Division of Air Quality Permit Application Submittal

Please find attached a permit application for : Optima Belle, LLC; Belle, West Virginia
[Company Name; Facility Location]

- DAQ Facility ID (for existing facilities only): 039-00663
- Current 45CSR13 and 45CSR30 (Title V) permits associated with this process (for existing facilities only): R13-2093H

- Type of NSR Application (check all that apply):
  - ☑ Construction
  - ☑ Modification
  - ☐ Class I Administrative Update
  - ☐ Class II Administrative Update
  - ☐ Relocation
  - ☐ Temporary
  - ☐ Permit Determination

- Type of 45CSR30 (TITLE V) Application:
  - ☐ Title V Initial
  - ☐ Title V Renewal
  - ☐ Administrative Amendment**
  - ☐ Minor Modification**
  - ☐ Significant Modification**
  - ☐ Off Permit Change

****If the box above is checked, include the Title V revision information as ATTACHMENT S to the combined NSR/Title V application.**

- Payment Type:
  - ☑ Credit Card (Instructions to pay by credit card will be sent in the Application Status email.)
  - ☐ Check (Make checks payable to: WVDEP – Division of Air Quality)
    Mail checks to:
    WVDEP – DAQ – Permitting
    Attn: NSR Permitting Secretary
    601 57th Street, SE
    Charleston, WV 25304

Please wait until DAQ emails you the Facility ID Number and Permit Application Number. Please add these identifiers to your check or cover letter with your check.

- If the permit writer has any questions, please contact (all that apply):
  - ☑ Responsible Official/Authorized Representative
    - Name: Doug Cochran
    - Email: dcochran@optimachem.com
    - Phone Number: (912) 720-5190
  - ☑ Company Contact
    - Name: Michelle Given
    - Email: mgiven@optimachem.com
    - Phone Number: (304) 949-7162
  - ☑ Consultant
    - Name: Patrick Ward
    - Email: PEWard@potesta.com
    - Phone Number: (304) 342-1400

REGULATION 13 APPLICATION FOR MODIFICATION FOR NEW EQUIPMENT AND PRODUCT OPTIMA BELLE PLANT

REDACTED APPLICATION

Prepared for:

Optima Belle, LLC
901 W. DuPont Avenue
Belle, West Virginia 25015

Prepared by:

Potesta & Associates, Inc.
7012 MacCorkle Avenue, SE
Charleston, West Virginia 25304
Phone: (304) 342-1400 Fax: (304) 343-9031
Email: potesta@potesta.com

Project No. 0101-14-0162-022

March 2023

POTESTA

TABLE OF CONTENTS

Attachments Not Applicable to this Application: Attachments K, R, and S.

SECTION I - III

GENERAL APPLICANT INFORMATION

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):*
Optima Belle, LLC

2. Federal Employer ID No. ***(FEIN):***
465403006

3. Name of facility *(if different from above):*
Optima Belle Plant

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

5A. Applicant's mailing address:
901 W. DuPont Avenue
Belle, West Virginia 25015

5B. Facility's present physical address:
901 W. DuPont Avenue
Belle, West Virginia 25015

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: NA

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: The site is owned and operated by the applicant.

➪ If **NO,** you are not eligible for a permit for this source.

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): Chemical Manufacturing

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

11A. DAQ Plant ID No. (for existing facilities only):
039-00663

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):
R13-2093H

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-64 to Belle exit, then Rt. 60 East to Belle exit, turn right onto DuPont Avenue, travel approximately 500 feet and the plant entrance is on the left.

12.B. New site address (if applicable):	12C. Nearest city or town:	12D. County:
Same	Belle	Kanawha
12.E. UTM Northing (KM): 4,232.60	12F. UTM Easting (KM): 451.90	12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility:
Optima Belle, LLC proposes add new equipment and a new product to the site.

