

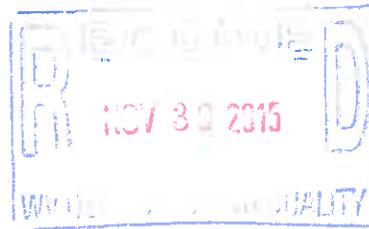
November 25, 2015

EXPRESS MAIL

FedEx No. 8089 0241 7051

Ms. Beverly McKeone
Permitting Manager
Division of Air Quality
West Virginia Department of Environmental Protection
601 57th Street
Charleston WV 25304

Subject: Class II Administrative Update
Elementis Specialties, Inc.
Marshall County, West Virginia
Permit No. R13-3065A
Facility ID No. 051-00159
IES Project No. EV150994.04



Dear Ms. McKeone:

On behalf of Elementis Specialties, Inc. (Elementis), IES Engineers (IES) is pleased to submit the enclosed application for a Class II Administrative Update to New Source Review (NSR) Permit No. R13-3065A. This permit was issued by the Department on October 14, 2014, to Elementis for the construction of Phase III of its specialty chemical manufacturing facility in New Martinsville, West Virginia.

The purpose of this application is: (1) to add new equipment items/emission units to the permit; (2) to change a chemical substance stored in tank T-242 from Acrylic Acid to Vinyl Acetate; and, (3) to allow operational flexibility to change product recipes as long as emissions are maintained within the existing permit limits.

The following new equipment items/emission units and chemical changes to tank T-242 are proposed:

Emission Unit ID	Emission Point ID	Description	Capacity (liters)
T-242	T-242E	Change from Acrylic Acid to Vinyl Acetate	50,000
T-243	T-243E	Di-isobutylene	50,000
T-3000	T-3000E	Finished product storage tank	47,318
T-4000	T-4000E	Finished product storage tank	47,318
T-9010	T-9010E	Finished product storage tank	47,318
T-9020	T-9020E	Finished product storage tank	47,318
T-9040	T-9040E	Finished product storage tank	47,318
T-9050	T-9050E	Finished product storage tank	47,318

Ms. Beverly McKeone
 November 25, 2015
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T-9060	T-9060E	Finished product storage tank	47,318
T-9070	T-9070E	Finished product storage tank	47,318

This permit application includes the following:

- New Source Review Permit Application Form
- Attachment A Certificate of Registration
- Attachment B Maps
- Attachment C Schedule of Installation and Start-up
- Attachment D Regulatory Discussion
- Attachment E Plot Plan
- Attachment F Detailed Process Flow Diagram
- Attachment G Process Description
- 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
- Attachment M Air Pollution Control Device Sheets
- Attachment N Emission Calculations
- Attachment O Monitoring, Recording, and Testing Plans
- Attachment P Public Notice / Affidavit of Publication
- Attachment Q Business Confidential Claims

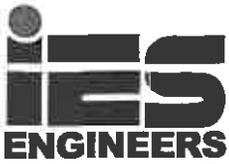
Under the Clean Air Act regulations, this site is classified as a minor source and is not subject to the federal Part 60 New Source Performance Standards (NSPS), the NESHAP Part 63 GACT/MACT regulations, or the West Virginia §45-27-2.10 regulation for toxic air pollutants.

As discussed in Attachment N, the addition of the additional equipment and changes in product recipe can be accommodated under the existing emission limits in the permit. Therefore, no increase in allowable emissions is expected.

Included with this application is a check in the amount of \$300.00, payable to the "West Virginia Department of Environmental Protection – Division of Air Quality" for the Department's processing of this application.

CONFIDENTIAL INFORMATION

Elementis is claiming that certain information being provided with this application is **CONFIDENTIAL** pursuant to 45CSR31. Based on a review of the Precautionary Notice – Claims of Confidentiality guidance, Elementis is designating the information identified in Attachment Q as confidential information.

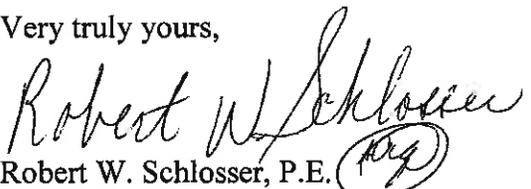


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November 25, 2015
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The information contained in these sections includes production related data. It is business-sensitive material that, if made public, would reveal trade secrets and confer an unfair economic advantage on Elementis' competitors. Accordingly, Elementis has redacted the information in the designated attachments and is requesting that the information be protected from disclosure to the public. Three copies of the "public" version of the application with the confidential information redacted are being submitted, along with a sealed envelope marked "CONFIDENTIAL" that contains two copies of the confidential information printed on colored paper.

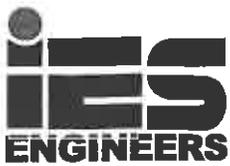
We request the Department to approve the Class II Administrative Update Application. We will be happy to answer any questions the Department may have concerning this application. Please feel free to contact me or Mr. Todd Patterson at (609) 443-2332.

Very truly yours,


Robert W. Schlosser, P.E. 
Principal Project Manager

Enclosures

cc: T. Patterson, Elementis
S. Anderson, Elementis
A. Soni, IES



**APPLICATION FOR A CLASS II ADMINISTRATIVE UPDATE TO
NEW SOURCE REVIEW PERMIT NO. R13-3065A**

SUBMITTED BY:

**ELEMENTIS SPECIALTIES, INC.
MARSHALL COUNTY, WEST VIRGINIA**

SUBMITTED TO:

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

NOVEMBER 2015

IES PROJECT NO. EV150994.04



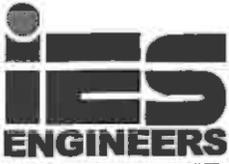
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Project Background

New Source Review Permit Application Form

ATTACHMENTS

Attachment A	Certificate of Registration
Attachment B	Maps
Attachment C	Schedule of Installation and Start-up
Attachment D	Regulatory Discussion
Attachment E	Plot Plan
Attachment F	Detailed Process Flow Diagram
Attachment G	Process Description
Attachment H	Material Safety Data Sheets
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
Attachment M	Air Pollution Control Device Sheets
Attachment N	Emission Calculations
Attachment O	Monitoring, Recording, and Testing Plans
Attachment P	Public Notice / Affidavit of Publication
Attachment Q	Business Confidential Claims



PROJECT BACKGROUND

Elementis Specialties, Inc. (Elementis) has constructed a new batch-type specialty multi-product chemical manufacturing operation in New Martinsville, Marshall County, West Virginia. This operation is located in an existing facility previously occupied by Bayer Material Science (Bayer) in the New Martinsville Industrial Park on State Route 2 North. Elementis operates the facility under SIC Code 2869 and NAICS Code 325199.

Elementis leases this site from Bayer, which is responsible for providing all of the utilities to Elementis under a landlord-tenant agreement. The air quality permits currently held by Bayer will not be transferred to Elementis.

Elementis installed Phase I new process equipment at this facility in 2012 to produce a family of rheological products under Permit Applicability No. PD12-068, dated August 8, 2012. Elementis installed the Phase II process equipment, pursuant to Permit No. R13-3065, which was issued by the Department on May 5, 2014. The Phase II equipment produces HASE (a proprietary Hydrophobically-modified Alkali Swellable Emulsion) and Dispersant products. Elementis submitted a Class II Administrative Update in August 19, 2014 to add several additional equipment items that it obtained from Bayer to its operations, collectively referred to as West Side Equipment, also referred to as Phase III equipment. The Department issued R13-3065A on October 14, 2014 to incorporate the Phase III equipment into the air permit.

In this application, Elementis is submitting a Class II Administrative Update application: (1) to add new equipment items/emission units to the permit, referred as Phase IV equipment; (2) to change a chemical substance stored in tank T-242 from Acrylic Acid to Vinyl Acetate; and, (3) to allow operational flexibility to change product recipes as long as emissions are maintained within the existing permit limits.

The addition of Phase IV equipment will not exceed the permitted VOC and HAP emissions.



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):
Elementis Specialties, Inc.

2. Federal Employer ID No. (FEIN):
05-0495836

3. Name of facility (if different from above):
New Martinsville Facility

4. The applicant is the:
 OWNER OPERATOR BOTH

5A. Applicant's mailing address:
17595 Energy Road
Proctor, WV, 26055

5B. Facility's present physical address:
17595 Energy Road
Proctor, WV, 26055

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: N/A

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: Elementis Specialties, Inc. (Elementis) operates a specialty chemical manufacturing facility in Marshal County, WV few miles north of New Martinsville. The operation is located in an existing facility previously occupied by Bayer Material Science (Bayer) in the New Martinsville Industrial Park on State Route 2 North. Elementis is leasing this site from Bayer.
- 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.): Specialty chemical manufacturing operations facility

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

11A. DAQ Plant ID No. (for existing facilities only):
051-00159

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):
PD 12-068; R13-3065A

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**.

I-77 North. Exit 179: Right onto Route 2 North for 33 miles. Left onto Elizabeth Street. Right onto Route 2 North (Wells Street) for 6.6 miles

12.B. New site address (if applicable):
17595 Energy Road, Proctor, WV, 26055

12C. Nearest city or town:
New Martinsville

12D. County:
Marshall

12.E. UTM Northing (KM): 4397.33880

12F. UTM Easting (KM): 514.59346

12G. UTM Zone: 17

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

Elementis Specialties, Inc. (Elementis) operates a specialty chemical manufacturing facility in Marshal County, WV few miles north of New Martinsville. Elementis produces a family of HASE and Dispersant products, and emit minor quantities of VOCs and HAPs. The proposed application is a Class II Administrative update to add new equipment to the existing inventory and make changes to product recipe with no emission increase.

