WEST VIRGINIA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

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):*
The Chemours Company FC, LLC

2. Federal Employer ID No. ***(FEIN):***
46-5626518

3. Name of facility *(if different from above):*
Washington Works Facility

4. The applicant is the:
☐ **OWNER** ☐ **OPERATOR** ☒ **BOTH**

5A. Applicant's mailing address:
Building 1, Washington Works
Washington WV, 26181-1217

5B. Facility's present physical address:
8480 DuPont Road
Washington, WV 26181

6. **West Virginia Business Registration.** Is the applicant a resident of the State of West Virginia? ☒ **YES** ☐ **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:

8. Does the applicant own, lease, have an option to buy or otherwise have control of the *proposed site?* ☒ **YES** ☐ **NO**
- If **YES,** please explain: Owns site
- 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.): Chemical Manufacturing

10. North American Industry Classification System **(NAICS)** code for the facility:
325199

11A. DAQ Plant ID No. (for existing facilities only):
107-00182

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):
R13-1823J, R13-3223, R30-107-00182 Segment 2 of 14

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**.

Take the Route 50 bypass towards Ohio from I-77. Exit the Route 50 bypass at the last exit in West Virginia. At the light turn left and continue on DuPont road for approximately ½ - ¾ mile. The main plant entrance will be visible on your right.

12.B. New site address (if applicable):	12C. Nearest city or town:	12D. County:
N/A	Parkersburg	Wood
12.E. UTM Northing (KM): 4347.0231	12F. UTM Easting (KM): 442.1204	12G. UTM Zone: 17S

13. Briefly describe the proposed change(s) at the facility:

This permit amendment is intended to remove certain equipment that are no longer in service or no longer emit regulated air pollutants. In addition, this amendment removes from the permit all references to methanol as an air pollutant, since methanol is no longer used. This amendment calls attention to permit references that must be changed; it also seeks to modify language regarding visible emission observsations.

14A. Provide the date of anticipated installation or change:	14B. Date of anticipated Start-Up if a permit is granted:
– If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: various	N/A

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).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:

Hours Per Day 24 Days Per Week 7 Weeks Per Year52

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), 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.**

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.

25. Fill out the **Emission Units Table** and provide it as **Attachment I.**

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J.**

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K.**

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

☐ Bulk Liquid Transfer Operations	☐ Haul Road Emissions	☐ Quarry
☒ Chemical Processes	☐ Hot Mix Asphalt Plant	☐ Solid Materials Sizing, Handling and Storage Facilities
☐ Concrete Batch Plant	☐ Incinerator	☐ Storage Tanks
☐ Grey Iron and Steel Foundry	☐ Indirect Heat Exchanger	
☐ General Emission Unit, specify		

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L.**

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

☐ Absorption Systems	☐ Baghouse	☐ Flare
☐ Adsorption Systems	☐ Condenser	☐ Mechanical Collector
☐ Afterburner	☐ Electrostatic Precipitator	☐ Wet Collecting System

☐ Other Collectors, specify

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M.**

30. Provide all **Supporting Emissions Calculations** as **Attachment N,** or attach the calculations directly to the forms listed in Items 28 through 31.

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:

☐ Authority of Corporation or Other Business Entity ☐ Authority of Partnership

☐ Authority of Governmental Agency ☐ 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** / ☐ **Authorized Representative,** 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: May 22, 2015 *(Please use blue ink)*

35B. Printed name of signee: Robert J. Fehrenbacher		35C. Title: Plant Manager
35D. E-mail: robert.j.fehrenbacher@chemours.com	36E. Phone: 304-863-4305	36F. FAX: 304-863-4962
36A. Printed name of contact person (if different from above): David F. Altman		36B. Title: Sr. Env. Control Consult.
36C. E-mail: david.f.altman@chemours.com	36D. Phone: 304-863-4271	36E. FAX: 304-863-4862

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

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

WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION CERTIFICATE

ISSUED TO:
THE CHEMOURS COMPANY FC, LLC
8480 DUPONT RD
WASHINGTON, WV 26181-8398

BUSINESS REGISTRATION ACCOUNT NUMBER: **2303-3963**

This certificate is issued on: 10/27/2014

This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code

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

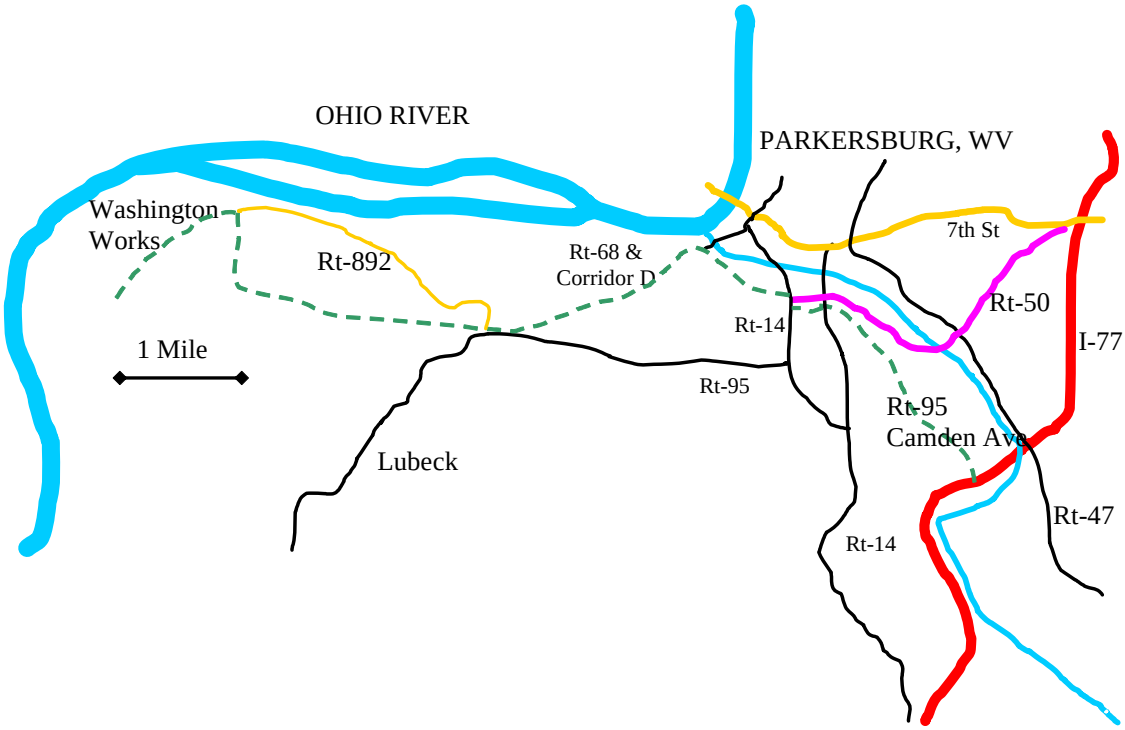
This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

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.

atL006 v.4
L1658939968

ATTACHMENT B – Map to Facility



From Interstate 77, take exit for Rt-95/Camden Avenue.
Proceed west until intersection with Rt-14 then turn right (north).
After about 1/4 mile turn left onto Corridor D Bypass entrance.
Follow the bypass to the exit just before the bridge
Turn left (south) onto DuPont Rd, Rt-892.
Proceed approx. 1 mile to facility on right.

Attachment D

Regulatory Discussion

Regulatory Discussion

The following regulations apply to this production unit: West Virginia Regulations 7, 13, 21, 30 and US EPA MACT Standards for the Miscellaneous Organic NESHAP.

RACT
45CSR21-40.3.c requires RACT analysis on a case by case basis for those VOC emissions greater than 6 pph which are constructed, modified, or begin operation after the date 45CSR 21 becomes effective. Permit R13-3223 requires RACT analysis for any increase in VOC from sources listed in R13-3223. For only one source – T7JK, are we requesting an increase in VOC emissions; this source is not on the R13-3223 list. While the increase in emissions is estimated to be 7.22 pph ethanol, the emissions are from maintenance cleaning, and only yield up to 0.007 tpy VOCs. In the past, the T7 area had accounted for methanol emissions from the same cleaning operation. The T7 area has revised their procedure to use ethanol – a Non-HAP, rather than methanol – a HAP and VOC. In the past, methanol emission from T7JK were estimated to be 1.13 pph and 0.02 tpy. Therefore, although the ethanol emissions from source T7JK are higher from a pph perspective (because of the amount used at one time), emissions of HAPs and VOCs will be reduced.