14A. Provide the date of anticipated installation or change: May 2023 ➪ If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: NA	14B. Date of anticipated Start-Up if a permit is granted: August 2023

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:

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

☒ General Emission Unit, specify: Building 216 Small Lots Manufacturing and Building 114.

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

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

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

☐ Other Collectors, specify:

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

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

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

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

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

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

☒ **YES** ☐ **NO**

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

Section III. Certification of Information

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

☐ Authority of Corporation or Other Business Entity	☐ Authority of Partnership
☐ Authority of Governmental Agency	☐ Authority of Limited Partnership

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

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

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

Certification of Truth, Accuracy, and Completeness

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

Compliance Certification

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

SIGNATURE Doug Cochran *(Please use blue ink)* DATE: 3/17/23 *(Please use blue ink)*

35B. Printed name of signee: Doug Cochran		35C. Title: Vice President of Business Development
35D. E-mail: dcochran@optimachem.com	36E. Phone: (912) 720-5190	36F. FAX: Use email
36A. Printed name of contact person (if different from above): Michelle Given		36B. Title: EHS Manager
36C. E-mail: mgiven@optimachem.com	36D. Phone: (304) 949-7162	36E. FAX: Use email

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

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

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

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

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

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

ATTACHMENT A

BUSINESS CERTIFICATE

WEST VIRGINIA
STATE TAX DEPARTMENT

BUSINESS REGISTRATION CERTIFICATE

ISSUED TO:
OPTIMA BELLE LLC
901 W DUPONT AVE
BELLE, WV 25015-1555

BUSINESS REGISTRATION ACCOUNT NUMBER: **2298-1773**

This certificate is issued on: **05/8/2015**

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

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

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

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

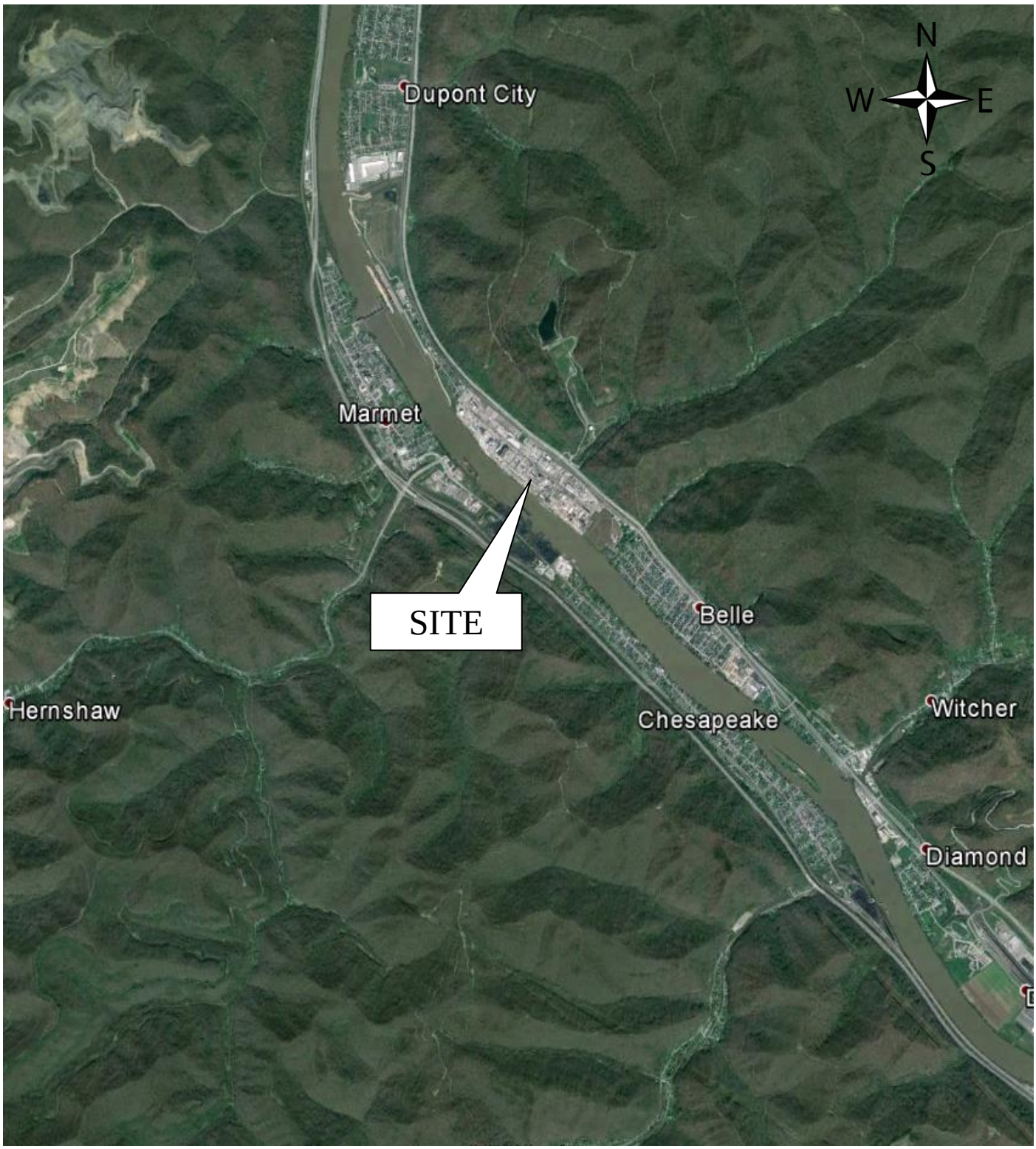
Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