14A. Provide the date of anticipated installation or change: 11/25/15

- If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: / /

14B. Date of anticipated Start-Up if a permit is granted: 02/01/2016

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 Year 52

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

17. **Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), 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:

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

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

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

- | | | |
|---|---|--|
| <input type="checkbox"/> Absorption Systems | <input type="checkbox"/> Baghouse | <input type="checkbox"/> Flare |
| <input type="checkbox"/> Adsorption Systems | <input type="checkbox"/> Condenser | <input type="checkbox"/> Mechanical Collector |
| <input type="checkbox"/> Afterburner | <input type="checkbox"/> Electrostatic Precipitator | <input type="checkbox"/> Wet Collecting System |

Other Collectors, specify: An odor scrubber has been installed at the facility, but is not used for emission control and is therefore not acting as an Air Pollution Control Device

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:

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

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

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

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

Certification of Truth, Accuracy, and Completeness

I, the undersigned **Responsible Official** / **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 W. D. Greer
(Please use blue ink)

DATE: 11/24/2015
(Please use blue ink)

35B. Printed name of signee: Bill Greer

35C. Title: Director, Global Operations

35D. E-mail: Bill.Greer@elementis.com

36E. Phone: (609)443-2551

36F. FAX: (609)443-2482

36A. Printed name of contact person (if different from above): Todd Patterson

36B. Title: Global Director, HSE &QA

36C. E-mail:
Todd.Patterson@elementis.com

36D. Phone: (609)443-2332

36E. FAX: (609)443-2482

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

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

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

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

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

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

ATTACHMENT A
CERTIFICATE OF REGISTRATION

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

**ISSUED TO:
ELEMENTIS SPECIALTIES INC
469 OLD TRENTON RD
EAST WINDSOR, NJ 08512-5601**

BUSINESS REGISTRATION ACCOUNT NUMBER: 1006-6971

This certificate is issued on: 05/28/2012

*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.**



STATE OF WEST VIRGINIA
State Tax Department, Revenue Division
P. O. Box 2666
Charleston, WV 25330-2666



Earl Ray Tomblin, Governor

Craig A. Griffith, Tax Commissioner

ELEMENTIS SPECIALTIES INC
469 OLD TRENTON RD
EAST WINDSOR NJ 08512-5601

Letter Id: L0040748416
Issued: 06/28/2012
Account #: 1006-6971

06/000102010000



RE: Business Registration Certificate

The West Virginia State Tax Department would like to thank you for registering your business. Enclosed is your Business Registration Certificate. This certificate shall be permanent until cessation of business or until suspended, revoked or cancelled. Changes in name, ownership or location are considered a cessation of business; a new Business Registration Certificate and applicable fees are required. Please review the certificate for accuracy.

This certificate must be prominently displayed at the location for which issued. Engaging in business without conspicuously posting a West Virginia Business Registration Certificate in the place of business is a crime and may subject you to fines per W.Va. Code § 11-9.

When contacting the State Tax Department, refer to the appropriate account number listed on the back of this page. The taxes listed may not be all the taxes for which you are responsible. Account numbers for taxes are printed on the tax returns mailed by the State Tax Department. Failure to timely file tax returns may result in penalties for late filing.

Should the nature of your business activity or business ownership change, your liability for these and other taxes will change accordingly.

To learn more about these taxes and the services offered by the West Virginia State Tax Department, visit our web site at www.wvtax.gov.

Enclosure

atL006 v.4

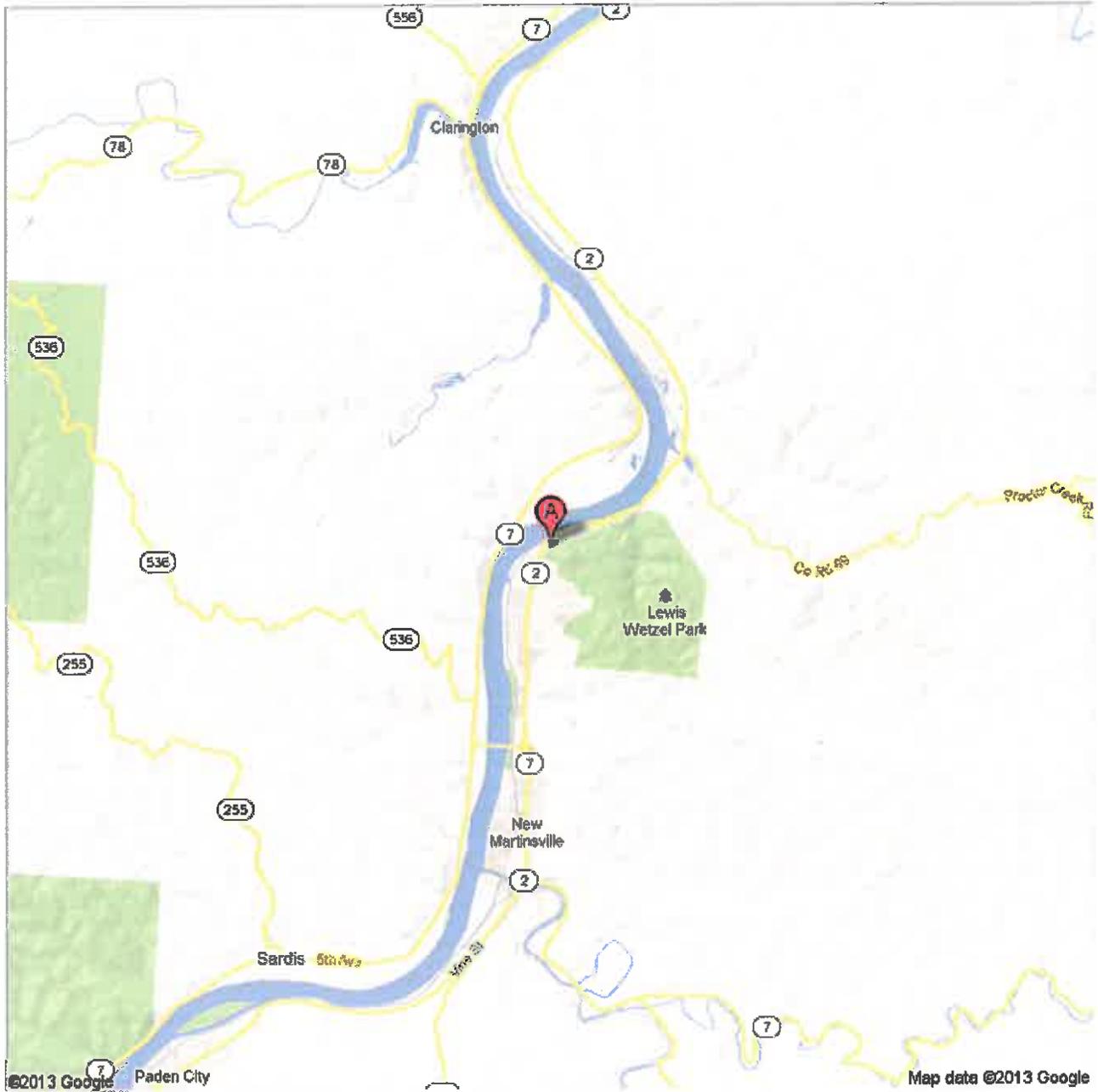
ATTACHMENT B

MAPS



Address **1343 W Virginia 2**
New Martinsville, WV 26155

Get Google Maps on your phone
Text the word "GMAPS" to 466453





Untitled Placemark

Ga-Hwy-22

Image: USDOA Farm Service Agency ©2013 Google

Google

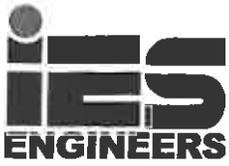


My Notes

On the go? Use m.bing.com to find maps, directions, businesses, and more



ATTACHMENT C
SCHEDULE OF INSTALLATION AND START-UP



ATTACHMENT C
SCHEDULE OF INSTALLATION AND START-UP

The Phase IV equipment will be installed upon the approval of the permit application. This is expected to be completed in the 2nd quarter of 2016. The start-up of this equipment will occur once the installation and commissioning are completed.

ATTACHMENT D
REGULATORY DISCUSSION

ATTACHMENT D
REGULATORY DISCUSSION

Attachment D of the April 5, 2013, permit application presented a detailed evaluation of the applicability of federal and West Virginia air quality regulations:

- 1) New Source Performance Standards (NSPS)
- 2) National Emission Standards for Hazardous Air Pollutants (NESHAP)
- 3) Maximum Achievable Control Technology (MACT) and Generally Available Control Technology (GACT) for Source Categories
- 4) Prevention of Significant Deterioration (PSD)/Nonattainment. New Source Review (NNSR)

New Source Performance Standards

The following NSPS regulations were evaluated in the original permit application and shown not to apply to the Elementis facility. They have been re-evaluated with respect to their applicability to the Phase IV project and their non-applicability has been reconfirmed.

Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Subpart K-b - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

Subpart DDD - Standards of Performance for VOC Emissions from the Polymer Manufacturing Industry

Subpart RRR - Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes

Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006

Subpart NNN - Standards of Performance for Volatile Organic Compound (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations

Subpart RRR - Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes

The Phase IV equipment is functionally similar to the Phase II equipment that was included in the original permit application which was not subject to any NSPS regulations. The addition of the new tanks in Phase IV will not trigger any of these NSPS regulations. Any product recipe changes will be to produce HASE (a proprietary Hydrophobically-modified Alkali Swellable Emulsion), Dispersant products and Rheolate products. The new raw materials and finished products will not trigger any of these NSPS regulations.

National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 61

The Part 61 NESHAP regulations apply to the following compounds: asbestos, benzene, beryllium, coke oven emissions, inorganic arsenic, mercury, radionuclides, and vinyl chloride. The regulations list emission limits, operating parameters, and other requirements that must be followed for specifically listed source types that emit regulated HAPs. NESHAP regulations do not apply to this application because the proposed changes will not emit any of these air contaminants.

Maximum Achievable Control Technology (MACT) and Generally Available Control Technology (GACT) Standards

The following MACT regulations were evaluated in the original permit application and shown not to apply to the Elementis facility. They have been re-evaluated with respect to their applicability to the Phase IV project and their non-applicability has been confirmed.

Subpart DDDDDD – National Emission Standards for Hazardous Air Pollutants for Polyvinyl Chloride and Copolymers Production Area Sources

40 CFR 63, Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers: Area Sources

Subpart VVVVVV – National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources

Subpart BBBBBB – National Emission Standards for Hazardous Air Pollutants for Area Sources: Chemical Preparations Industry

Subpart CCCCCC – National Emission Standards for Hazardous Air Pollutants for Area Sources: Paints and Allied Products Manufacturing

Subpart H - National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks

Subpart TT - National Emission Standards for Equipment Leaks-Control Level 1

Subpart UU - National Emission Standards for Equipment Leaks-Control Level 2

The proposed changes will produce chemicals already included in the original permit application. However, the new raw materials and equipment will not trigger any new MACT requirements.

Prevention of Significant Deterioration of Air Quality (PSD)

The purpose of the PSD rules is to maintain air quality in areas that are meeting the National Ambient Air Quality Standards. Marshall County is an attainment area for all criteria pollutants – VOC, NO₂, CO, SO₂, and PM₁₀. The Chemical Process Plant category, which includes Elementis' operations, is one of the 28 listed source categories for which the major source threshold is 100 ton/yr. Since the potential emissions of PSD-regulated pollutants is well below this threshold and since the addition of the Phase IV Equipment and the proposed changes will not increase the facility's potential emissions above this threshold, the PSD rules will not apply.