This class II permit amendment application is being filed under 45CSR13 since a slight increase in VOC emissions from T7JK is being requested. Overall, methanol emissions will decrease by 0.478 tons/year and VOC emissions associated with the sources identified in this application will decrease by 0.314 tpy. Additionally, other Reg.13 and Title V language requests are being made to clean up both permits with the submission of the Title V permit renewal application for R30-10700182.

PSD
As of January 2, 2011, pursuant to actions taken by the USEPA, Greenhouse Gases (GHGs) became a regulated pollutant under the major NSR program. As such, an evaluation must be done for any increase in GHG emissions resulting from construction or modification to determine PSD applicability per 40 CFR 52.21. There are no new emissions of components listed in table A-1 of 40 CFR 98.2 therefore PSD for GHG does not apply.

The changes proposed in this Class II Administrative update R13-1823K include:

1. Revised emission calculations for maintenance cleaning associated with the following sources, all of which exhaust through emission point T7XIE:

	Current state: VOCs (as Ethanol)		Former state: HAP/VOC (as methanol)		Change	
Source ID	**pph**	**tpy**	**pph**	**tpy**	**tpy**	
T1XG	46.1	0.024	54.1	0.028	-0.004	
T4GK	3	0.028	6.1	0.04	-0.012	
T4GM	17.05	0.031	24.05	0.039	-0.008	
T4GS	17.05	0.034	24.05	0.043	-0.009	
T4XK	17.05	0.03	24.05	0.038	-0.008	
T7JK	7.22	0.007	1.13	0.02	-0.013	
T7EI, T7XI	0.045	0.01	0.044	0.01	0	
Citric Acid now used for the sources below:			**MeOH (pph)**	**MeOH (tpy)**	-0.054	subtotal
T1XD	N/A	N/A	70.6	0.036	-0.036	
T2XJ	N/A	N/A	24.1	0.041	-0.041	
T2XM	N/A	N/A	158.3	0.080	-0.080	
T2XN	N/A	N/A	76.4	0.103	-0.103	
					-0.260	subtotal
					-0.314	total

2. Remove methanol from the table under condition 4.1.2. on page 16 of the permit.

3. Remove methanol from the table under condition 4.1.4. on page 16 of the permit; also adjust the VOC value from 19.8 tpy to 19.5 tpy.

4. Replace references to Air Quality permit R13-2617 in permit conditions 4.1.24. and 4.1.25. on page 22 of the permit with references to Air Quality permit R13-3223.

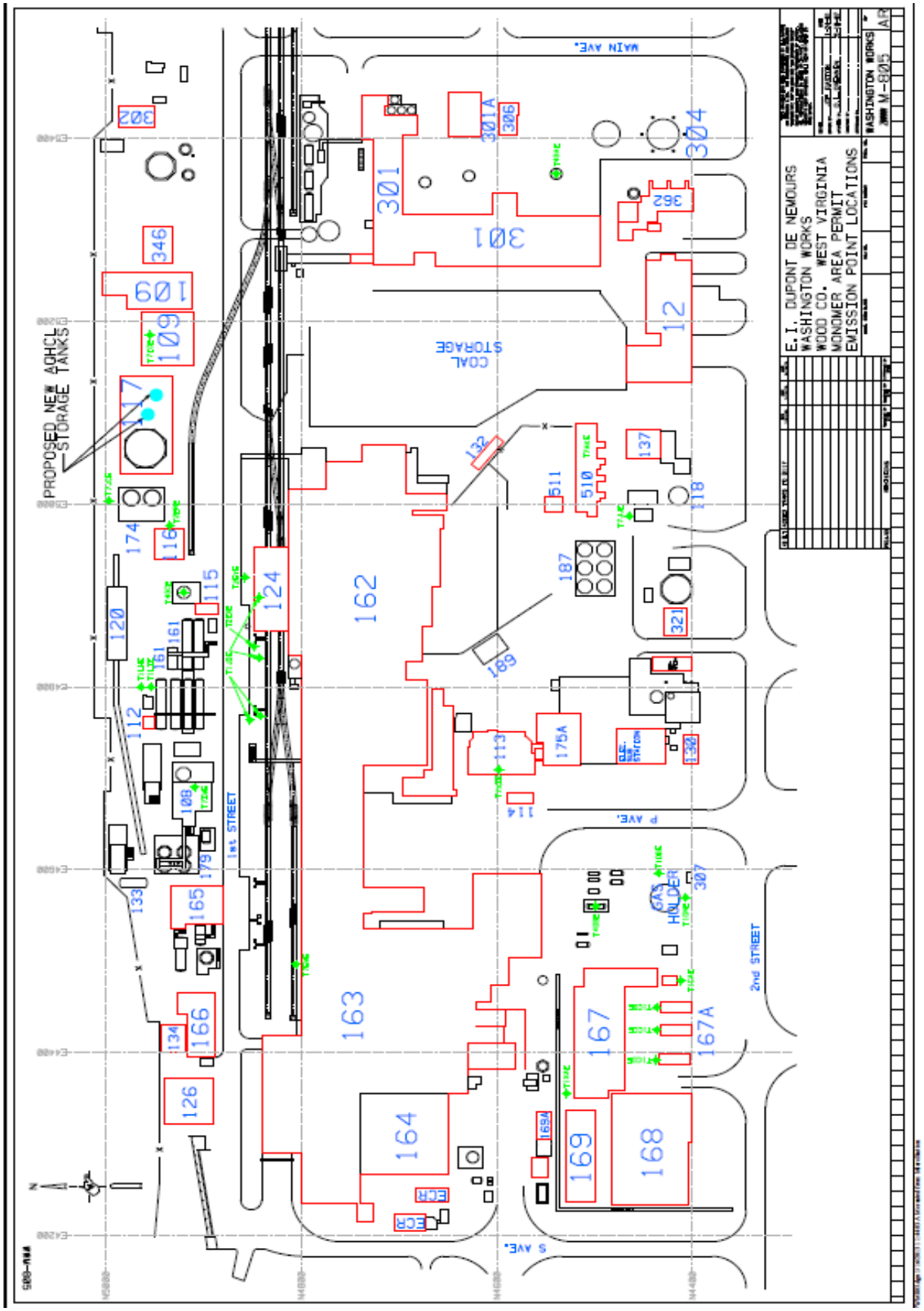
5. 45 CSR 7 – Compliance condition modification request – Condition 4.2.1.:
In the current permit the requirement for monitoring for particulate matter, found in permit condition 4.2.1. which requires *"Monitoring shall be conducted at last once per month with a maximum of forty-five (45) days between consecutive readings".* Chemours has experienced a significant issue with the interpretation of the condition such that we consistently perform the observations as required. The additional text that sets the 45 day maximum interval has been seen, despite educational efforts, to mean that there is up to a 45 day period after the last reading to take the next reading. Chemours is requesting that the compliance condition be simplified to require a monthly visual

observation for visible particulate emissions. The elimination of the perceived conflicting 45 day period will enable Chemours personnel to ensure the readings are performed at the correct interval and that focus can be given to the Operations personnel to ensure the reading is always taken early in the operational month before production schedule or challenges alter the operational timing and cause a missed reading. The suggested limited text change from above is to *"Monitoring shall be conducted at least once per month."*

