1)(vi). Therefore, the CAM exemption should remain intact for Title V permitting purposes.



DIVISION OF ENVIRONMENTAL PROTECTION

GASTON CAPERTON  
GOVERNOR

1558 Washington Street East  
Charleston, WV 25311-2599

LAIDLEY ELI MCCOY, PH.D.  
- DIRECTOR

**PERMIT TO CONSTRUCT, MODIFY, OR RELOCATE  
STATIONARY SOURCES OF AIR POLLUTANTS**

PERMIT NO.: R13-1858A      DATE: September 28, 1995 T.B.D.

IN ACCORDANCE WITH THE WEST VIRGINIA AIR POLLUTION CONTROL LAW (W. Va. Code §§22-5-1 et seq.), AND REGULATIONS PROMULGATED THEREUNDER, THE FOLLOWING PERMITTEE IS AUTHORIZED TO MODIFY THE SUBJECT FACILITY IN ACCORDANCE WITH THIS PERMIT.

Name of Permittee:                    Union Carbide Corporation  
Name of Facility:                      ~~Technical Center~~Technology Park  
Mailing Address:                      Operations, ~~South~~ Charleston  
  
P.O. Box 8361  
  
South Charleston, WV 25303

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South Charleston  
Kanawha

Nearest City or Town:                    From Charleston - west on Interstate 64 to

County:                                      Kanawha Turnpike exit. West on Kanawha

Directions to Exact Location:                    Turnpike to the Technical Center.

~~Modification of~~ Administratively amend Polymers Pilot Plant by  
~~addition~~ removal of two ~~new~~ reactor systems (G-9 and G-10),

Type of Facility or Modification:                    monitoring language change, and other minor changes

SPECIFIC REQUIREMENTS

(A) IN ACCORDANCE WITH THE PERMIT APPLICATION AND ITS AMENDMENTS THIS PERMIT IS LIMITED AS FOLLOWS:

1. Emissions to the atmosphere from the flare (~~73F~~ emission point ID F003, flare for building 773) shall not exceed 4.16 pounds per hour and 18.2 tons per year of volatile organic chemicals as defined in ~~45CSR13 Section 2.37~~.

~~2. Emissions of toxic air pollutants from the flare, resulting from the operation of reactor G-9, reactor G-10, and associated equipment vents shall not exceed the following:~~

<u>toxic air pollutant</u>	<u>lb/hr</u>	<u>TPY</u>
butadiene	0.2	.88
chloroform	0.00055	0.0024

- 3. Composition of process vent gas to be flared shall be enriched by additional fuels such that flare temperature shall be 1400 degrees fahrenheit or higher.
- 4. In the event of unavoidable malfunction of the flare, all reactor feeds to reactors vented to the flare shall be discontinued.
- 5. All equipment listed ~~on~~ in Attachment 1 shall be vented to the flare (73F) during operation.

(B) OTHER REQUIREMENTS

~~1. The permittee shall perform stack testing on the flare at maximum feed rate conditions within 180 days of start up of the G-9 and G-10 reactor systems and shall submit a stack test protocol at least thirty (30) days before such testing for approval by the Chief.~~

2. The permittee shall record on a daily basis the total amount of VOCs (~~as defined by 45CSR13 Section 2.37~~) vented to the flare. Such records shall be maintained on site such records for a period of no less than at least five (5) years and shall be made available to the Secretary or his duly authorized representative upon request for inspection by the Chief or an authorized representative of the Chief.