Nonattainment New Source Review (NNSR)

The NNSR regulations apply in nonattainment areas, i.e., areas that are not meeting the National Ambient Air Quality Standards (NAAQS) for one or more air contaminants. The purpose of the NNSR regulations is to allow for industrial and economic growth in nonattainment areas while progressing toward the attainment of NAAQS. Marshall County is an attainment area for all criteria pollutants. Therefore, the NNSR rules will not apply.

Mandatory Greenhouse Gas Reporting Rule

On October 30, 2009, EPA promulgated the final greenhouse gas (GHG) reporting rule (40 CFR Part 98). Facilities meeting both of the following conditions are required to submit annual reports of CO₂, N₂O, and CH₄ emissions to EPA:

- The rated heat input to all stationary fuel combustion equipment (including boilers and thermal oxidizers, but not emergency equipment), exceeds 30 MMBTU/hour; and
- The actual GHG emissions exceed 25,000 metric tons per year, as CO₂ equivalent.

Neither the equipment installed under existing Phases I, II, & III nor the proposed Phase IV equipment includes any combustion sources. Therefore, this rule will not apply.

Greenhouse Gas Emission Tailoring Rule

On June 3, 2010, EPA promulgated its final rule addressing criteria for applying GHG requirements to major air quality permit programs such as the PSD and Title V Operating Permit programs. West Virginia has incorporated requirements for permitting sources of greenhouse gas emissions into 45CSR14. The Greenhouse Gas permitting requirements/Tailoring Rule do not apply to this application because the facility is not a major source and the Phase IV equipment will not result in the requisite increase in greenhouse gas emissions, since it is neither a PSD- nor a Title V-regulated source.

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION REGULATIONS

The applicability of the West Virginia regulations is discussed below:

Series 002, Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers – The proposed changes do not include any fuel combustion in indirect heat exchangers.

Series 004, To Prevent and Control the Discharge of Air Pollutants into the Open Air Which Causes or Contributes to an Objectionable Odor or Odors – Because of the low VOC emission rates, the closed nature of the process equipment, and the incorporation of an odor scrubber, objectionable odors beyond the property line are not expected.

Series 007, To Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations – This regulation addresses the emission of smoke, particulate matter, visible emissions, and fugitive particulate emissions. Since the Phase IV equipment and proposed changes will not emit liquid raw materials in aerosol form, no particulate emissions are expected.

Series 010, To Prevent and Control Air Pollutions from the Emission of Sulfur Oxides – The proposed changes will not combust any fuels, so no sulfur oxide emissions are expected.

Series 011, Prevention of Air Pollution Emergency Episodes – Even after the addition of the Phase IV equipment and considering the proposed changes in this application, the facility will emit well below 100 tons per year of all pollutants. Therefore, no pre-planned reduction strategy is required.

Series 013, Permits for Construction, Modification, Relocation Updates, Temporary Permits, General Permits, and Procedures for Evaluation – Pursuant to §45-13-2.17, Elementis obtained a New Source Review permit for Phases I, Phase II, and Phase III projects at the New Martinsville facility. This application is for a Class II Administrative Update to the existing permit pursuant to §45-13-4.2.(b.1) because the addition of the Phase IV equipment and proposed changes will not result in an increase in the emission of any existing regulated air pollutant or any new regulated air pollutant.

Series 016, Standards of Performance for New Stationary Sources – WV DEP adopts and incorporates by reference the federal New Source Performance Standards (NSPS) promulgated by the U.S. EPA. As discussed above, the facility is not subject to any NSPS rules.

Series 017, To Prevent and Control Particulate Matter Air Pollution from Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matter – The Phase IV equipment will not involve any materials handling, preparation, storage, or other operations that may generate fugitive emissions of particulate matter subject to the regulations.

Series 021, Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds – This regulation imposes Reasonably Available Control Technology (RACT) requirements to certain source categories in Putnam, Kanawha, Cabell, Wayne, and Wood Counties. The Elementis facility is located in Marshall County, so it is not subject to this regulation.

Series 022, Air Quality Management Fee Program -- We will pay the required and applicable fees associated with this application.

Series 027, To Prevent and Control the Emissions of Toxic Air Pollutants -- This regulation requires the implementation of Best Available Technology (BAT) for sources emitting one or more listed toxic air pollutants. The Phase IV equipment will not be processing or emitting any of the Toxic Air Pollutants listed in §45-27-2.10.

Series 028, Air Pollutant Emission Banking and Trading -- Elementis is not applying to participate in the emissions credit trading program.

Series 029, Rule Requiring the Submission of Emission Statements for Volatile Organic Compound Emissions and Oxides of Nitrogen Emissions -- The Elementis facility is not required to submit emission statements because it is located in Marshall County (not one of the counties listed in §45-29-1.1) and because VOC emissions will be less than 25 tons per year.

Series 030, Requirements for Operating Permits -- Elementis will not be required to obtain an operating permit because (i) it is not a major source, (ii) is not subject to Section 111 or 112 of the Clean Air Act, and (iii) is not an affected facility subject to Title IV of the Clean Air Act (Acid Deposition Control).

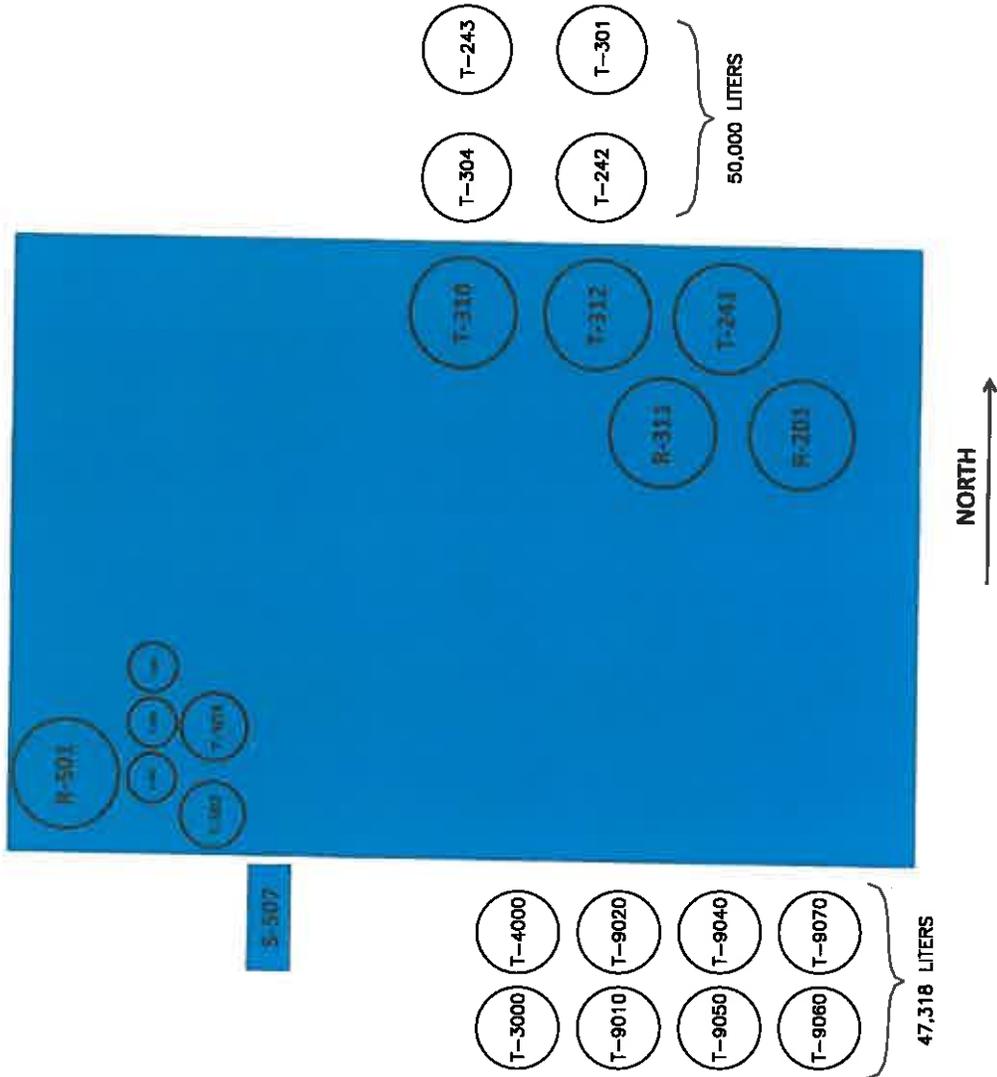
Series 031, Confidential Information -- We are submitting information in this application subject to the confidentiality provisions of §45-31.

Series 034, Emission Standards for Hazardous Air Pollutants -- WV DEP adopts and incorporates by reference the National Emission Standards for Hazardous Air Pollutants (NESHAP) promulgated by the EPA. As discussed above, the facility is not subject to any NESHAP rules.

ATTACHMENT E

PLOT PLAN

ELEMENTIS SPECIALTIES – NEW MARTINSVILLE BUILDING LAYOUT

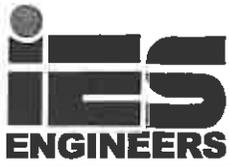




IES ENGINEERS
ENGINEERING FOR INDUSTRY

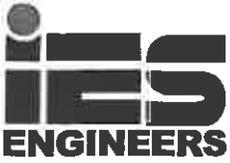
1200 WILSON ROAD, SU. 10402
MARTINSVILLE, VA 24101
PHONE: (703) 837-3079

DATE	BY	APP. NO.	REV.	DATE



CLAIMED CONFIDENTIAL – November 25, 2015

ATTACHMENT F
DETAILED PROCESS FLOW DIAGRAM



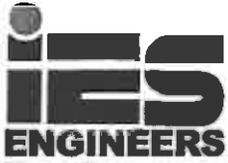
REDACTED COPY – CLAIM OF CONFIDENTIALITY

The process flow diagrams are proprietary information, which has been deleted from the publicly available version of this application, but provided to the Department in a separate CONFIDENTIAL version.



CLAIMED CONFIDENTIAL – November 25, 2015

ATTACHMENT G
PROCESS DESCRIPTION



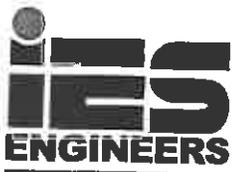
CLAIMED CONFIDENTIAL – November 25, 2015

REDACTED COPY – CLAIM OF CONFIDENTIALITY

The process description contains proprietary process information, which has been deleted from the publicly available version of this application, but provided to the Department in a separate CONFIDENTIAL version.