6. In Attachment E on pages 39 and 40, please remove references to methanol as an air pollutant.

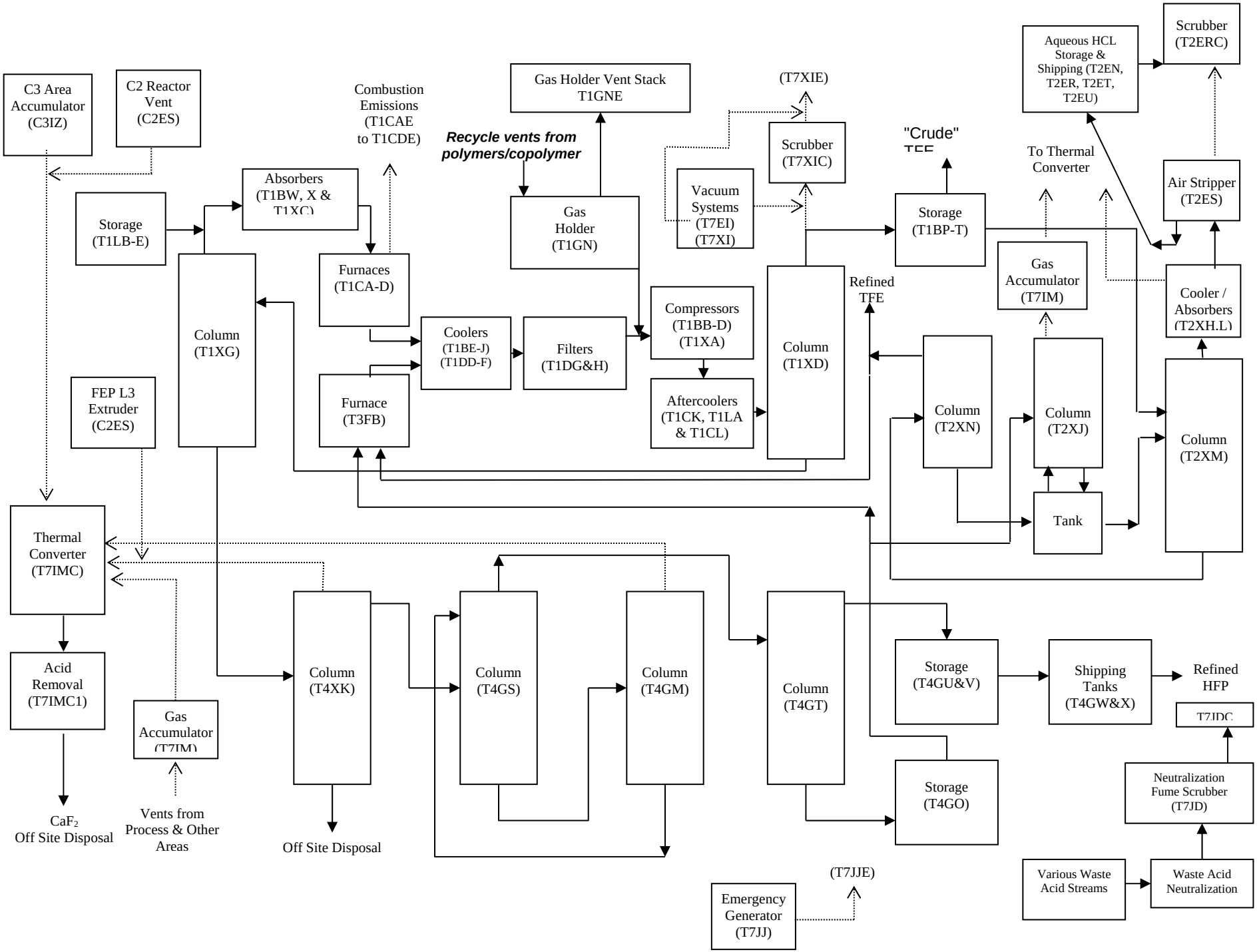
Attachment E

Plot Plan


E.I. DUPONT DE NEMOURS
WASHINGTON WORKS
WOOD CO. WEST VIRGINIA
MONOMER AREA PERMIT
EMISSION POINT LOCATIONS
WASHINGTON WORKS
M-805
PROPOSED NEW AQHCL STORAGE TANKS
COAL STORAGE
GAS HOLDER
MAIN AVE.
P AVE.
S AVE.
1st STREET
2nd STREET
301
301A
302
304
346
109
117
174
116
120
115
124
162
112
161
108
179
133
165
166
134
126
163
164
ECR
169A
169
168
167
167A
307
362
12
132
511
510
137
118
187
321
689
175A
113
114
130

Attachment F

Detailed Process Flow Diagrams


C3 Area Accumulator (C3IZ)
C2 Reactor Vent (C2ES)
Combustion Emissions (T1CAE to T1CDE)
Gas Holder Vent Stack T1GNE
(T7XIE)
Aqueous HCL Storage & Shipping (T2EN, T2ER, T2ET, T2EU)
Scrubber (T2ERC)
Recycle vents from polymers/copolymer
Scrubber (T7XIC)
"Crude" TFE
To Thermal Converter
Air Stripper (T2ES)
Absorbers (T1BW, X & T1XC)
Storage (T1LB-E)
Gas Holder (T1GN)
Vacuum Systems (T7EI) (T7XI)
Storage (T1BP-T)
Gas Accumulator (T7IM)
Cooler / Absorbers (T2XH.L)
Furnaces (T1CA-D)
Column (T1XG)
Coolers (T1BE-J) (T1DD-F)
Filters (T1DG&H)
Compressors (T1BB-D) (T1XA)
Column (T1XD)
Refined TFE
Column (T2XN)
Column (T2XJ)
Column (T2XM)
FEP L3 Extruder (C2ES)
Furnace (T3FB)
Aftercoolers (T1CK, T1LA & T1CL)
Tank
Thermal Converter (T7IMC)
Acid Removal (T7IMC1)
Gas Accumulator (T7IM)
Column (T4XK)
Column (T4GS)
Column (T4GM)
Column (T4GT)
Storage (T4GU&V)
Shipping Tanks (T4GW&X)
Refined HFP
T7JDC
Storage (T4GO)
Neutralization Fume Scrubber (T7JD)
CaF_2 Off Site Disposal
Vents from Process & Other Areas
Off Site Disposal
(T7JJE)
Emergency Generator (T7JJ)
Various Waste Acid Streams
Waste Acid Neutralization

Attachment G

Process Description

T1-T4, T7 Area

The T1-T4, T7 area produces fluoromonomers tetrafluoroethylene (TFE) and hexafluoropropylene (HFP); an intermediate, perfluorocyclobutane; and byproducts hydrogen chloride (HCl, aqueous) and calcium fluoride (CaF2, solid). The production facility is divided into the following logical sections: T1-TFE Synthesis, T2-TFE Refining, T3-HFP Synthesis, T4-HFP Refining, and T7-Utilities.

Fluorocarbons are reacted by pyrolysis in T1 section and the products are separated to form crude TFE and recovered byproducts. TFE is refined in T2 section. In-process materials and intermediates are reacted by pyrolysis in T3 section to form crude HFP that is then refined in T4 section.

T7 section is comprised of several utilities, including refrigeration and cold brine supply, the unit vacuum systems for maintenance clearing of equipment, waste acid neutralization, and the thermal converter. The thermal converter combusts fluorine-containing byproduct gases from the other process sections (and from polymerization operations in C1, C2, and T6 sections) and two different non-hazardous fluorine- containing liquid streams to produce aqueous hydrogen fluoride (HF) which is reacted with slaked lime (calcium oxide or CaO) to form CaF2.

Several pieces of equipment referenced within this permit application are maintained up to twice a year. In order to prepare some of these vessels for maintenance, they are cleaned with ethanol, in order to remove residual toxic chemicals. The resultant spent ethanol is transferred into a waste tanker truck and shipped off-site for proper disposal through incineration. Several pieces of equipment are no longer cleaned with alcohol, but with citric acid, which is transferred into a waste tanker truck when spent, and shipped off-site for proper disposal.

Attachment H

MSDS Sheets

Ethanol SOF-662-MF 200 proof

Version1.02 ***Revision Date 11.06.2011***

Material Safety Data Sheet

SECTION 1 Identification of the substance/mixture and of the company/undertaking

Trade name Ethanol SOF-662-MF 200 proof

Synonyms Ethanol SOF-662-MF 200 proof, SOF 662 MF Duplicating Fluid / Denatured Alcohol

Company Sasol Chemicals North America LLC
900 Threadneedle, Suite 100
Houston, Texas 77079-2990 USA

,

Telephone		
	CHEMTREC North America Transport Emergency (24-hr)	(800) 424-9300
	CHEMTREC World Wide Transport Emergency (24-hr)	(703) 527-3887
	MSDS and Product Information (8:00am-4:30pm CST)	(281) 588-3315
	Sasol LCCC Main Gate Guard	(337) 494-5142

SECTION 2 Hazards identification

Emergency Overview

Danger Highly flammable.

State of matter liquid clear

Odour alcohol-like

Potential environmental effects

Environmental precautions Should not be released into the environment. Prevent further leakage or spillage if safe to do so.