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

atL006 v.4
L1970489664

ATTACHMENT B

AREA MAP



POTESTA
Engineers and Environmental Consultants

DATE: June 2016

PROJECT NO. 0101-14-0162-022

MAPPING FOR VISUAL REPRESENTATION ONLY

SITE LOCATION MAP 1 of 2
OPTIMA BELLE, LLC
BELLE, KANAWHA COUNTY, WV

NOT TO SCALE

POTESTA
Engineers and Environmental Consultants

DATE: June 2016

PROJECT NO. 0101-14-0162-022

MAPPING FOR VISUAL REPRESENTATION ONLY

SITE LOCATION MAP 2 of 2
OPTIMA BELLE, LLC
BELLE, KANAWHA COUNTY, WV

NOT TO SCALE

ATTACHMENT C

INSTALLATION AND START UP SCHEDULE

ATTACHMENT C

SCHEDULE OF INSTALLATION

This application includes upgrading the facility to replace equipment that became inoperable in the 2020 incident. This includes the addition of equipment to the permit which will be utilized to process the same materials that we currently process, add HMAPS production, and continue to operate in the same manner under the flexible permit for emissions. Additionally, we will be removing equipment from the permit that is no longer operable. Installation of the equipment is anticipated to start in May 2023.

ATTACHMENT D

REGULATORY DISCUSSION

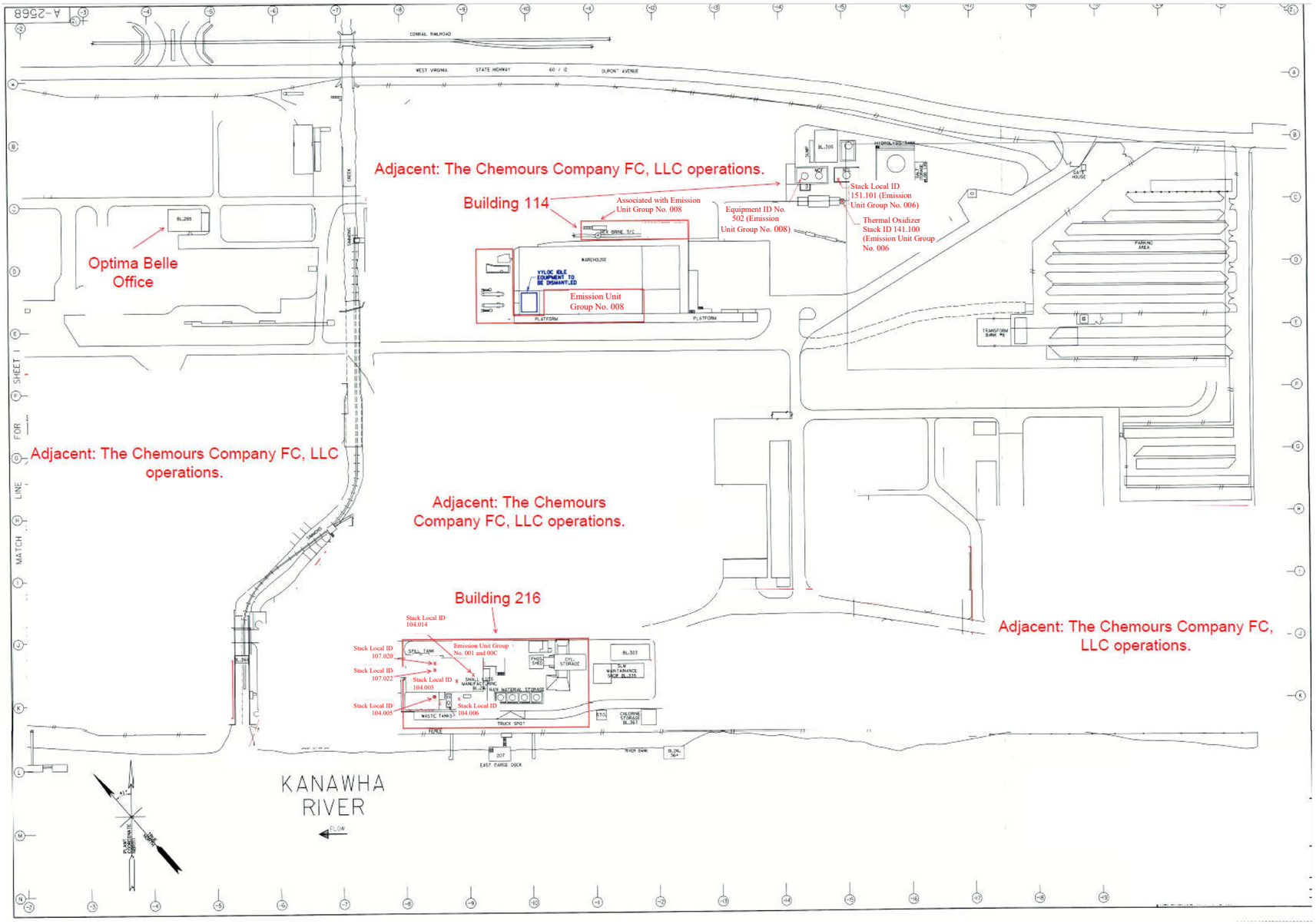
ATTACHMENT D

REGULATORY DISCUSSION

The request in this application does not modify the regulatory basis for the permit.