3. The permittee shall ~~install equipment to~~ continuously monitor and record the flare (73F) operating temperature on an hourly basis when volatile organic compounds are vented to the flare. In the event that the flare operating temperature monitoring and recording system is not operable, the permittee shall monitor and record, on a once per hour frequency, the status of the pilot flame (presence or absence). Such records shall be and maintained such records on site for a period of no less than at least five (5) years and shall be made available to the Secretary or his duly authorized representative upon

request. ~~For inspection by the Chief or an authorized representative of the Chief.~~

4. ~~This permit supersedes and replaces R13-473A.~~

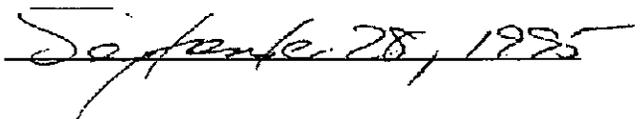
GENERAL REQUIREMENTS

1. In accordance with 45CSR30, enclosed with this permit is a Certified Emissions Statement registration form. Please complete this form and return it to the West Virginia Office of Air Quality (OAQ) along with the correct operating fee within thirty (30) days after receipt. If you have already submitted a Certified Emissions Statement to the OAQ please disregard this requirement.
2. Possession of this permit does not relieve any person of the responsibility of complying with any and all applicable rules or regulations of the Division of Environmental Protection or any other governmental agency.
3. The permitted facility must be constructed and operated in accordance with information filed in Permit Application R13-1858. The Chief may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to.
4. At such reasonable time(s) as the Chief may designate, the permittee shall conduct or have conducted tests to determine compliance with the emission limitations established in the permit application and/or applicable regulations. Tests shall be conducted in such a manner as the Chief may specify or approve and shall be filed in a manner acceptable to the Chief. The Chief, or his duly authorized representative, may at his option witness or conduct such test. Should the Chief exercise his option to conduct such tests, the operator shall provide all the necessary sampling connections and sampling ports to be located in such manner as the Chief may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices. For any tests to be conducted by the permittee, a test protocol shall be submitted to the Office of Air Quality by the permittee at least thirty (30) days prior to the test and shall be approved by the Chief. The Chief shall be notified at least fifteen (15) days in advance of the actual dates and times during which the test will be conducted.

ISSUED BY:

  
G. DALE ARLEY CHIEF  
OFFICE OF AIR QUALITY

DATE:



## ATTACHMENT 1

WVOAQ Permit Application Number R13-1858  
Polymers Pilot Plant - Equipment Vented to Flare

Equipment Name	Equipment Identification	Current Eq. Id. (Reg 13)
Ethylene Purification System	1000	
Propylene Purification System	1100	
Butene Purification System	1200	
Hexene Purification System	1300	
Isopentane Purification System	1400	
Reactor System 1	100	
Reactor System 2	200	
Reactor System 3	300	
Reactor System 4	400	
Reactor System 5	400	
Reactor System 6	600	
Reactor System 7	700	
<del>Reactor System 8 - Reactor System</del>	<del>3400</del>	<del>400</del>
<del>Reactor System 8 - Hold Vessel</del>	<del>3500</del>	<del>600</del>
<del>Reactor System 8 - Resin Purge</del>	<del>3600</del>	<del>500</del>
<del>Reactor System 8 Feed Vessel</del>	<del>3700</del>	<del>200</del>
<del>ENB Storage - System 8</del>	<del>3100</del>	
<del>Reactor System 9</del>	<del>4107</del>	
<del>Reactor System 9 Hold Vessel</del>	<del>4202</del>	
<del>Reaction System 9 Purge Vessel</del>	<del>4207</del>	
<del>Reactor System 10</del>	<del>4307</del>	
<del>Reactor System 10 Hold Vessel</del>	<del>4402</del>	
<del>Reaction System 10 Purge Vessel</del>	<del>4407</del>	
<del>773 Analyzers Fast Purge System</del>	<del>773A</del>	
<del>G8-G10 Analyzer System</del>	<del>4116</del>	
Ethylene Tank Truck Vent	LHH ETTR	
Propylene Storage Tank Vent	1101	
Butene Storage Tank Vent	1201	
Isopentane Storage Tank Vent	1401	
Hexene Storage Tank Vent	1301	
Butadiene Storage Vents	BSTV	
Reaction Co-catalysts Storage	RXNS	

8/3/95-1/6/16

# Attachment E

## Plot Plan



**Union Carbide Corporation – Technology Park Operations  
Polyolefins Process R&D: Flare  
Attachment G – Process Description**

Polyolefins Process R&D contains several reactors and other vessels that vent emissions to the flare. There are no proposed changes to this process as a part of this application.