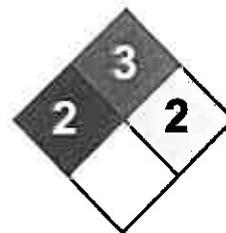
ATTACHMENT H

MATERIAL SAFETY DATA SHEETS



Please see April 2013 application, which is incorporated by reference, for Material Safety Data Sheet.

The Methyl Acrylate MSDS, not included in previous application, is attached.



Health	2
Fire	3
Reactivity	1
Personal Protection	H

Material Safety Data Sheet

Methyl Acrylate MSDS

Section 1: Chemical Product and Company Identification

Product Name: Methyl Acrylate

Catalog Codes: SLM3391

CAS#: 96-33-3

RTECS: AT2800000

TSCA: TSCA 8(b) inventory: Methyl Acrylate

CI#: Not available.

Synonym: 2-Propenoic Acid

Chemical Name: Methyl Acrylate

Chemical Formula: C₄-H₆-O₂

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Methyl Acrylate	96-33-3	100

Toxicological Data on Ingredients: Methyl Acrylate: ORAL (LD50): Acute: 277 mg/kg [Rat]. 827 mg/kg [Mouse]. DERMAL (LD50): Acute: 1243 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of skin contact (irritant), of eye contact (irritant). Hazardous in case of inhalation. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC.
MUTAGENIC EFFECTS: Not available. **TERATOGENIC EFFECTS:** Not available. **DEVELOPMENTAL TOXICITY:** Not available. The substance may be toxic to blood, kidneys, lungs, brain, gastrointestinal tract, upper respiratory tract, skin, eyes, Metabolism, Urinary, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention immediately.

Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 468°C (874.4°F)

Flash Points: CLOSED CUP: -3.89°C (25°F). OPEN CUP: -3°C (26.6°F).

Flammable Limits: LOWER: 2.8% UPPER: 25%

Products of Combustion: These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances: Highly flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: VAPOR FORMS EXPLOSIVE MIXTURE IN AIR

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:

Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined

areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, alkalis.

Storage:

Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Do not store above 21°C (69.8°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 2 (ppm) from ACGIH (TLV) [United States] [1998] SKIN TWA: 10 (ppm) [Australia] [1993] SKIN TWA: 10 [Israel]
Inhalation TWA: 10 (ppm) from NIOSH SKIN TWA: 10 (ppm) from OSHA (PEL) [United States] SKIN Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Acrid

Taste: Not available.

Molecular Weight: 86.09 g/mole

Color: Colorless.

pH (1% soln/water): Not available.

Boiling Point: 80.5°C (176.9°F)

Melting Point: -76.5°C (-105.7°F)

Critical Temperature: 263°C (505.4°F)

Specific Gravity: 0.9561 (Water = 1)

Vapor Pressure: Not available.

Vapor Density: 2.97 (Air = 1)

Volatility: Not available.

Odor Threshold: 20 ppm

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties:

Partially dispersed in methanol, diethyl ether, n-octanol. Very slightly dispersed in cold water, hot water. See solubility in methanol, diethyl ether, n-octanol, acetone.

Solubility:

Partially soluble in methanol, diethyl ether, n-octanol, acetone. Very slightly soluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Reactive with oxidizing agents, alkalis.

Corrosivity: Not available.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation.

Toxicity to Animals:

Acute oral toxicity (LD50): 277 mg/kg [Rat]. Acute dermal toxicity (LD50): 1243 mg/kg [Rabbit].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC. May cause damage to the following organs: blood, kidneys, lungs, brain, gastrointestinal tract, upper respiratory tract, skin, eyes, Metabolism, Urinary, central nervous system (CNS).

Other Toxic Effects on Humans:

Very hazardous in case of skin contact (irritant). Hazardous in case of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification : Methyl Acrylate UNNA: UN1919 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

Rhode Island RTK hazardous substances: Methyl Acrylate Pennsylvania RTK: Methyl Acrylate Florida: Methyl Acrylate Minnesota: Methyl Acrylate Massachusetts RTK: Methyl Acrylate New Jersey: Methyl Acrylate TSCA 8(b) inventory: Methyl Acrylate TSCA 8(a) PAIR: Methyl Acrylate SARA 313 toxic chemical notification and release reporting: Methyl Acrylate

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):

R11- Highly flammable. R21/22- Harmful in contact with skin and if swallowed. R38- Irritating to skin. R41- Risk of serious damage to eyes.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 1

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 2

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/09/2005 06:07 PM

Last Updated: 05/21/2013 12:00 PM

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall ScienceLab.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if ScienceLab.com has been advised of the possibility of such damages.

ATTACHMENT I
EMISSION UNITS TABLE

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 (L)	Type ³ and Date of Change	Control Device ⁴
T-242	T-242E	Vinyl Acetate	2013	50,000	Existing	N/A
T-243	T-243E	Di-isobutylene	2016	50,000	New	N/A
T-3000	T-3000E	Finished product storage tank	2016	47,318	New	N/A
T-4000	T-4000E	Finished product storage tank	2016	47,318	New	N/A
T-9010	T-9010E	Finished product storage tank	2016	47,318	New	N/A
T-9020	T-9020E	Finished product storage tank	2016	47,318	New	N/A
T-9040	T-9040E	Finished product storage tank	2016	47,318	New	N/A
T-9050	T-9050E	Finished product storage tank	2016	47,318	New	N/A
T-9060	T-9060E	Finished product storage tank	2016	47,318	New	N/A
T-9070	T-9070E	Finished product storage tank	2016	47,318	New	N/A
Scrbr (15S)	Scrbr (15E)	Scrubber	2013	---	New	N/A*

*Note: This scrubber is for odor control only, and is not used for air pollution control.

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 SHEET

**Attachment J
EMISSION POINTS DATA SUMMARY SHEET**

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 ³)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
T-242	upward vertical stack	T-242E	Vinyl Acetate	N/A	N/A			* Please see Attachment N for Supporting Emission Calculations					EE		
T-243	upward vertical stack	T-243E	Di-isobutylene	N/A	N/A									EE	
T-3000	upward vertical stack	T-3000E	Finished product storage tank	N/A	N/A									EE	
T-4000	upward vertical stack	T-4000E	Finished product storage tank	N/A	N/A									EE	
T-9010	upward vertical stack	T-9010E	Finished product storage tank	N/A	N/A									EE	
T-9020	upward vertical stack	T-9020E	Finished product storage tank	N/A	N/A									EE	

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 ³)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (tr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
T-9040	upward vertical stack	T-9040E	Finished product storage tank	N/A	N/A									EE	
T-9050	upward vertical stack	T-9050E	Finished product storage tank	N/A	N/A									EE	
T-9060	upward vertical stack	T-9060E	Finished product storage tank	N/A	N/A									EE	
T-9070	upward vertical stack	T-9070E	Finished product storage tank	N/A	N/A									EE	
Scrbr	upward vertical stack	Scrbr	Scrubber*	N/A	N/A									EE	

*NOTE: This scrubber is for odor control only and is not used as an air pollution control device.

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 (e.g., 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 Adds, CO, CS₂, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, all applicable Greenhouse Gases (including CO₂ and methane), etc. **DO NOT LIST** H₂, H₂O, N₂, O₂, 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/m³) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO₂, use units of ppmv (See 45CSR10).

**Attachment J
EMISSION POINTS DATA SUMMARY SHEET**

Table 2: Release Parameter Data

Emission Point ID No. (Must match Emission Units Table)	Inner Diameter (ft.)	Exit Gas			Emission Point Elevation (ft)		UTM Coordinates (km)	
		Temp. (°F)	Volumetric Flow ¹ (acfm) at operating conditions	Velocity (fps)	Ground Level (Height above mean sea level)	Stack Height ² (Release height of emissions above ground level)	Northing	Easting
T-242					640		4397.33880	514.59346
T-243					640		4397.33880	514.59346
T-3000					640		4397.33880	514.59346
T-4000					640		4397.33880	514.59346
T-9010					640		4397.33880	514.59346
T-9020					640		4397.33880	514.59346
T-9040					640		4397.33880	514.59346
T-9050					640		4397.33880	514.59346
T-9060					640		4397.33880	514.59346
T-9070					640		4397.33880	514.59346
Scrb (15E)					640		4397.33880	514.59346

¹ Give at operating conditions. Include inerts.

² Release height of emissions above ground level.

ATTACHMENT K

FUGITIVE EMISSIONS DATA SUMMARY SHEET

FUGITIVE EMISSIONS

No increase in fugitive emissions is anticipated as a result of the installation of the proposed equipment.

ATTACHMENT L
EMISSIONS UNIT DATA SHEET

**Attachment L
EMISSIONS UNIT DATA SHEET
CHEMICAL PROCESS**

For chemical processes please fill out this sheet and all supplementary forms (see below) that apply. Please check all supplementary forms that have been completed.

- Emergency Vent Summary Sheet*
- Leak Sources Data Sheet* *** See Emission Master® Information in Attachment N**
- Toxicology Data Sheet*
- Reactor Data Sheet*
- Distillation Column Data Sheet*

1. Chemical process area name and equipment ID number (as shown in *Equipment List Form*)
The Phase IV equipment is functionally similar to the Phase II equipment that was included in the original permit application. Any product recipe changes will be to produce HASE, Dispersant products, and a family of Rheolate products.

2. Standard Industrial Classification Codes (SICs) for process(es)
NAICS Code 325199

3. List raw materials and attach MSDSs

*** See Emission Master® Information in Attachment N and MSDSs in Attachment H provided in April 2013 Application which is incorporated by reference.**

4. List Products and Maximum Production and attach MSDSs

Description and CAS Number	Maximum Hourly (lb/hr)	Maximum Annual (ton/year)
* See Emission Master® Information in Attachment N.		

5. Complete the *Emergency Vent Summary Sheet* for all emergency relief devices.

6. Complete the *Leak Source Data Sheet* and describe below or attach to application the leak detection or maintenance program to minimize fugitive emissions. Include detection instruments, calibration gases or methods, planned inspection frequency, and recordkeeping, and similar pertinent information. If subject to a rule requirement (e.g. 40CFR60, Subpart VV), please list those here.

Not Applicable - As discussed in Attachment D, Elementis is not subject to these regulations.

7. Clearly describe below or attach to application Accident Procedures to be followed in the event of an accidental spill or release.

Elementis has developed an RMP Plan and includes emergency response procedures and emergency contacts.