ATTACHMENT E

PLOT PLAN



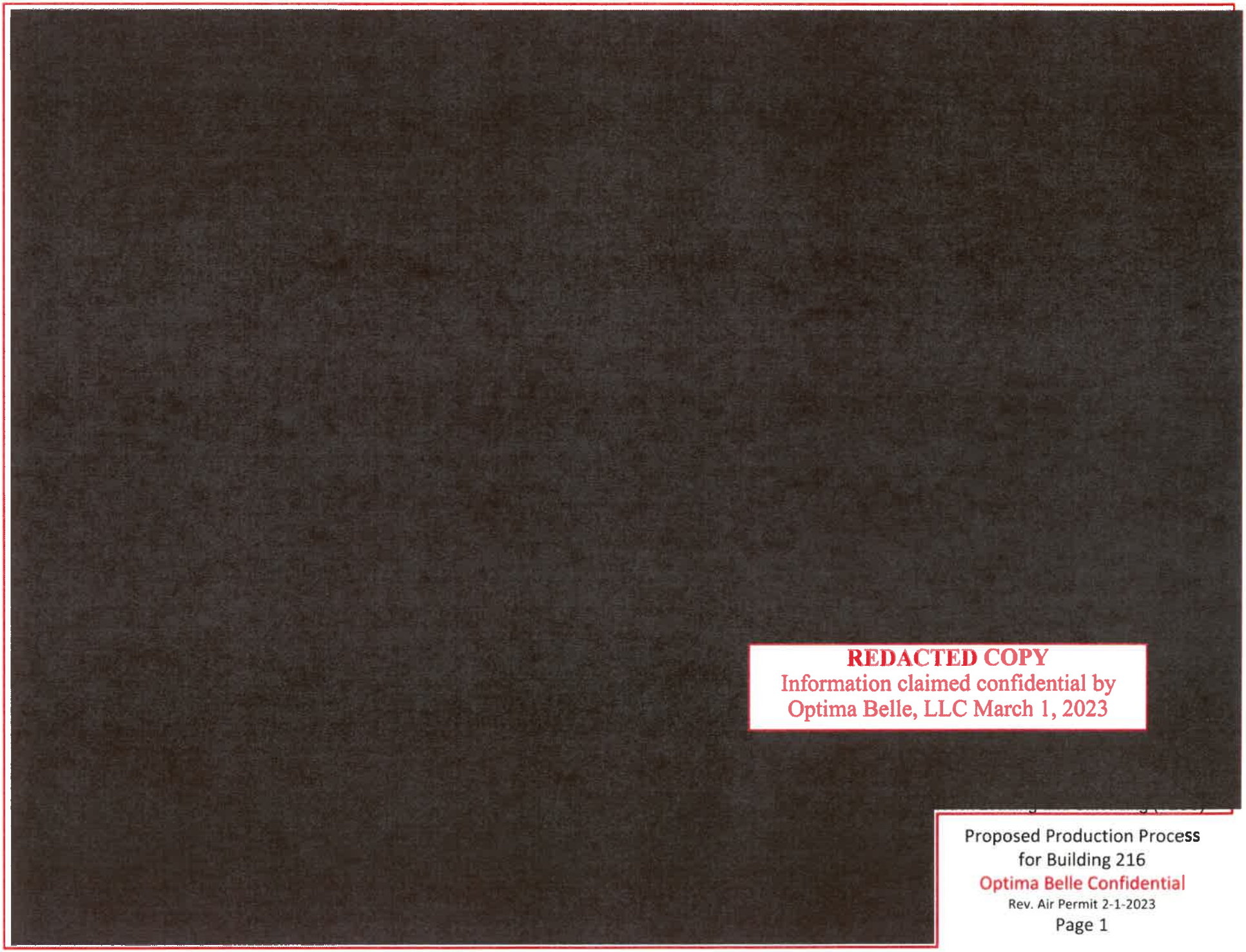
POTESTA
Engineers and Environmental Consultants