**Union Carbide Corporation Technology Park Operations  
Regulation 13 Permit Modification Application  
Polyolefins Process R&D : Flare  
Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans**

See Attachment D: Regulatory Discussion

# Attachment P

## Legal Ad

Note: Original affidavit of publication will be submitted immediately upon receipt.

## **AIR QUALITY PERMIT NOTICE**

### **Notice of Application**

Notice is given that Union Carbide Corporation has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Class II Administrative Update for a research and development facility located at 1840 Union Carbide Drive, South Charleston, in Kanawha County, West Virginia. The latitude and longitude coordinates are: 38.35556, -81.70159

The purpose of this application is to revise flare monitoring language in order to provide clarification and to remove other obsolete requirements. There will be no change in emissions as a result of this application. The flare has the potential to emit Volatile Organic Compounds of 18.2 tons per year. Anticipated emissions of Particulate Matter are estimated to be 1 ton per year.

This facility is currently operating. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57<sup>th</sup> Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1250, during normal business hours.

Dated this the 22 day of January, 2016.

By: Union Carbide Corporation  
Tyler J. London  
WVO Site Leader  
P.O. Box 8361  
South Charleston, WV 25303

**Attachment S**  
**Title V Permit Revision Information**

<b>1. New Applicable Requirements Summary</b>	
Mark all applicable requirements associated with the changes involved with this permit revision:	
<input type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input checked="" type="checkbox"/> Minor source NSR (45CSR13)	<input type="checkbox"/> PSD (45CSR14)
<input type="checkbox"/> NESHAP (45CSR34)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input type="checkbox"/> Section 111 NSPS (Subpart(s) _____)	<input type="checkbox"/> Section 112(d) MACT standards (Subpart(s) _____)
<input type="checkbox"/> Section 112(g) Case-by-case MACT	<input type="checkbox"/> 112(r) RMP
<input type="checkbox"/> Section 112(i) Early reduction of HAP	<input type="checkbox"/> Consumer/commercial prod. reqts., section 183(e)
<input type="checkbox"/> Section 129 Standards/Reqts.	<input type="checkbox"/> Stratospheric ozone (Title VI)
<input type="checkbox"/> Tank vessel reqt., section 183(f)	<input type="checkbox"/> Emissions cap 45CSR§30-2.6.1
<input type="checkbox"/> NAAQS, increments or visibility (temp. sources)	<input type="checkbox"/> 45CSR27 State enforceable only rule
<input type="checkbox"/> 45CSR4 State enforceable only rule	<input type="checkbox"/> Acid Rain (Title IV, 45CSR33)
<input type="checkbox"/> Emissions Trading and Banking (45CSR28)	<input type="checkbox"/> Compliance Assurance Monitoring (40CFR64) <sup>(1)</sup>
<input type="checkbox"/> NO <sub>x</sub> Budget Trading Program Non-EGUs (45CSR1)	<input type="checkbox"/> NO <sub>x</sub> Budget Trading Program EGUs (45CSR26)
<p><sup>(1)</sup> If this box is checked, please include <b>Compliance Assurance Monitoring (CAM) Form(s)</b> for each Pollutants Specific Emission Unit (PSEU) (See Attachment H to Title V Application). If this box is not checked, please explain why <b>Compliance Assurance Monitoring</b> is not applicable:</p> <p>The current Title V permit fact sheet states that CAM is not applicable because a continuous compliance determination method is applied (continuous monitoring and recording of flare temperature).</p> <p>This application includes discussion in Attachment D which describes why the continuous compliance determination method exemption remains intact for the monitoring proposed.</p>	

<b>2. Non Applicability Determinations</b>
List all requirements, which the source has determined not applicable to this permit revision and for which a permit shield is requested. The listing shall also include the rule citation and a rationale for the determination.
<input type="checkbox"/> <b>Permit Shield Requested</b> <i>(not applicable to Minor Modifications)</i>
<i>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</i>

### 3. Suggested Title V Draft Permit Language

Are there any changes involved with this Title V Permit revision outside of the scope of the NSR Permit revision?  Yes  No If Yes, describe the changes below.