8A. Complete the *Toxicology Data Sheet* or attach to application a toxicology report (an up-to-date material safety data sheets (MSDS) may be used) outlining the currently known acute and chronic health effects of each compound or chemical entity emitted to the air. If these compounds have already been listed in Item 3, then a duplicate MSDS sheet is not required. Include data such as the OSHA time weighted average (TWA) or mutagenicity, teratogenicity, irritation, and other known or suspected effects should be addressed. Indicate where these are unknown, and provide references.

8B. Describe any health effects testing or epidemiological studies on these compounds that are being or may be conducted by the company or required under TSCA, RCRA or other federal regulations. Discuss the persistence in the environment of any emission (e.g. pesticides, etc.).

9. **Waste Products** - Waste products status: (If source is subject to RCRA or 45CSR25, please contact the Hazardous Waste Section of WVDEP, OAQ at (304) 926-3647.)

9A. Types and amounts of wastes to be disposed: **At this time, the facility is a Small Quantity hazardous waste Generator. Waste products will be transferred off site by a licensed hauler to a licensed waste facility.**

9B. Method of disposal and location of waste disposal facilities:
Carrier: Approved Haz Waste Disposal Company Phone:

9C. Check here if approved USEPA/State Hazardous Waste Landfill will be used

10. Maximum and Projected Typical Operating Schedule for process or project as a whole (circle appropriate units).

	circle units:	(hrs/day) (hr/batch)	(days), (batches/day), (batches/week)	(days/yr), (weeks/year)
10A. Maximum		24 hours per day	7 days	365 days/year
10B. Typical		12 hours per batch	2 batches/day	365 days/year

11. Complete a *Reactor Data Sheet* for each reactor in this chemical process.

12. Complete a *Distillation Column Data Sheet* for each distillation column in this chemical process.

13. Proposed Monitoring, Recordkeeping, Reporting, and Testing

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING

Condenser temps
Pressure Difference
Production records
Raw material usage

RECORDKEEPING

Condenser temps
Pressure Difference
Production records
Raw material usage
Maintenance activities

REPORTING

As required by DEP

TESTING

As required by DEP

MONITORING. Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment operation or air pollution control device.

RECORDKEEPING. Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING. Please describe the proposed frequency of reporting of the recordkeeping.

TESTING. Please describe any proposed emissions testing for this process equipment or air pollution control device.

14. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty
This process falls under EPA's RMP program. Equipment will be maintained as described in the integrity maintenance section of the Risk Management Program.

INFORMATION REQUIRED FOR CHEMICAL PROCESSES

The notes listed below for chemical processes are intended to help the applicant submit a complete application to the OAQ; these notes are not intended to be all inclusive. The requirements for a complete application for a permit issued under 45CSR13 are designed to provide enough information for a permit reviewer to begin a technical review. Additional information beyond that identified may be required to complete the technical review of any individual application.

Process Description

Please keep these points in mind when completing your process description as part of this permit application.

1. Provide a general process overview. This brief, but complete, process description should include chemical or registered trademark names of chemical products, intermediates, and/or raw materials to be produced or consumed, and the ultimate use(s) of the product(s). A list of the various chemical compounds is helpful.
2. Describe each process step. Include the process chemistry and stoichiometrically balanced reaction equation or material mass balance on all components.
3. Describe the methods and equipment used to receive, store, handle, and charge raw materials.
4. Describe the methods and equipment used to handle, store, or package final products and intermediates.
5. Provide process flow diagrams or equipment layout drawings which clearly show the process flow relationships among all pieces of process and control equipment. Identify all air emission discharge points. Discuss instrumentation and controls for the process.
6. Discuss the possibilities of process upsets, the duration and frequency of upsets, and consequences (including air emissions) of these upsets. Include a description of rupture discs, pressure relief valves, and secondary containment systems.
7. Discuss any fugitive emissions and the methods used to minimize them.
8. Include the following plans for the process if available:
 - a. preventative maintenance and malfunction abatement plan (recommended for all control equipment).
 - b. continuous emissions (in-stack) monitoring plan
 - c. ambient monitoring plan
 - d. emergency response plan

Regulatory Discussion

The following state and federal air pollution control regulations may be applicable to your chemical process. You should review these regulations carefully to determine if they apply to your process. Please summarize the results of your review in your permit application along with any other regulations you believe are applicable.

- Title 45 Legislative Rule Division of Environmental Protection, Office of Air Quality contains West Virginia's air pollution control regulations, including the following promulgated rules which may require emissions reductions or control technologies for your chemical process:
 - a. 45CSR27 - Best Available Technology (BAT) for Toxic Air Pollutants (TAPs)
 - b. 45CSR21 - VOC emissions controls for ozone maintenance in Kanawha, Cabell, Putnam, Wayne, and Wood counties.
 - c. 45CSR13 (Table 45-13A) - plantwide emission thresholds for permitting for certain pollutants.
- Federal Guidelines for case-by-case MACT determinations under section 112(g) of the 1990 CAAA for individual and total HAPs greater than 10 and 25 tons per year, respectively.
- There are also subparts of the federal Standards of Performance for New Stationary Sources (NSPS), 40CFR60 60, and the National Emission Standards for Hazardous Air Pollutants (NESHAP) at 40CFR61 and 40CFR63, which apply to various chemical and nonchemical processes. These subparts are too numerous to list here, but these areas of the federal regulations should be consulted carefully to determine applicability to your process.

Emissions Summary and Calculations

Please keep these points in mind when submitting your emissions calculations as part of this permit application.

1. For each pollutant, provide the basis for the emissions estimate and for all emission reduction(s) or control efficiency(ies) claimed.
2. For all batch processes provide the following
 - a. Emissions of each pollutant in pound(s) per batch, from each process step
 - b. Annual emissions based on number of batches requested per year
 - c. The total time for each process step and the duration of the emissions during the process step
 - d. Total batch time, total emissions per batch (or per day), and annual emissions based on the number of batches requested per year.

LEAK SOURCE DATA SHEET - Not Applicable

Source Category	Pollutant	Number of Source Components ¹	Number of Components Monitored by Frequency ²	Average Time to Repair (days) ³	Estimated Annual Emission Rate (lb/yr) ⁴
Pumps ⁵	light liquid VOC ^{6,7}				
	heavy liquid VOC ⁸				
	Non-VOC ⁹				
Valves ¹⁰	Gas VOC				
	Light Liquid VOC				
	Heavy Liquid VOC				
Safety Relief Valves ¹¹	Non-VOC				
	Gas VOC				
	Non VOC				
Open-ended Lines ¹²	VOC				
	Non-VOC				
	VOC				
Sampling Connections ¹³	Non-VOC				
	VOC				
	Non-VOC				
Compressors	VOC				
	Non-VOC				
	VOC				
Flanges	Non-VOC				
	VOC				
	Non-VOC				
Other	VOC				
	Non-VOC				
	VOC				

1 - 13 See notes on the following page.

Notes for Leak Source Data Sheet

1. For VOC sources include components on streams and equipment that contain greater than 10% w/w VOC, including feed streams, reaction/separation facilities, and product/by-product delivery lines. Do not include certain leakless equipment as defined below by category.
2. By monitoring frequency, give the number of sources routinely monitored for leaks, using a portable detection device that measures concentration in ppm. Do not include monitoring by visual or soap-bubble leak detection methods. "M/Q(M)/Q/SA/A/O" means the time period between inspections as follows:

Monthly/Quarterly, with Monthly follow-up of repaired leakers/Quarterly/Semi-annual/Annually/Other (specify time period)

If source category is not monitored, a single zero in the space will suffice. For example, if 50 gas-service valves are monitored quarterly, with monthly follow-up of those repaired, 75 are monitored semi-annually, and 50 are checked bimonthly (alternate months), with non checked at any other frequency, you would put in the category "valves, gas service:" 0/50/0/75/0/50 (bimonthly).
3. Give the average number of days, after a leak is discovered, that an attempt will be made to repair the leak.
4. Note the method used: MB - material balance; EE - engineering estimate; EPA - emission factors established by EPA (cite document used); O - other method, such as in-house emission factor (specify).
5. Do not include in the equipment count sealless pumps (canned motor or diaphragm) or those with enclosed venting to a control device. (Emissions from vented equipment should be included in the estimates given in the Emission Points Data Sheet.)
6. Volatile organic compounds (VOC) means the term as defined in 40 CFR §51.100 (s).
7. A light liquid is defined as a fluid with vapor pressure equal to or greater than 0.04 psi (0.3 Kpa) at 20°C. For mixtures, if 20% w/w or more of the stream is composed of fluids with vapor pressures greater than 0.04 psi (0.3 Kpa) at 20 °C, then the fluid is defined as a light liquid.
8. A heavy liquid is defined as a fluid with a vapor pressure less than 0.04 psi (0.3 Kpa) at 20°C. For mixtures, if less than 20% w/w of the stream is composed of fluids with vapor pressures greater than 0.04 psi (0.3 Kpa) at 20 °C, then the fluid is defined as a heavy liquid.
9. LIST CO, H₂S, mineral acids, NO, NO₂, SO₃, etc. DO NOT LIST CO₂, H₂, H₂O, N₂, O₂, and Noble Gases.
10. Include all process valves whether in-line or on an open-ended line such as sample, drain and purge valves. Do not include safety-relief valves, or leakless valves such as check, diaphragm, and bellows seal valves.
11. Do not include a safety-relief valve if there is a rupture disk in place upstream of the valve, or if the valve vents to a control device.
12. Open-ended lines include purge, drain and vent lines. Do not include sampling connections, or lines sealed by plugs, caps, blinds or second valves.
13. Do not include closed-purge sampling connections.

REACTOR DATA SHEET

Provide the following information for each piece of equipment that is a potential or actual source of emissions as shown on the *Equipment List Form* and other parts of application.

Identification Number (as shown on <i>Equipment List Form</i>): Not Applicable							
1. Name and type of equipment (e.g. CSTR, plug flow, batch, etc.)							
2. Type of operation <input type="checkbox"/> Batch <input type="checkbox"/> Continuous <input type="checkbox"/> Semi-batch							
3. Projected Actual Equipment Operating Schedule (complete appropriate lines):							
hrs/day		days/week			weeks/year		
hrs/batch		batches/day, weeks (Circle one)			day, weeks/yr (Circle one)		
4. Feed Data Flow In = gal/hr, or gal/batch							
Material Name & CAS No.	Phase ^a	Specific Gravity	Vapor Pressure ^b	Charge Rate			Fill Time (min/batch, run) ^c
				Normal	Max	Units	
<p>a. S = Solid, L = Liquid, G = gas or vapor</p> <p>b. At feed conditions</p> <p>c. Total time that equipment is filling per batch or run (start-up), for tank or vessel-type equipment.</p>							
5. Provide all chemical reactions that will be involved (if applicable), including the residence time and any side reactions that may occur as well as gases that may be generated during these reactions. Indicate if the reaction(s) are exothermic or endothermic.							