Ecological information: See chapter 12

Potential health effects

Acute effects

Eyes Causes eye irritation.

Ethanol SOF-662-MF 200 proof

Version1.02 ***Revision Date 11.06.2011***

Skin Prolonged or repeated contact may dry skin and cause irritation.

Inhalation May cause respiratory tract irritation.

Ingestion Aspiration hazard if swallowed - can enter lungs and cause damage.

Toxicological information: See chapter 11

SECTION 3 Composition/information on ingredients

Components	CAS-No.	Weight percent
ethanol; ethyl alcohol	64-17-5	*85.00*
propan-2-ol; isopropyl alcohol; isopropanol	67-63-0	*14.00*
propyl acetate	109-60-4	*1.00*

Exposure limit(s): See chapter 8
Classification and hazard labelling: See chapter 15

SECTION 4 First aid measures

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before re-use. If skin irritation persists, call a physician.

Inhalation Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.

Ingestion If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

SECTION 5 Fire-fighting measures

Flammability

Flash point 13 °C

Autoignition temperature 400 °C

Ethanol SOF-662-MF 200 proof

Version1.02 ***Revision Date 11.06.2011***

Explosion limits	**Lower explosion limit:** 4 %(V) **Upper explosion limit:** 20 %(V)
Fire/explosion	Flash back possible over considerable distance.
Hazardous combustion products	Carbon oxides
Suitable extinguishing media	Water spray Alcohol-resistant foam Dry chemical Carbon dioxide (CO2)
Unsuitable extinguishing media	No information available.
Protection measures and instructions	Wear self-contained breathing apparatus and protective suit.
Further information	Cool containers / tanks with water spray.

SECTION 6 Accidental release measures

Personal precautions	Keep people away from and upwind of spill/leak. Remove all sources of ignition. Do not breathe vapours or spray mist.
Environmental precautions	Should not be released into the environment. Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Soak up with inert absorbent material and dispose of as hazardous waste.

Exposure controls/personal protection: See chapter 8

SECTION 7 Handling and storage

Safe handling advice	Provide sufficient air exchange and/or exhaust in work rooms. Wear personal protective equipment. Take precautionary measures against static discharge. Ensure all equipment is electrically grounded before beginning transfer operations.
Advice on protection against fire and explosion	Keep away from heat and sources of ignition.Use explosion-proof equipment.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place.

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SECTION 8 Exposure controls/personal protection

Engineering measures

Provide sufficient air exchange and/or exhaust in work rooms.

Personal protective equipment

Eyes Safety glasses with side-shields

Skin Protective suit Safety shoes

Inhalation In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection

Hygiene measures Wash hands before breaks and immediately after handling the product.

Protective measures Wear suitable protective equipment.

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Exposure Guidelines

Components	Exposure limit(s)
ETHYL ALCOHOL	US. ACGIH Threshold Limit Values time weighted average 1,000 ppm US. NIOSH: Pocket Guide to Chemical Hazards Recommended exposure limit (REL): 1,000 ppm (1,900 mg/m3)
ETHYL ALCOHOL; ETHANOL	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Permissible exposure limit 1,000 ppm (1,900 mg/m3)
ETHANOL	US. OSHA Table Z-1-A (29 CFR 1910.1000) time weighted average 1,000 ppm (1,900 mg/m3)
ETHYL ALCOHOL	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants Time Weighted Average (TWA) Permissible Exposure Limit (PEL): 1,000 ppm (1,900 mg/m3)
ETHYL ALCOHOL; ETHANOL ETHYL ALCOHOL	US. ACGIH Threshold Limit Values US. ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values Short term exposure limit 1,000 ppm US. ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values US. NIOSH: Pocket Guide to Chemical Hazards
ETHYL ALCOHOL (ETHONAL)	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) US. OSHA Table Z-1-A (29 CFR 1910.1000) US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) Short-Term ESL: US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) Annual ESL: US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) US. ACGIH Threshold Limit Values Short term exposure limit 1,000 ppm US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A time weighted average 1,000 ppm (1,900 mg/m3) US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A Listed Listed Listed Listed Listed Listed Listed Listed
ISOPROPYL ALCOHOL	US. ACGIH Threshold Limit Values time weighted average 200 ppm US. ACGIH Threshold Limit Values Short term exposure limit 400 ppm US. NIOSH: Pocket Guide to Chemical Hazards Recommended exposure limit (REL): 400 ppm (980 mg/m3) US. NIOSH: Pocket Guide to Chemical Hazards Short term exposure limit 500 ppm (1,225 mg/m3) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Permissible exposure limit 400 ppm (980 mg/m3) US. OSHA Table Z-1-A (29 CFR 1910.1000) time weighted average 400 ppm (980 mg/m3) US. OSHA Table Z-1-A (29 CFR 1910.1000) Short term exposure limit 500 ppm (1,225 mg/m3) US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants Time Weighted Average (TWA) Permissible Exposure Limit (PEL): 400 ppm (980 mg/m3) US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants Short term exposure limit 500 ppm (1,225 mg/m3) US. ACGIH Threshold Limit Values time weighted average 200 ppm

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	US. ACGIH Threshold Limit Values Short term exposure limit 400 ppm US. ACGIH Threshold Limit Values US. NIOSH: Pocket Guide to Chemical Hazards US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) US. OSHA Table Z-1-A (29 CFR 1910.1000) US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) Short-Term ESL: US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) Annual ESL: US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A time weighted average 400 ppm (980 mg/m3) US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A Short term exposure limit 500 ppm (1,225 mg/m3) US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A Listed Listed Listed Listed Listed Screening levels that have the odor designations represent the levels of constituents in the air at which the odor would be a nuisance. Screening levels that have the odor designations represent the levels of constituents in the air at which the odor would be a nuisance. Listed Listed
N-PROPYL ACETATE	US. ACGIH Threshold Limit Values time weighted average 200 ppm US. ACGIH Threshold Limit Values Short term exposure limit 250 ppm US. NIOSH: Pocket Guide to Chemical Hazards Recommended exposure limit (REL): 200 ppm (840 mg/m3) US. NIOSH: Pocket Guide to Chemical Hazards Short term exposure limit 250 ppm (1,050 mg/m3) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Permissible exposure limit 200 ppm (840 mg/m3) US. OSHA Table Z-1-A (29 CFR 1910.1000) time weighted average 200 ppm (840 mg/m3)
PROPYL ACETATE	US. OSHA Table Z-1-A (29 CFR 1910.1000) Short term exposure limit 250 ppm (1,050 mg/m3) US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants Time Weighted Average (TWA) Permissible Exposure Limit (PEL): 200 ppm (840 mg/m3)
N-PROPYL ACETATE	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants Short term exposure limit 250 ppm (1,050 mg/m3) US. ACGIH Threshold Limit Values US. NIOSH: Pocket Guide to Chemical Hazards US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) US. OSHA Table Z-1-A (29 CFR 1910.1000) US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) Short-Term ESL: US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) Annual ESL: US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A time weighted average 200 ppm (840 mg/m3)

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US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A Short term exposure limit 250 ppm (1,050 mg/m3)
US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A
Listed Listed Listed Listed Listed Screening levels that have the odor designations represent the levels of constituents in the air at which the odor would be a nuisance. Screening levels that have the odor designations represent the levels of constituents in the air at which the odor would be a nuisance. Listed Listed

PEL=	Permissible Exposure Limits	TWA=	Time Weighted Average (8 hr.)
TLV=	Threshold Limit Value	STEL=	Short Term Exposure Limit (15 min.)
EL=	Excursion Limit	WEEL=	Workplace Environmental Exposure Level

SECTION 9 Physical and chemical properties

State of matter liquid

Colour clear

Odour alcohol-like

Form liquid

Boiling point/boiling range 74 - 80 °C

Flash point 13 °C

Lower explosion limit 4 %(V)

Upper explosion limit 20 %(V)

Vapour pressure ca. 66.661 hPa at

Solubility(ies) completely soluble

Melting point/range ca. ca.-114 °C

Density 0.79 g/cm3

SECTION 10 Stability and reactivity

Conditions to avoid Heat, flames and sparks.

Hazardous decomposition products	Carbon oxides
Incompatible products	Strong oxidizing agents Incompatible with acids. Halogenated compounds
Hazardous reactions	Hazardous polymerisation does not occur.