Also, please provide **Suggested Title V Draft Permit language** for the proposed Title V Permit revision (including all applicable requirements associated with the permit revision and any associated monitoring /recordkeeping/ reporting requirements), OR attach a marked up pages of current Title V Permit. Please include appropriate citations (Permit or Consent Order number, condition number and/or rule citation (e.g. 45CSR§7-4.1)) for those requirements being added / revised.

**Revise section 5.2.1 to mirror condition (B) 3 of the revised R13-1858A permit. Proposed language is as follows.**

The permittee shall continuously monitor and record the flare (73F) operating temperature on an hourly basis when volatile organic compounds are vented to the flare. In the event that the flare operating temperature monitoring and recording system is not operable, the permittee shall monitor and record, on a once per hour frequency, the status of the pilot flame (presence or absence). Such records shall be maintained on site for a period of no less than five (5) years and shall be made available to the Secretary or his duly authorized representative upon request.

### 4. Active NSR Permits/Permit Determinations/Consent Orders Associated With This Permit Revision

Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
R13-1858	9/28/1995	(B) 3
	/ /	

### 5. Inactive NSR Permits/Obsolete Permit or Consent Orders Conditions Associated With This Revision

Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
	MM/DD/YYYY	
	/ /	
	/ /	

### 6. Change in Potential Emissions

Pollutant	Change in Potential Emissions (+ or -), TPY
Not applicable	Not applicable

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

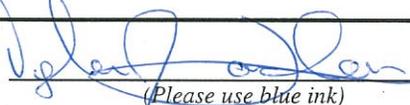
**7. Certification For Use Of Minor Modification Procedures (Required Only for Minor Modification Requests)**

*Note:* This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete. The criteria for allowing the use of Minor Modification Procedures are as follows:

- i. Proposed changes do not violate any applicable requirement;
- ii. Proposed changes do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- iii. Proposed changes do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient air quality impacts, or a visibility increment analysis;
- iv. Proposed changes do not seek to establish or change a permit term or condition for which there is no underlying applicable requirement and which permit or condition has been used to avoid an applicable requirement to which the source would otherwise be subject (synthetic minor). Such terms and conditions include, but are not limited to a federally enforceable emissions cap used to avoid classification as a modification under any provision of Title I or any alternative emissions limit approved pursuant to regulations promulgated under § 112(j)(5) of the Clean Air Act;
- v. Proposed changes do not involve preconstruction review under Title I of the Clean Air Act or 45CSR14 and 45CSR19;
- vi. Proposed changes are not required under any rule of the Director to be processed as a significant modification;

Notwithstanding subparagraph 45CSR§30-6.5.a.1.A. (items i through vi above), minor permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in rules of the Director which are approved by the U.S. EPA as a part of the State Implementation Plan under the Clean Air Act, or which may be otherwise provided for in the Title V operating permit issued under 45CSR30.

**Pursuant to 45CSR§30-6.5.a.2.C., the proposed modification contained herein meets the criteria for use of Minor permit modification procedures as set forth in Section 45CSR§30-6.5.a.1.A. The use of Minor permit modification procedures are hereby requested for processing of this application.**

(Signed):  <i>(Please use blue ink)</i>	Date: <u>01 / 15 / 16</u> <i>(Please use blue ink)</i>
Named (typed): Tyler J. London	Title: WVO Site Leader

**Note: Please check if the following included (if applicable):**

- |                                     |   |
|-------------------------------------|---|
| <input type="checkbox"/>            | Compliance Assurance Monitoring Form(s) |
| <input checked="" type="checkbox"/> | Suggested Title V Draft Permit Language |

*All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.*