6. Maximum Temperature <div style="text-align: right;">°C</div> <div style="text-align: right;">°F</div>	7A. Maximum Pressure 7B. Max. Set Pressure for venting <div style="text-align: center;">mmHg</div> <div style="text-align: center;">psig</div>
---	--

8. Output Data		Flow Out =				
		gal/hr or gal/batch				
Material Name and CAS No.	Phase	Specific Gravity	Vapor Pressure	Hourly or Batch Output Rate		Units
				Normal	Maximum	

9. Complete the following emission data for equipment connected to a header exhaust system, giving emissions levels before entering header system (i.e. before control equipment).

Check here if not applicable

Emission Point ID (exhaust point of header system):

Material Name and CAS No.	Maximum Potential Emission Rate (lb/hr)	Method **

** MB - material balance; EE - Engineering Estimate; TM - Test Measurement (submit test data); O - other (Explain)

10. Provide the following information pertaining to each condenser that may be attached to this reactor. Attach additional pages as necessary if more than one condenser is used for this reactor. Complete the Condenser Air Pollution Control Device Sheet if necessary.

Check here if not applicable

- 10A. Cooling material
- 10B. Minimum and Maximum flowrate of cooling material (gal/hr)
- 10C. Inlet temperature of cooling material (°F)
- 10D. Outlet temperature of cooling material (°F)
- 10E. Pressure drop of gas to be condensed from inlet to outlet (psig)
- 10F. Inlet temperature of gas stream (°F)
- 10G. Outlet temperature of gas stream (°F)
- 10H. Number of passes
- 10I. Cooling surface area

11. Provide the following pertaining to auxiliary equipment that burns fuel (heaters, dryers, etc.):

Check here if not applicable

11A. Type of fuel and maximum fuel burn rate, per hour:

11B. Provide maximum percent sulfur (S), ash content of fuel, and the energy content using appropriate units:

%S	% Ash	BTU/lb, std. ft ³ /day, gal
		(circle one)

11C. Theoretical combustion air requirement in SCFD per unit of fuel (circle appropriate unit) @ 70°F and 14.7 PSIA:

SCFD/lb, SCFD, gal (circle one)

11D. Percent excess air: %

11E. Type, amount, and BTU rating of burners and all other firing equipment that are planned to be used:

11F. Total maximum design heat input: ×10⁶ BTU/hr.

12. Proposed Monitoring, Recordkeeping, Reporting, and Testing

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING

RECORDKEEPING

REPORTING

TESTING

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION OR AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT OR AIR POLLUTION CONTROL DEVICE.

13. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

Equipment warranty details have not been determined.

NOTE: An *AIR POLLUTION CONTROL DEVICE SHEET* must be completed for any air pollution device(s) (except emergency relief devices) used to control emissions from this reactor.

DISTILLATION COLUMN DATA SHEET

Identification Number (as assigned on <i>Equipment List Form</i>):	NOT APPLICABLE	
1. Name and type of equipment		
#. Projected actual equipment operating schedule (complete appropriate lines):		
hrs/day	days/week	weeks/year
hrs/batch	batches/day, batches/week (circle one)	days/yr, weeks/yr (circle one)
2. Number of stages (plates), excluding condenser		
3. Number of feed plates and stage location		
4. Specify details of any reheating, recycling, or stage conditioning along with the stage locations		
5. Specify reflux ratio, R (where R is defined as the ratio of the reflux to the overhead product, given symbolically as $R=L/D$, where L = liquid down column, D = distillation product)		
6. Specify the fraction of feed which is vaporized, f (where f is the molal fraction of the feed that leaves the feed plate continuously as vapor).		
7A. Type of condenser used: <input type="checkbox"/> total <input type="checkbox"/> partial <input type="checkbox"/> multiple <input type="checkbox"/> other		
7B. For each condenser provide process operating details including all inlet and outlet temperatures, pressures, and compositions.		
8. Feed Characteristics		
A. Molar composition		
B. Individual vapor pressure of each component		
C. Total feed stage pressure		
D. Total feed stage temperature		
E. Total mass flow rate of each stream into the system		
9. Overhead Product		
A. Molar composition of components		
B. Vapor pressure of components		
C. Total mass flow rate of all streams leaving the system as overhead products		
10. Bottom Product		
A. Molar composition of all components		
B. Total mass flow rate of all streams leaving the system as bottom products		

11. General Information

- A. Distillation column diameter
- B. Distillation column height
- C. Type of plates
- D. Plate spacing
- E. Murphree plate efficiency
- F. Any other information necessary of describe the operation of this distillation column.

12. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING

RECORDKEEPING

REPORTING

TESTING

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION OR AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT OR AIR POLLUTION CONTROL DEVICE.

13. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

NOTE: An *AIR POLLUTION CONTROL DEVICE SHEET* must be completed for any air pollution device(s) (except emergency relief devices) used to control emissions from this distillation column.

Attachment L
EMISSIONS UNIT DATA SHEET
STORAGE TANKS

Provide the following information for each new or modified bulk liquid storage tank as shown on the *Equipment List Form* and other parts of this application. A tank is considered modified if the material to be stored in the tank is different from the existing stored liquid.

IF USING US EPA'S TANKS EMISSION ESTIMATION PROGRAM (AVAILABLE AT www.epa.gov/ttn/tanks.html), APPLICANT MAY ATTACH THE SUMMARY SHEETS IN LIEU OF COMPLETING SECTIONS III, IV, & V OF THIS FORM. HOWEVER, SECTIONS I, II, AND VI OF THIS FORM MUST BE COMPLETED. US EPA'S AP-42, SECTION 7.1, "ORGANIC LIQUID STORAGE TANKS," MAY ALSO BE USED TO ESTIMATE VOC AND HAP EMISSIONS (<http://www.epa.gov/ttn/chief/>).

I. GENERAL INFORMATION (required)

1. Bulk Storage Area Name <i>Finished Product Storage Area</i>	2. Tank Name N/A
3. Tank Equipment Identification No. (as assigned on <i>Equipment List Form</i>) T-3000, T-4000, T-9010, T-9020, T-9040,	4. Emission Point Identification No. (as assigned on <i>Equipment List Form</i>) T-3000E, T-4000E, T-9010E, T-9020E, T-9040E,
5. Date of Commencement of Construction (for existing tanks)	
6. Type of change <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> New Stored Material <input type="checkbox"/> Other Tank Modification	
7. Description of Tank Modification (if applicable)	
7A. Does the tank have more than one mode of operation? (e.g. Is there more than one product stored in the tank?) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
7B. If YES, explain and identify which mode is covered by this application (Note: A separate form must be completed for each mode).	
7C. Provide any limitations on source operation affecting emissions, any work practice standards (e.g. production variation, etc.):	

II. TANK INFORMATION (required)

8. Design Capacity (specify barrels or gallons). Use the internal cross-sectional area multiplied by internal height. <p style="text-align: center;">47,318 Liters</p>	
9A. Tank Internal Diameter (ft)	9B. Tank Internal Height (or Length) (ft)
10A. Maximum Liquid Height (ft)	10B. Average Liquid Height (ft)
11A. Maximum Vapor Space Height (ft)	11B. Average Vapor Space Height (ft)
12. Nominal Capacity (specify barrels or gallons). This is also known as "working volume" and considers design liquid levels and overflow valve heights. <p style="text-align: center;">37,855 L</p>	

25F. Describe deck fittings; indicate the number of each type of fitting:		
ACCESS HATCH		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
AUTOMATIC GAUGE FLOAT WELL		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
COLUMN WELL		
BUILT-UP COLUMN - SLIDING COVER, GASKETED:	BUILT-UP COLUMN - SLIDING COVER, UNGASKETED:	PIPE COLUMN - FLEXIBLE FABRIC SLEEVE SEAL:
LADDER WELL		
PIP COLUMN - SLIDING COVER, GASKETED:	PIPE COLUMN - SLIDING COVER, UNGASKETED:	
GAUGE-HATCH/SAMPLE PORT		
SLIDING COVER, GASKETED:	SLIDING COVER, UNGASKETED:	
ROOF LEG OR HANGER WELL		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	SAMPLE WELL-SLIT FABRIC SEAL (10% OPEN AREA)
VACUUM BREAKER		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
RIM VENT		
WEIGHTED MECHANICAL ACTUATION GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
DECK DRAIN (3-INCH DIAMETER)		
OPEN:	90% CLOSED:	
STUB DRAIN		
1-INCH DIAMETER:		
OTHER (DESCRIBE, ATTACH ADDITIONAL PAGES IF NECESSARY)		

26. Complete the following section for Internal Floating Roof Tanks <input type="checkbox"/> Does Not Apply	
26A. Deck Type: <input type="checkbox"/> Bolted <input type="checkbox"/> Welded	
26B. For Bolted decks, provide deck construction:	
26C. Deck seam: <input type="checkbox"/> Continuous sheet construction 5 feet wide <input type="checkbox"/> Continuous sheet construction 6 feet wide <input type="checkbox"/> Continuous sheet construction 7 feet wide <input type="checkbox"/> Continuous sheet construction 5 × 7.5 feet wide <input type="checkbox"/> Continuous sheet construction 5 × 12 feet wide <input type="checkbox"/> Other (describe)	
26D. Deck seam length (ft)	26E. Area of deck (ft ²)
For column supported tanks:	26G. Diameter of each column:
26F. Number of columns:	

IV. SITE INFORMATION (optional if providing TANKS Summary Sheets)

27. Provide the city and state on which the data in this section are based.
28. Daily Average Ambient Temperature (°F)
29. Annual Average Maximum Temperature (°F)
30. Annual Average Minimum Temperature (°F)
31. Average Wind Speed (miles/hr)
32. Annual Average Solar Insulation Factor (BTU/(ft ² ·day))
33. Atmospheric Pressure (psia)

V. LIQUID INFORMATION (optional if providing TANKS Summary Sheets)

34. Average daily temperature range of bulk liquid:	
34A. Minimum (°F)	34B. Maximum (°F)
35. Average operating pressure range of tank:	
35A. Minimum (psig)	35B. Maximum (psig)
36A. Minimum Liquid Surface Temperature (°F)	36B. Corresponding Vapor Pressure (psia)
37A. Average Liquid Surface Temperature (°F)	37B. Corresponding Vapor Pressure (psia)
38A. Maximum Liquid Surface Temperature (°F)	38B. Corresponding Vapor Pressure (psia)
39. Provide the following for <u>each</u> liquid or gas to be stored in tank. Add additional pages if necessary.	
39A. Material Name or Composition	
39B. CAS Number	
39C. Liquid Density (lb/gal)	
39D. Liquid Molecular Weight (lb/lb-mole)	
39E. Vapor Molecular Weight (lb/lb-mole)	

Attachment L
EMISSIONS UNIT DATA SHEET
STORAGE TANKS

Provide the following information for each new or modified bulk liquid storage tank as shown on the *Equipment List Form* and other parts of this application. A tank is considered modified if the material to be stored in the tank is different from the existing stored liquid.