SECTION 11 Toxicological information

Acute oral toxicity	Ethanol: LD50 rat: 7,060 mg/kg; literature value Isopropyl alcohol: LD50 rat: 5,045 mg/kg; literature value Isopropyl alcohol: LD50 rabbit: 6,410 mg/kg; literature value n-Propyl Acetate: LD50 rat: 9,370 mg/kg;
Acute inhalation toxicity	Ethanol: LC50 rat: 66,000 mg/l; literature value; 4 h Isopropyl alcohol: LC50 rat: 16,000 mg/l; literature value; 8 h n-Propyl Acetate: LC50 rat: 8,000 mg/l; ; 8 h
Acute dermal toxicity	Ethanol: LDLo rabbit: 20,000 mg/kg; literature value Isopropyl alcohol: LD50 rabbit: 12,800 mg/kg; literature value
Skin irritation	Isopropyl alcohol: rabbit: Mild skin irritation; literature value
Eye irritation	Isopropyl alcohol: rabbit: Moderate eye irritation; literature value; Causes eye irritation.

SECTION 12 Ecological information

Ecotoxicity effects

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Toxicity to fish Isopropyl alcohol:
LC50 Pimephales promelas: > 6,000 mg/l; 96 h; (literature value)

n-Propyl Acetate:
LC50 Pimephales promelas: 60 mg/l; 96 h

Toxicity to daphnia n-Propyl Acetate:
LC50 Daphnia magna: 511 mg/l; 96 h; literature value

SECTION 13 Disposal considerations

Waste Classification US. EPA Resource Conservation and Recovery Act: (RCRA) D List of Characteristic Hazardous Wastes (40 CFR 261.21-24): D001

Waste from residues / unused products In accordance with local and national regulations.Do not contaminate ponds, waterways or ditches with chemical or used container.The product should not be allowed to enter drains, water courses or the soil.

Uncleaned empty packaging Do not burn, or use a cutting torch on, the empty drum., Triple rinse containers., Can be offered for recycling, re-conditioning or puncture.

Handling and storage: See chapter 7
Exposure controls/personal protection: See chapter 8

SECTION 14 Transport information

DOT/49CFR UN 1170 ETHANOL SOLUTION, 3, II
IMDG UN 1170 ETHANOL SOLUTION, 3, II; EmS F-E, S-D
ICAO/IATA UN 1170 Ethyl alcohol solution, 3, II

SECTION 15 Regulatory information

U.S. Federal Classifications:

OSHA Hazards Flammable liquid, Mild eye irritant

SARA 311/312 Fire Hazard, Acute Health Hazard

U.S. Regulated Ingredients:

Hazard information reporting
US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required
Components **CAS-No.**

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US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

Components	CAS-No.
Propyl acetate	109-60-4
Propan-2-ol	67-63-0
Ethanol	64-17-5

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

Components	CAS-No.
Propyl acetate	109-60-4
Propan-2-ol	67-63-0
Ethanol	64-17-5

US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

Components	CAS-No.
Propyl acetate	109-60-4
Propan-2-ol	67-63-0
Ethanol	64-17-5

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)

Components	CAS-No.

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Spill reporting

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Components	CAS-No.	Reportable Quantity
Propyl acetate	109-60-4	1 mg/L1,000 mg/kg100 mg/kg10 mg/L10 lbs100 lbs100 lbs

Health

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

Components	CAS-No.
Not listed	

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Inventories

EU list of existing chemical substances	All chemical constituents are listed in: EU list of existing chemical substances (See chapter 3)
US TSCA Inventory	All chemical constituents are listed in: US TSCA Inventory (See chapter 3)
Australian Inv. of Chem. Substances AICS	All chemical constituents are listed in: Australian Inv. of Chem. Substances AICS (See chapter 3)
Canadian Domestic Substances List DSL	All chemical constituents are listed in: Canadian Domestic Substances List DSL (See chapter 3)
Jap. Inv. of Exist. & New Chemicals ENCS	All chemical constituents are listed in: Jap. Inv. of Exist. & New Chemicals ENCS (See chapter 3)
Korean Exist. Chemicals List ECL	All chemical constituents are listed in: Korean Exist. Chemicals List ECL (See chapter 3)
Philippines Inv. of Chem. Subst. PICCS	All chemical constituents are listed in: Philippines Inv. of Chem. Subst. PICCS (See chapter 3)
Inv. of Exist. Chem. Substances in China	All chemical constituents are listed in: Inv. of Exist. Chem. Substances in China (See chapter 3)

Other international regulations

WHMIS Classification B2: Flammable liquid
D2B: Toxic Material Causing Other Toxic Effects

SECTION 16 Other information

Hazard Ratings

	Health	Flammability	Reactivity Hazard
HMIS	1	3	0
NFPA	1	3	0

All reasonable efforts were exercised to compile this SDS in accordance with ISO 11014 and ANSIZ400.1.1993. The SDS provides information regarding the health, safety and environmental hazards, at the date of issue, to facilitate the safe receipt, use and handling of the product in the workplace. Since Sasol and its subsidiaries cannot anticipate or control all conditions under which the product may be handled, used and received in the workplace, it remains the obligation of each user, receiver or handler to, prior to usage, review this SDS in the context within which the product will be received, handled or used in the workplace. The user, handler or receiver must ensure that the necessary mitigating measures are in place as regards health and safety. This does not substitute the need or requirement for any relevant risk assessments to be conducted. It further remains the responsibility of the receiver, handler or user to communicate such information to all relevant parties that may be involved in the receipt, use or handling of the product. Although all reasonable efforts were exercised in the compilation of this SDS, Sasol does not expressly warrant the accuracy or assume any

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liability for the incompleteness of the information contained herein or any advice given. The product is sold and risk passes in accordance with the specific terms and conditions of sale.

The MSDS was created by: MOTLATSI
The MSDS was approved by: Glen

Attachment I

Equipment List Form

Attachment I

Emission Units Table

(includes all emission units and air pollution control devices that will be part of this permit application review, regardless of permitting status)

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type[3] and Date of Change	Control Device[4]
1XD	T7XIE	Column	1997	Confidential.	Modification	N/A
T1XG	T7XIE	Column	1997	Confidential.	Modification	N/A
T2XJ	T7XIE	Column	1997	Confidential.	Modification	N/A
T2XM	T7XIE	Column	1997	Confidential.	Modification	N/A
T2XN	T7XIE	Column	1997	Confidential.	Modification	N/A
T4GK	T7XIE	Shipping Containers	1983	Confidential.	Modification	N/A
T4GM	T7XIE	Column	1997	Confidential.	Modification	N/A
T4GS	T7XIE	Column	1997	Confidential.	Modification	N/A
T4XK	T7XIE	Column	1998	Confidential.	Modification	N/A
T7EI /T7XI	T7XIE	N&S Stillhouse Vacuum System	1997	Confidential.	Modification	N/A
T7JK	T7XIE	Trailer Loading	1997	Confidential.	Modification	N/A

[1] For Emission Units (or Sources) use the following numbering system:1S, 2S, 3S,... or other appropriate designation.
[2] For Emission Points use the following numbering system:1E, 2E, 3E, ... or other appropriate designation.
[3] New, modification, removal
[4] For Control Devices use the following numbering system: 1C, 2C, 3C,... or other appropriate designation.

Attachment J Emission Points Data Summary Sheets

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions [4]		Maximum Potential Controlled Emissions [5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used [6]	Emission Concentration [7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
T7XIE	Upward Vertical Stack	T1XG	Column	N/A	N/A	1 hour	2	Ethanol	46.21	0.024	46.21	0.024	Gas/Vapor	EE / MB	0.44 mg/m3
		T4GK	Shipping Containers	N/A	N/A	1 hour	8	Ethanol	3.0	0.028	3.0	0.028	Gas/Vapor	EE / MB	0.028 mg/m3
		T4GM	Column	N/A	N/A	1 hour	2	Ethanol	17.05	0.031	17.05	0.031	Gas/Vapor	EE / MB	0.16 mg/m3

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

[1] Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

[2] Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

[3] List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. **LIST** Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, all applicable Greenhouse Gases (including CO_2 and methane), etc. **DO NOT LIST** H_2, H_2O, N_2, O_2, and Noble Gases.

[4] Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[5] Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[6] Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

[7] Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m^3) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO_2, use units of ppmv (See 45CSR10).

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions [4]		Maximum Potential Controlled Emissions [5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used [6]	Emission Concentration [7] (ppmv or mg/m[4])
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
T7XIE	Upward Vertical Stack	T4GS	Column	N/A	N/A	1 hour	2	Ethanol	17.05	0.034	17.05	0.034	Gas/Vapor	EE / MB	0.16 mg/m3
		T4XK	Column	N/A	N/A	1 hour	2	Ethanol	17.05	0.03	17.05	0.03	Gas/Vapor	EE / MB	0.16 mg/m3
		T7JK	Column	N/A	N/A	1 hour	2	Ethanol	7.22	0.007	7.22	0.007	Gas/Vapor	EE / MB	0.07 mg/m3
		T7EI, T7XI	Vacuum System	N/A	N/A	1 hour	1456	Ethanol	0.045	0.01	0.045	0.01	Gas/Vapor	EE / MB	<0.01 mg/m3

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

[1] Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

[2] Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

[3] List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. **LIST** Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, all applicable Greenhouse Gases (including CO_2 and methane), etc. **DO NOT LIST** H_2, H_2O, N_2, O_2, and Noble Gases.

[4] Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[5] Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[6] Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

[7] Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m^3) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO_2, use units of ppmv (See 45CSR10).

Attachment L – Emission Unit Data Sheets

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
T1XD	Column	T7XIC/T7IMC

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Column -Vents through T7XIE

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Manufacturer:	**Model number:**	**Serial number:**
N/A	N/A	N/A
Construction date:	**Installation date:**	**Modification date(s):**
N/A	1997	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

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Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
		8760 Hr/Yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☐ Yes ☑ No	**If yes, is it?** ☐ Direct Fired ☐ Indirect Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	2794.7	11.12
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Hydrochloric Acid	2190.25	8.620
Hydrogen Fluoride	0.02	0.001
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ozone Depleting Chemicals (ODC)	91.2	0.24
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).		
Engineering Estimate		

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.
<u>See Attached List for all Applicable Requirements.</u>
____ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)
See WV Regulation 13 construction permit # 1823H **Are you in compliance with all applicable requirements for this emission unit?** ☑ **Yes** ☐ **No** If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
T1XG	Column	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Column -Vents through T7XIE

Redacted Copy - Claim of Confidentiality

Manufacturer:	**Model number:**	**Serial number:**
N/A	N/A	N/A
Construction date:	**Installation date:**	**Modification date(s):**
N/A	1997	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

CLAIMED CONFIDENTIAL

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
		8760 Hr/Yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☐ Yes ☑ No	**If yes, is it?** ☐ Direct Fired ☐ Indirect Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	46.3	0.03
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Chloroform	0.01	0.001
Hydrochloric Acid	0.01	0.001
Hydrogen Fluoride	0.01	0.001
Phosgene	0.01	0.001
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ozone Depleting Chemicals (ODC)	4.1	0.02
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).		
Engineering Estimate		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

<u>See Attached List for all Applicable Requirements.</u>

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See WV Regulation 13 construction permit # 1823H

Are you in compliance with all applicable requirements for this emission unit? ☑ **Yes** ☐ **No**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
T2XJ	Column	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Column -Vents through T7XIE

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Manufacturer:	**Model number:**	**Serial number:**
N/A	N/A	N/A
Construction date:	**Installation date:**	**Modification date(s):**
N/A	1997	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

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Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
		8760 Hr/Yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☐ Yes ☑ No	**If yes, is it?** ☐ Direct Fired ☐ Indirect Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	43.8	0.43
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).		
Engineering Estimate		

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.
<u>See Attached List for all Applicable Requirements.</u>
____ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)
See WV Regulation 13 construction permit # 1823H **Are you in compliance with all applicable requirements for this emission unit?** ☑ **Yes** ☐ **No** If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
T2XM	Column	T7XIC

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Column -Vents through T7XIE

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Manufacturer:	**Model number:**	**Serial number:**
N/A	N/A	N/A

Construction date:	**Installation date:**	**Modification date(s):**
N/A	1997	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

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Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
		8760 Hr/Yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☐ Yes ☑ No	**If yes, is it?** ☐ Direct Fired ☐ Indirect Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	561.6	14.27
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Hydrochloric Acid	12242.19	1516.356
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).		
Engineering Estimate		

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.
<u>See Attached List for all Applicable Requirements.</u>
____ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)
See WV Regulation 13 construction permit # 1823H **Are you in compliance with all applicable requirements for this emission unit?** ☑ **Yes** ☐ **No** If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
T2XN	Column	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Column -Vents through T7XIE

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Manufacturer:	**Model number:**	**Serial number:**
N/A	N/A	N/A
Construction date:	**Installation date:**	**Modification date(s):**
N/A	1997	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

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Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
		8760 Hr/Yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☐ Yes ☑ No	**If yes, is it?** ☐ Direct Fired ☐ Indirect Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	3.2	0.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).		
Engineering Estimate		

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.
<u>See Attached List for all Applicable Requirements.</u>
____ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)
See WV Regulation 13 construction permit # 1823H **Are you in compliance with all applicable requirements for this emission unit?** ☑ **Yes** ☐ **No** If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
T4GK	Shipping Containers	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Shipping Containers -Vents through T7XIE

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Manufacturer:	**Model number:**	**Serial number:**
N/A	N/A	N/A
Construction date:	**Installation date:**	**Modification date(s):**
N/A	1983	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

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Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
		N/A Hr/Yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☐ Yes ☑ No	**If yes, is it?** ☐ Direct Fired ☐ Indirect Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	3	0.03
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total Haps	1.20	0.016
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).		
Engineering Estimate		

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.
<u>See Attached List for all Applicable Requirements.</u>
____ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)
See WV Regulation 13 construction permit # 1823H **Are you in compliance with all applicable requirements for this emission unit?** ☑ **Yes** ☐ **No** If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
T4GM	Column	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Column -Vents through T7XIE

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Manufacturer:	**Model number:**	**Serial number:**
N/A	N/A	N/A
Construction date:	**Installation date:**	**Modification date(s):**
N/A	1997	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

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Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
		8760 Hr/Yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☐ Yes ☑ No	**If yes, is it?** ☐ Direct Fired ☐ Indirect Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	17.1	0.04
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ozone Depleting Chemicals (ODC)	1.7	0.01

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Engineering Estimate

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.
<u>See Attached List for all Applicable Requirements.</u>
____ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)
See WV Regulation 13 construction permit # 1823H **Are you in compliance with all applicable requirements for this emission unit?** ☑ **Yes** ☐ **No** If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
T4GS	Column	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Column -Vents through T7XIE

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Manufacturer:	**Model number:**	**Serial number:**
N/A	N/A	N/A
Construction date:	**Installation date:**	**Modification date(s):**
N/A	1997	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

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Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☐ Yes ☑ No	**If yes, is it?** ☐ Direct Fired ☐ Indirect Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	665.3	1.05
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).		
Engineering Estimate		

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.
<u>See Attached List for all Applicable Requirements.</u>
____ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)
See WV Regulation 13 construction permit # 1823H **Are you in compliance with all applicable requirements for this emission unit?** ☑ **Yes** ☐ **No** If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
T4XK	Column	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Column -Vents through T7XIE

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Manufacturer:	**Model number:**	**Serial number:**
N/A	N/A	N/A
Construction date:	**Installation date:**	**Modification date(s):**
N/A	1998	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

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Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
		8760 Hr/Yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☐ Yes ☑ No	**If yes, is it?** ☐ Direct Fired ☐ Indirect Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	17.1	0.04
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).		
Engineering Estimate		

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.
<u>See Attached List for all Applicable Requirements.</u>
____ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)
See WV Regulation 13 construction permit # 1823H **Are you in compliance with all applicable requirements for this emission unit?** ☑ **Yes** ☐ **No** If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
T7EI, T7XI	N & S Stillhouse Vacuum Systems (Misc Vents)	T7XIC

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

N & S Stillhouse Vacuum Systems (Misc Vents) -Vents through T7XIE

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Manufacturer:	**Model number:**	**Serial number:**
N/A	N/A	N/A
Construction date:	**Installation date:**	**Modification date(s):**
N/A	1997	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

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Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
		8760 Hr/Yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☐ Yes ☑ No	**If yes, is it?** ☐ Direct Fired ☐ Indirect Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**
N/A	N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	0.8	0.16
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total Haps	0.13	0.028
Hydrochloric Acid	0.01	0.001
Hydrogen Fluoride	0.01	0.002
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ozone Depleting Chemicals (ODC)	0.5	0.11
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).		
Engineering Estimate		

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.
<u>See Attached List for all Applicable Requirements.</u>
____ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)
See WV Regulation 13 construction permit # 1823H **Are you in compliance with all applicable requirements for this emission unit?** ☑ **Yes** ☐ **No** If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
T7JK	Ethanol Waste Trailer	N/A

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Tanker truck used to collect ethanol washes from process equipment.