IF USING US EPA'S TANKS EMISSION ESTIMATION PROGRAM (AVAILABLE AT www.epa.gov/ttn/tanks.html), APPLICANT MAY ATTACH THE SUMMARY SHEETS IN LIEU OF COMPLETING SECTIONS III, IV, & V OF THIS FORM. HOWEVER, SECTIONS I, II, AND VI OF THIS FORM MUST BE COMPLETED. US EPA'S AP-42, SECTION 7.1, "ORGANIC LIQUID STORAGE TANKS," MAY ALSO BE USED TO ESTIMATE VOC AND HAP EMISSIONS (<http://www.epa.gov/ttn/chief/>).

I. GENERAL INFORMATION (required)

1. Bulk Storage Area Name Finished Product Storage Area	2. Tank Name N/A
3. Tank Equipment Identification No. (as assigned on <i>Equipment List Form</i>) T-9050, T-9060, T-9070	4. Emission Point Identification No. (as assigned on <i>Equipment List Form</i>) T-9050E, T-9060E, T-9070E
5. Date of Commencement of Construction (for existing tanks)	
6. Type of change <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> New Stored Material <input type="checkbox"/> Other Tank Modification	
7. Description of Tank Modification (if applicable)	
7A. Does the tank have more than one mode of operation? (e.g. Is there more than one product stored in the tank?) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
7B. If YES, explain and identify which mode is covered by this application (Note: A separate form must be completed for each mode).	
7C. Provide any limitations on source operation affecting emissions, any work practice standards (e.g. production variation, etc.):	

II. TANK INFORMATION (required)

8. Design Capacity (specify barrels or gallons). Use the internal cross-sectional area multiplied by internal height. <p style="text-align: center;">47,318</p>	
9A. Tank Internal Diameter (ft)	9B. Tank Internal Height (or Length) (ft)
10A. Maximum Liquid Height (ft)	10B. Average Liquid Height (ft)
11A. Maximum Vapor Space Height (ft)	11B. Average Vapor Space Height (ft)
12. Nominal Capacity (specify barrels or gallons). This is also known as "working volume" and considers design liquid levels and overflow valve heights. <p style="text-align: center;">37855 L</p>	

25F. Describe deck fittings; indicate the number of each type of fitting:		
ACCESS HATCH		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
AUTOMATIC GAUGE FLOAT WELL		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
COLUMN WELL		
BUILT-UP COLUMN - SLIDING COVER, GASKETED:	BUILT-UP COLUMN - SLIDING COVER, UNGASKETED:	PIPE COLUMN - FLEXIBLE FABRIC SLEEVE SEAL:
LADDER WELL		
PIP COLUMN - SLIDING COVER, GASKETED:	PIPE COLUMN - SLIDING COVER, UNGASKETED:	
GAUGE-HATCH/SAMPLE PORT		
SLIDING COVER, GASKETED:	SLIDING COVER, UNGASKETED:	
ROOF LEG OR HANGER WELL		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	SAMPLE WELL-SLIT FABRIC SEAL (10% OPEN AREA)
VACUUM BREAKER		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
RIM VENT		
WEIGHTED MECHANICAL ACTUATION GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
DECK DRAIN (3-INCH DIAMETER)		
OPEN:	90% CLOSED:	
STUB DRAIN		
1-INCH DIAMETER:		
OTHER (DESCRIBE, ATTACH ADDITIONAL PAGES IF NECESSARY)		

26. Complete the following section for Internal Floating Roof Tanks <input type="checkbox"/> Does Not Apply	
26A. Deck Type: <input type="checkbox"/> Bolted <input type="checkbox"/> Welded	
26B. For Bolted decks, provide deck construction:	
26C. Deck seam: <input type="checkbox"/> Continuous sheet construction 5 feet wide <input type="checkbox"/> Continuous sheet construction 6 feet wide <input type="checkbox"/> Continuous sheet construction 7 feet wide <input type="checkbox"/> Continuous sheet construction 5 × 7.5 feet wide <input type="checkbox"/> Continuous sheet construction 5 × 12 feet wide <input type="checkbox"/> Other (describe)	
26D. Deck seam length (ft)	26E. Area of deck (ft ²)
For column supported tanks:	26G. Diameter of each column:
26F. Number of columns:	

IV. SITE INFORMATION (optional if providing TANKS Summary Sheets)

27. Provide the city and state on which the data in this section are based.
28. Daily Average Ambient Temperature (°F)
29. Annual Average Maximum Temperature (°F)
30. Annual Average Minimum Temperature (°F)
31. Average Wind Speed (miles/hr)
32. Annual Average Solar Insulation Factor (BTU/(ft ² -day))
33. Atmospheric Pressure (psia)

V. LIQUID INFORMATION (optional if providing TANKS Summary Sheets)

34. Average daily temperature range of bulk liquid:			
34A. Minimum (°F)		34B. Maximum (°F)	
35. Average operating pressure range of tank:			
35A. Minimum (psig)		35B. Maximum (psig)	
36A. Minimum Liquid Surface Temperature (°F)		36B. Corresponding Vapor Pressure (psia)	
37A. Average Liquid Surface Temperature (°F)		37B. Corresponding Vapor Pressure (psia)	
38A. Maximum Liquid Surface Temperature (°F)		38B. Corresponding Vapor Pressure (psia)	
39. Provide the following for <u>each</u> liquid or gas to be stored in tank. Add additional pages if necessary.			
39A. Material Name or Composition			
39B. CAS Number			
39C. Liquid Density (lb/gal)			
39D. Liquid Molecular Weight (lb/lb-mole)			
39E. Vapor Molecular Weight (lb/lb-mole)			

Attachment L
EMISSIONS UNIT DATA SHEET
STORAGE TANKS

Provide the following information for each new or modified bulk liquid storage tank as shown on the *Equipment List Form* and other parts of this application. A tank is considered modified if the material to be stored in the tank is different from the existing stored liquid.

IF USING US EPA'S TANKS EMISSION ESTIMATION PROGRAM (AVAILABLE AT www.epa.gov/tnn/tanks.html), APPLICANT MAY ATTACH THE SUMMARY SHEETS IN LIEU OF COMPLETING SECTIONS III, IV, & V OF THIS FORM. HOWEVER, SECTIONS I, II, AND VI OF THIS FORM MUST BE COMPLETED. US EPA'S AP-42, SECTION 7.1, "ORGANIC LIQUID STORAGE TANKS," MAY ALSO BE USED TO ESTIMATE VOC AND HAP EMISSIONS (<http://www.epa.gov/tnn/chieff>).

I. GENERAL INFORMATION (required)

1. Bulk Storage Area Name Raw Material Storage Area	2. Tank Name N/A
3. Tank Equipment Identification No. (as assigned on <i>Equipment List Form</i>) T-242	4. Emission Point Identification No. (as assigned on <i>Equipment List Form</i>) T-242E
5. Date of Commencement of Construction (for existing tanks) 4Q, 2015	
6. Type of change <input type="checkbox"/> New Construction <input checked="" type="checkbox"/> New Stored Material <input type="checkbox"/> Other Tank Modification	
7. Description of Tank Modification (if applicable) Change from Acrylic Acid to Vinyl Acetate	
7A. Does the tank have more than one mode of operation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (e.g. Is there more than one product stored in the tank?)	
7B. If YES, explain and identify which mode is covered by this application (Note: A separate form must be completed for each mode).	
7C. Provide any limitations on source operation affecting emissions, any work practice standards (e.g. production variation, etc.):	

II. TANK INFORMATION (required)

8. Design Capacity (specify barrels or gallons). Use the internal cross-sectional area multiplied by internal height. <p style="text-align: center;">50,000 Liters</p>	
9A. Tank Internal Diameter (ft)	9B. Tank Internal Height (or Length) (ft)
10A. Maximum Liquid Height (ft)	10B. Average Liquid Height (ft)
11A. Maximum Vapor Space Height (ft)	11B. Average Vapor Space Height (ft)
12. Nominal Capacity (specify barrels or gallons). This is also known as "working volume" and considers design liquid levels and overflow valve heights. <p style="text-align: center;">40,000 Liters</p>	

25F. Describe deck fittings; indicate the number of each type of fitting:		
ACCESS HATCH		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
AUTOMATIC GAUGE FLOAT WELL		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
COLUMN WELL		
BUILT-UP COLUMN – SLIDING COVER, GASKETED:	BUILT-UP COLUMN – SLIDING COVER, UNGASKETED:	PIPE COLUMN – FLEXIBLE FABRIC SLEEVE SEAL:
LADDER WELL		
PIP COLUMN – SLIDING COVER, GASKETED:	PIPE COLUMN – SLIDING COVER, UNGASKETED:	
GAUGE-HATCH/SAMPLE PORT		
SLIDING COVER, GASKETED:	SLIDING COVER, UNGASKETED:	
ROOF LEG OR HANGER WELL		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	SAMPLE WELL-SLIT FABRIC SEAL (10% OPEN AREA)
VACUUM BREAKER		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
RIM VENT		
WEIGHTED MECHANICAL ACTUATION GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
DECK DRAIN (3-INCH DIAMETER)		
OPEN:	90% CLOSED:	
STUB DRAIN		
1-INCH DIAMETER:		
OTHER (DESCRIBE, ATTACH ADDITIONAL PAGES IF NECESSARY)		

26. Complete the following section for Internal Floating Roof Tanks <input type="checkbox"/> Does Not Apply	
26A. Deck Type: <input type="checkbox"/> Bolted <input type="checkbox"/> Welded	
26B. For Bolted decks, provide deck construction:	
26C. Deck seam: <input type="checkbox"/> Continuous sheet construction 5 feet wide <input type="checkbox"/> Continuous sheet construction 6 feet wide <input type="checkbox"/> Continuous sheet construction 7 feet wide <input type="checkbox"/> Continuous sheet construction 5 × 7.5 feet wide <input type="checkbox"/> Continuous sheet construction 5 × 12 feet wide <input type="checkbox"/> Other (describe)	
26D. Deck seam length (ft)	26E. Area of deck (ft ²)
For column supported tanks: 26F. Number of columns:	26G. Diameter of each column:

IV. SITE INFORMATION (optional if providing TANKS Summary Sheets)

27. Provide the city and state on which the data in this section are based.
28. Daily Average Ambient Temperature (°F)
29. Annual Average Maximum Temperature (°F)
30. Annual Average Minimum Temperature (°F)
31. Average Wind Speed (miles/hr)
32. Annual Average Solar Insulation Factor (BTU/(ft ² ·day))
33. Atmospheric Pressure (psia)

V. LIQUID INFORMATION (optional if providing TANKS Summary Sheets)

34. Average daily temperature range of bulk liquid:			
34A. Minimum (°F)	34B. Maximum (°F)		
35. Average operating pressure range of tank:			
35A. Minimum (psig)	35B. Maximum (psig)		
36A. Minimum Liquid Surface Temperature (°F)	36B. Corresponding Vapor Pressure (psia)		
37A. Average Liquid Surface Temperature (°F)	37B. Corresponding Vapor Pressure (psia)		
38A. Maximum Liquid Surface Temperature (°F)	38B. Corresponding Vapor Pressure (psia)		
39. Provide the following for <u>each</u> liquid or gas to be stored in tank. Add additional pages if necessary.			
39A. Material Name or Composition			
39B. CAS Number			
39C. Liquid Density (lb/gal)			
39D. Liquid Molecular Weight (lb/lb-mole)			
39E. Vapor Molecular Weight (lb/lb-mole)			

Attachment L EMISSIONS UNIT DATA SHEET STORAGE TANKS

Provide the following information for each new or modified bulk liquid storage tank as shown on the *Equipment List Form* and other parts of this application. A tank is considered modified if the material to be stored in the tank is different from the existing stored liquid.

IF USING US EPA'S TANKS EMISSION ESTIMATION PROGRAM (AVAILABLE AT www.epa.gov/tnn/tanks.html), APPLICANT MAY ATTACH THE SUMMARY SHEETS IN LIEU OF COMPLETING SECTIONS III, IV, & V OF THIS FORM. HOWEVER, SECTIONS I, II, AND VI OF THIS FORM MUST BE COMPLETED. US EPA'S AP-42, SECTION 7.1, "ORGANIC LIQUID STORAGE TANKS," MAY ALSO BE USED TO ESTIMATE VOC AND HAP EMISSIONS (<http://www.epa.gov/tnn/chief/>).

I. GENERAL INFORMATION (required)

1. Bulk Storage Area Name Raw Material Storage Area	2. Tank Name N/A
3. Tank Equipment Identification No. (as assigned on <i>Equipment List Form</i>) T-243	4. Emission Point Identification No. (as assigned on <i>Equipment List Form</i>) T-243E
5. Date of Commencement of Construction (for existing tanks)	
6. Type of change <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> New Stored Material <input type="checkbox"/> Other Tank Modification	
7. Description of Tank Modification (if applicable)	
7A. Does the tank have more than one mode of operation? (e.g. Is there more than one product stored in the tank?) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
7B. If YES, explain and identify which mode is covered by this application (Note: A separate form must be completed for each mode).	
7C. Provide any limitations on source operation affecting emissions, any work practice standards (e.g. production variation, etc.):	

II. TANK INFORMATION (required)

8. Design Capacity (specify barrels or gallons). Use the internal cross-sectional area multiplied by internal height. <div style="text-align: center;">50,000 Liters</div>	
9A. Tank Internal Diameter (ft)	9B. Tank Internal Height (or Length) (ft)
10A. Maximum Liquid Height (ft)	10B. Average Liquid Height (ft)
11A. Maximum Vapor Space Height (ft)	11B. Average Vapor Space Height (ft)
12. Nominal Capacity (specify barrels or gallons). This is also known as "working volume" and considers design liquid levels and overflow valve heights. <div style="text-align: center;">40,000 Liters</div>	

25F. Describe deck fittings; indicate the number of each type of fitting:		
ACCESS HATCH		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
AUTOMATIC GAUGE FLOAT WELL		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
COLUMN WELL		
BUILT-UP COLUMN - SLIDING COVER, GASKETED:	BUILT-UP COLUMN - SLIDING COVER, UNGASKETED:	PIPE COLUMN - FLEXIBLE FABRIC SLEEVE SEAL:
LADDER WELL		
PIP COLUMN - SLIDING COVER, GASKETED:	PIPE COLUMN - SLIDING COVER, UNGASKETED:	
GAUGE-HATCH/SAMPLE PORT		
SLIDING COVER, GASKETED:	SLIDING COVER, UNGASKETED:	
ROOF LEG OR HANGER WELL		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	SAMPLE WELL-SLIT FABRIC SEAL (10% OPEN AREA)
VACUUM BREAKER		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
RIM VENT		
WEIGHTED MECHANICAL ACTUATION GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
DECK DRAIN (3-INCH DIAMETER)		
OPEN:	90% CLOSED:	
STUB DRAIN		
1-INCH DIAMETER:		
OTHER (DESCRIBE, ATTACH ADDITIONAL PAGES IF NECESSARY)		

26. Complete the following section for Internal Floating Roof Tanks <input type="checkbox"/> Does Not Apply	
26A. Deck Type: <input type="checkbox"/> Bolted <input type="checkbox"/> Welded	
26B. For Bolted decks, provide deck construction:	
26C. Deck seam: <input type="checkbox"/> Continuous sheet construction 5 feet wide <input type="checkbox"/> Continuous sheet construction 6 feet wide <input type="checkbox"/> Continuous sheet construction 7 feet wide <input type="checkbox"/> Continuous sheet construction 5 × 7.5 feet wide <input type="checkbox"/> Continuous sheet construction 5 × 12 feet wide <input type="checkbox"/> Other (describe)	
26D. Deck seam length (ft)	26E. Area of deck (ft ²)
For column supported tanks: 26F. Number of columns:	26G. Diameter of each column:

IV. SITE INFORMATION (optional if providing TANKS Summary Sheets)

27. Provide the city and state on which the data in this section are based.
28. Daily Average Ambient Temperature (°F)
29. Annual Average Maximum Temperature (°F)
30. Annual Average Minimum Temperature (°F)
31. Average Wind Speed (miles/hr)
32. Annual Average Solar Insulation Factor (BTU/(ft ² ·day))
33. Atmospheric Pressure (psia)

V. LIQUID INFORMATION (optional if providing TANKS Summary Sheets)

34. Average daily temperature range of bulk liquid:			
34A. Minimum (°F)	34B. Maximum (°F)		
35. Average operating pressure range of tank:			
35A. Minimum (psig)	35B. Maximum (psig)		
36A. Minimum Liquid Surface Temperature (°F)	36B. Corresponding Vapor Pressure (psia)		
37A. Average Liquid Surface Temperature (°F)	37B. Corresponding Vapor Pressure (psia)		
38A. Maximum Liquid Surface Temperature (°F)	38B. Corresponding Vapor Pressure (psia)		
39. Provide the following for <u>each</u> liquid or gas to be stored in tank. Add additional pages if necessary.			
39A. Material Name or Composition			
39B. CAS Number			
39C. Liquid Density (lb/gal)			
39D. Liquid Molecular Weight (lb/lb-mole)			
39E. Vapor Molecular Weight (lb/lb-mole)			

ATTACHMENT M

AIR POLLUTION CONTROL DEVICE SHEETS

Elementis is not proposing to install any air pollution control devices at the facility. The scrubber will be used for odor control and is not for air pollution control.

ATTACHMENT N
EMISSION CALCULATIONS

ATTACHMENT N
EMISSION CALCULATIONS

Installation and operation of the Phase IV equipment will not result in any increase in actual emissions above permitted VOC and HAP limits.

The potential to emit from the facility will not exceed due additions of the Phase IV equipment.

ATTACHMENT O

MONITORING, RECORDING, AND TESTING PLANS

Elementis will maintain the production records to calculate the VOC and HAP emission rates using Emission Master[®] software (Version 8.1.0.6) developed by Mitchell Scientific to demonstrate compliance with the emission limits imposed in the permit. Elementis will also monitor the temperature, pressure difference, and raw materials usage for the process condensers per existing permit conditions.

ATTACHMENT P

PUBLIC NOTICE / AFFIDAVIT OF PUBLICATION



[**Note:** The following legal notice will be published in the Wetzel Chronicle on (**December 2, 2015**). A copy of the notice and a notarized proof of publication will be submitted to the Department upon receipt.]

AIR QUALITY PERMIT NOTICE Notice of Application

Notice is given that Elementis Specialties, Inc., has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Class II Administrative Update to add new equipment to Permit No. R13-3065A at its existing specialty chemical manufacturing facility located at 17595 Energy Road, Proctor, WV in Marshall County, West Virginia. The latitude and longitude coordinates are: 39.727952°, -80.829961°, respectively.

This project will emit Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) but will not result in emission increases above the current permitted levels. The HAPs will consist of toluene, vinyl acetate, acrylic acid, ethyl acrylate, methyl methacrylate, and others. Based on the facility's emissions, it is classified as a minor source under the Clean Air Act regulations.

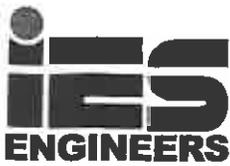
Startup of the new equipment is planned to begin on or about February 1, 2016. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality (DAQ), 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication 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 24th day of November 2015.

By: Elementis Specialties, Inc.
Bill Greer
Director, Global Operations
17595 Energy Road
Proctor, WV 26055

ATTACHMENT Q
BUSINESS CONFIDENTIAL CLAIM



ATTACHMENT Q
BUSINESS CONFIDENTIAL CLAIMS

Elementis is claiming the following items confidential in the Class II Administrative Update Application in accordance with 45 CSR 31:

Attachment F	Detailed Process Flow Diagrams
Attachment G	Process Description

The information contained in these sections includes product material formulas and production related data. It is business-sensitive material that, if made public, would reveal trade secrets and confer an unfair economic advantage on Elementis' competitors. Accordingly, Elementis has redacted the information in the designated attachments and is requesting that the information be protected from disclosure to the public. Three copies of the "public" version of the application with the confidential information redacted are being submitted, along with a sealed envelope marked "CONFIDENTIAL" that contains two copies of the confidential information on colored paper.