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Manufacturer:	**Model number:**	**Serial number:**
N/A	N/A	N/A
Construction date:	**Installation date:**	**Modification date(s):**
MM/DD/YYYY	MM/DD/YYYY	05/05/2015

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Confidential

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Confidential	Confidential	

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes __X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	7.22	0.007

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Engineering Estimate and mass balance

Attachment N

Supporting Emission Calculations

Ethanol replacing Methanol VOC summary

	Current state: VOCs (as Ethanol)		Former state: HAP/VOC (as methanol)		VOC Change	
Source ID	**pph**	**tpy**	**pph**	**tpy**	**tpy**	
T1XG	46.1	0.024	54.1	0.028	-0.004	
T4GK	3	0.028	6.1	0.04	-0.012	
T4GM	17.05	0.031	24.05	0.039	-0.008	
T4GS	17.05	0.034	24.05	0.043	-0.009	
T4XK	17.05	0.03	24.05	0.038	-0.008	
T7JK	7.22	0.007	1.13	0.02	-0.013	
T7EI, T7XI	0.045	0.01	0.044	0.01	0	
Citric Acid now used for the sources below:			**MeOH (pph)**	**MeOH (tpy)**	-0.054	subtotal
T1XD	N/A	N/A	70.6	0.036	-0.036	
T2XJ	N/A	N/A	24.1	0.041	-0.041	
T2XM	N/A	N/A	158.3	0.080	-0.080	
T2XN	N/A	N/A	76.4	0.103	-0.103	
		CH3OH Total Eliminated =		0.478	-0.260	subtotal reduction due to Citric Acid
					-0.314	total VOC Change

Example Calculations

1. Ideal gas law – P*V=n*R*T, solve for n.

   P= pressure

   V= volume

   n= no. of moles

   R= universal gas constant

   T= temperature

   a. n*mwt= pounds emitted per event with event duration no greater than 1 hour

      mwt= molecular weight of the compound(s) emitted.

   b. n*percentage of component*mwt=pounds emitter per event when dealing with less than 100%

   c. Number of events determine annual emissions

      Number of batches.

      Number of yearly cleanings or outages

2. For non-ideal situations – equation of state – used to determine mole fractions

   P=R*T/(V-b)-a/(V*(V+b)+b*(V-b))

   P=pressure

   V= molar volume

   T= temperature

   a is a function of interaction parameters and mole fractions

   b is a function of component critical temperatures and pressures.

   a. solve for pounds per event as before

   b. same as in 1.b.

3. Air measurements to determine pounds per event then times number of events to get annual emissions.

4. Polymer rate times emissions per pound of polymer

   a. polymer rate may have a surrogate such as motor amps, screw speed, etc. for hourly emissions or number of batches for annual emissions.

   b. emissions per pound of polymer are either engineering estimates, determined by off gas analysis, scaling up from a pilot plant or simple stack measurements.

The values presented in the detailed calculation pages were derived from a combination of engineering calculation software (TK Solver) based on the PV=nRT equation and

analytical measurements therefore they differ from the following example due to varying software input values and the addition of the E1 compound generated from the FRD 903/902.

Example Calculation using PV=nRT

Reactors (X1, X2)

Description

Polymerization takes place at high temperature and pressure in an aqueous medium. After polymerization is complete, unreacted materials are recycled to the monomer production area for re-use. After the initial vent to recycle or the thermal converter, the reactors contain residual unreacted gas that is vented to atmosphere prior to processing the next batch.

The vent to atmosphere is accomplished by applying vacuum to the reactor head space to reach a nominal pressure of 5.2 psia (-9.5 psig vacuum). Next, the atmospheric vent is closed and N2 is added to reach ambient pressure. Then the aqueous batch is dropped into a decanter. N2 is left on during this transfer process, so the net result is that the residual gas in the reactor head space is drawn into the next vessel downstream of the reactor and emitted from this vessel.

For emission determination and allocation, the total amount that is emitted from both the reactor and the next vessel downstream is calculated based on the total amount of gas in the reactor after recycle to monomers (or to thermal converter), and then this total is allocated to reactor vent and decanter (or stabilization tank) vent based on the vacuum pressure setting.

Emission Calculations

Emissions from the reactor and associated vessel (decanter or stabilization tank) depend upon the amount and composition of the gas remaining in the reactor head space after venting to the monomers area (or thermal converter), and the head space temperature and pressure.

There are several combinations of cases that must be evaluated in order to determine the maximum potential emissions from these vessels. There are four basic types of polymers made in the reactors; one using only TFE, two others with small amounts of comonomers, and a copolymer (PFA). Each product within the four basic types was evaluated with respect to aqueous phase volume, and the worst case (i.e. highest reactor head space volume) product was used as the basis for emission calculations. Each of the four product types were evaluated for both a pure monomer case and a maximum impurity case. Pure monomer is the worst case for potential VOC emissions,

and maximum impurities is the worst case for ODCs and HAPs. Only certain product recipes utilize the FRD903/902 compounds.

A small fraction of batches must be aborted after the initial pressure up phase. Because the aqueous phase is smaller for an aborted batch than for a normal batch, this case becomes the worst case for maximum hourly potential emissions. However, because batches are aborted infrequently, the effect on annual potential emissions is minimal. Pure monomer is the worst case for an aborted batch because the total amount of impurities introduced into the reactor is less for an aborted batch than a batch which is reacted to completion.

TFE Homopolymer Example

TFE homopolymers are made with either all TFE monomer or with small amounts of additives. The worst case product with respect to VOC emissions will be used in the following examples with both pure TFE monomer and maximum impurities in the TFE monomer feed.

A. Pure TFE Monomer

Reaction takes place at a pressure of 365 psia and temperature of 80 C (176 F). Reactor head space is calculated by subtracting the raw dispersion volume from the reactor total volume (810 gal). For the worst case TFE homopolymer, the reactor head space is 30.482 ft3.

The first step is to calculate the total number of moles of gas present in the reactor after the reaction is complete. This is done as follows using the Perfect Gas Law with the known T, P, and V after the reaction:

n = PV/RT
n = (365)(144)(30.482)/(1545)(460+176)
n = 1.6305 lb moles

The calculation above holds for both the pure monomer case and the monomer impurity case. Next, the composition of the gas must be calculated in order to determine the emissions to atmosphere. The composition of the gas depends upon the amount of monomer feed to the reactor, the amount of impurities in the monomer feed streams, the amount of each material reacted, and water vapor pressure. For the pure monomer case, feed rate to the reactor is:

Mass feed TFE = mTFE = 3090 lb/batch
Molar feed TFE = nTFE = 3090/100 = 30.90 lb moles/batch

For pure TFE monomer, the only other component in the head space is water vapor. The amount of water vapor after reaction is estimated from the perfect gas law:

nwater = PwaterV/RT
nwater = (6.87)(144)(30.482)/(1545)(460+176)
nwater = 0.03069 lb moles

The amount of TFE in the reactor head space after the reaction is determined by subtracting the moles of water vapor from the total moles in the reactor head space before venting to monomers area:

nTFE = 1.6305 – 0.0307 = 1.5998 lb moles

Emissions to the atmosphere are calculated using the perfect gas law and assuming that water vapor is not replenished during the recycle of unreacted TFE from the reactor to the monomer area. Mole fractions after reaction are:

YTFE = 1.5998/1.6305 = 0.9812
YH2O = 0.0307//1.6305 = 0.0188

If water vapor is not replenished, then the mole fractions remain constant during the pressure reduction from 365 psia to 16.7 psia. TFE emissions to the atmosphere are:

nTFE = (16.7)(0.9812)(144)(30.482)/[(1545)(460+176)]
nTFE = 0.0732 lb mole

Since the molecular weight of TFE is 100, the amount of TFE (VOC) emitted per batch is 7.32 lb. However, since the reactor pressure is only reduced to 5.2 psia during the vacuum step, some of the TFE remains in the reactor head space and is assumed to be drawn into the decanter when the raw aqueous dispersion is dropped from the reactor into the decanter. Total TFE emissions of 7.32 lb/batch are allocated to the reactor and decanter as follows:

Reactor emission = 7.32[(16.7-5.2)/16.7] = 5.04 lb/batch
Decanter emission = 7.32(5.2/16.7) = 2.28 lb/batch

Total VOC emissions for this case are 6.26 lb/batch (lb/hr); this is allocated to the reactor and decanter the same way as for the pure TFE monomer case (4.31 lb for the reactor and 1.95 lb for the decanter). Maximum ODC emissions are 0.36 lb from the reactor and 0.16 lb from the decanter. There are no HAP impurities in TFE.

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Attachment P

Public Notice

Attachment P – Public Notice

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that The Chemours Company FC, LLC, has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Class II Administrative Update for a plastic polymerization facility located on 8480 DuPont Road near Parkersburg in Wood County, West Virginia. The coordinates are: Latitude 39.27062 and Longitude -81.67098.

The applicant has reduced the potential to discharge the following Regulated Air Pollutants: Volatile Organic Compounds (VOCs) 0.314 tons/year and methanol (a hazardous air pollutant) by 0.478 tons/year.

No physical changes to the existing operations are planned. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th 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 1227, during normal business hours.

Dated this the _21st_ day of May, 2015.

By: The Chemours Company FC, LLC
Robert J. Fehrenbacher
Plant Manager
8480 DuPont Road
Washington, WV 26181-1217

Attachment S

Title V Permit Revision Information

Attachment S
Title V Permit Revision Information

1. New Applicable Requirements Summary	
Mark all applicable requirements associated with the changes involved with this permit revision.	
☐ SIP	☐ FIP
☒ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☐ NESHAP (45CSR15)	☐ Nonattainment NSR (45CSR19)
☐ Section 111 NSPS (Subpart _____)	☐ Section 112(d) MACT standards
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☐ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ Compliance Assurance Monitoring (40CFR64) (1)
☐ NO_x Budget Trading Program Non-EGUs (45CSR1)	☐ NO_x Budget Trading Program EGUs (45CSR26)
(1) If this box is checked, please include **Compliance Assurance Monitoring (CAM) Form(s)*** for each Pollutants Specific Emission Unit (PSEU).	

2. Non Applicability Determinations

List all requirements, which the source has determined to be not applicable to this permit revision and for which a permit shield is requested. The listing shall also include the rule citation and the rationale for the determination.

The proposed changes do not trigger any new applicable requirements nor do they invalidate any previous non-applicability determinations.

Permit Shield

☐ Permit Shield is Requested *(not applicable to Minor Modifications)*

3. Change in Potential Emissions

Pollutant	Change in Potential Emissions (+ or -), lb/hr	Change in Potential Emissions (+ or -), TPY
VOC	- 26.73 (avg.)	- 0.314
Methanol	-42.1 (avg.)	-0.478

4. List other Active NSR Permits / Permit Determinations / Consent Orders associated with this permit revision (if any):

NSR Permit and/or Consent Order Number	Date of Issuance	NSR Permit / Consent Order Condition Number
R13-1823J	5/4/2015	Tables 4.1.2. and 4.1.4.; conditions 4.1.24., 4.1.25. and 4.2.1.
R30-10700182-2010	12/8/2014	Tables 7.1.2. and 7.1.4.; conditions 7.4.14., 7.5.7., 3.4.11. and 3.6.m.

5. Inactive Permits / Obsolete Permit or Obsolete Consent Order(s) Conditions Associated With This Permit Revision

NSR Permit and/or Consent Order Number	Date of Issuance	NSR Permit / Consent Order Condition Number

6. 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 these changes (including all applicable requirements and any monitoring /recordkeeping/ reporting requirements associated with the changes), or attach a marked up pages of current Title V Permit. Please include appropriate citations for those requirements being added / revised.

Proposed changes are listed in the attached table. The portion outside the scope of this NSR permit revision are references to 40 CFR 63 Subpart DDDDD, otherwise known as the Federal Boiler and Process Heater MACT.

R30-10700182	3.4.11.	Add proposed condition that includes the requirement to keep records under the Federal Boiler and Process Heater MACT at 40 CFR 63 Subpart DDDDD. The MACT applies to six (6) process heaters in the Fluoroproducts areas.
R30-10700182	3.6.m.	Add proposed language that discusses non-applicability of the RICE MACT at 40 CFR 63 Subpart ZZZZ to source T7JJ, which is an emergency engine.
R30-10700182	Table 7.1.2.	Remove methanol from the table since methanol is no longer used in T1-T4 and T7 areas for equipment cleaning.
R30-10700182	Table 7.1.4.	Remove methanol from the table since it is no longer used in T1-T4 and T7 areas for cleaning prior to maintenance. Also decrease VOC total from 19.8 to 19.5 TPY, due to using ethanol, and in some cases, removing VOCs altogether from certain source cleanings prior to maintenance.
R30-10700182	7.1.5.	Replace reference to application R13-1823I with R13-1823K.
R30-10700182	7.1.21.	This section is proposed to be added to include limitations and standards of 40 CFR 63 Subpart DDDDD (Boiler and Process Heater MACT), which applies to sources T1CA, T1CB, T1CC and T1CD. Compliance with this MACT is required by 1/31/2016.
R30-10700182	7.2.1.	In the current permit the requirement for monitoring for particulate matter, found in permit condition 4.2.1. which requires *"Monitoring shall be conducted at last once per month with a maximum of forty-five (45) days between consecutive readings"*. Chemours has experienced a significant issue with the interpretation of the condition such that we consistently perform the observations as required. The additional text that sets the 45 day maximum interval has been seen, despite educational efforts, to mean that there is up to a 45 day period after the last reading to take the next reading. Chemours is requesting that the compliance condition be simplified to require a monthly visual observation for visible particulate emissions. The elimination of the perceived conflicting 45 day period will enable Chemours personnel to ensure the readings are performed at the correct interval and that focus can be given to the Operations personnel to ensure the reading is always taken early in the operational month before production schedule or challenges alter the operational timing and cause a missed reading. The suggested limited text change from above is to *"Monitoring shall be conducted at least once per month."*
R30-10700182	Table 7.2.2.	Update the table to reflect the most recent CISWI Operating Limits based on the February 8, 2012 test results, as provided in the proposed draft permit language supplied with this permit application.
R30-10700182	7.4.14.	This section is proposed to be added to include recordkeeping requirements of 40 CFR 63 Subpart DDDDD (Boiler and Process Heater MACT), which applies to sources T1CA, T1CB, T1CC and T1CD. Compliance with this MACT is required by 1/31/2016.
R30-10700182	7.5.7.	This section is proposed to be added to include reporting requirements of 40 CFR 63 Subpart DDDDD (Boiler and Process Heater MACT), which applies to sources T1CA, T1CB, T1CC and T1CD. Compliance with this MACT is required by 1/31/2016.

7. Certification For Use Of Minor Modification Procedures *(for Minor Modifications only)*

Note:	*This certification must be signed by a responsible official. Minor Modification 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 6.5.a.1.A. of 45CSR30 (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 this rule.

Pursuant to Section 6.5.a.2.C of 45CSR30, the proposed modification contained herein meets the criteria for use of Minor permit modification procedures as set forth in Section 6.5.a.1. The use of Minor permit modification procedures are hereby requested for processing of this application.

(Signed): Robert J. Fehrenbacher *(Please use blue ink)* Date: May / 22 / 2015 *(Please use blue ink)*

Named (typed): Robert J. Fehrenbacher Title: Plant Manager

NOTE: ***(1) For Administrative Amendments, the ability to operate with the changes described in this permit application is granted upon submittal of the application.***

(2) For Minor Modifications, the ability to operate with the changes described in this permit application is granted after seven (7) days from the submittal of the application, or upon issuance of the NSR permit, whichever is later.

(3) For Significant Modifications, the ability to operate is granted upon issuance of the modified Title V permit.

** All of the required forms and additional information can be found and downloaded from DAQ's Permitting Section site* **www.wvdep.org/daq,** *requested by phone (304) 926-0475, and/or obtained through the mail.*