7012 MacCorkle Avenue, S.E
Charleston, West Virginia 25304
Phone: (304) 342-1400
Fax: (304) 343-9031

Optima Belle, LLC
Kanawha County, West Virginia
Project No. 0101-14-0162

ATTACHMENT F

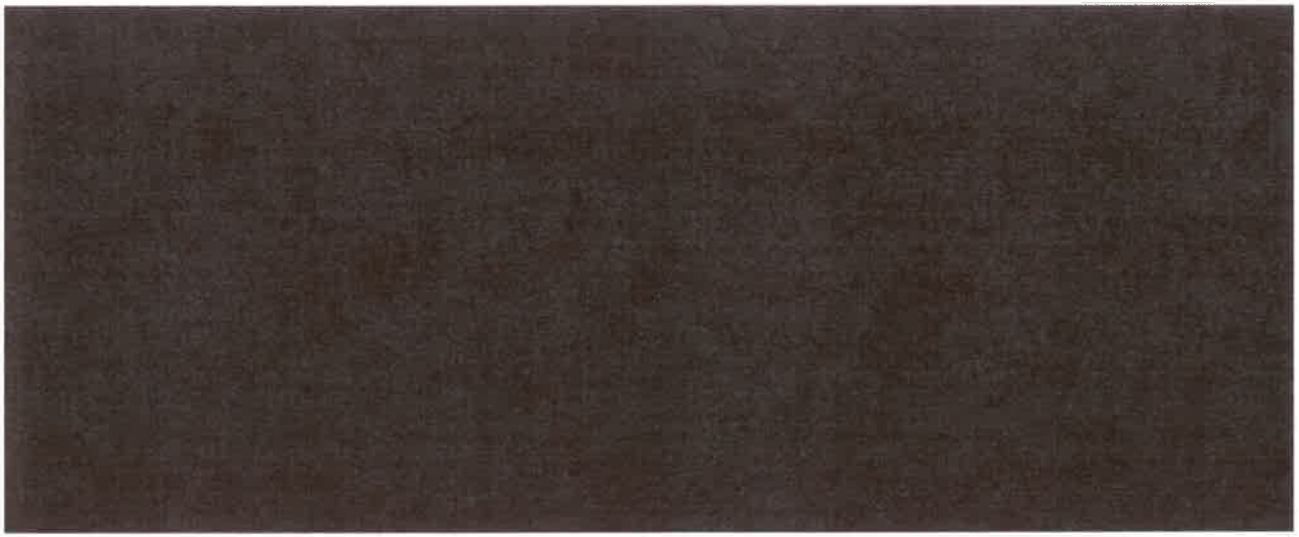
DETAILED PROCESS FLOW DIAGRAM



REDACTED COPY
Information claimed confidential by
Optima Belle, LLC March 1, 2023

Proposed Production Process
for Building 216
Optima Belle Confidential
Rev. Air Permit 2-1-2023

REDACTED COPY
Information claimed confidential by
Optima Belle, LLC March 1, 2023



Proposed Production Process
for Building 114
Optima Belle Confidential
Rev. Air Permit 2-1-2023

REDACTED COPY
Information claimed confidential by
Optima Belle, LLC March 1, 2023

ATTACHMENT G

PROCESS DESCRIPTION

ATTACHMENT G

PROCESS DESCRIPTION

Optima Belle, LLC is, by this application, requesting the ability to add to the site proposed equipment and a new proposed chemical process. Additionally, the application identifies equipment that needs to be removed from the permit as it is no longer operable and has been removed from the site. With the new equipment, Optima will return to full operational status and will be able to process the list of materials from which the potential to emit of the site is based. There is also a requested increase in the potential to emit for the new chemical process which adds new hazardous air pollutants to the permit.

Equipment to be Removed from the Permit

Equipment that was damaged in the incident with the double cone dryer in 2020 needs to be removed from the permit. This equipment is identified in Attachment I in blue. The equipment is not usable and has already been removed from the Building 216 processing area. The equipment to be removed includes one tank Xylene/Toluene Storage Tank (101), Reactor #1 (205), Reactor #8 (209), CWT Tank (227). Centrifuge Feed Tank (228), Reactor #7 (232), Double Cone Dryer (230), Reactor # 9 (233), Super Sack Unloading to Double Cone Dryer (234A, Super Sack Filling from Double Cone Dryer (235A), Caustic Storage Tank (SLM0074), Filter Dryer (236), Reactor #10 Condenser (237C) and Dust Collector 117. This equipment was damaged has been removed and will not be returned to service. We request that this equipment be removed from the permit.

New Equipment

The new equipment will be used in the same operating manner as the existing permitted equipment. Therefore, Optima can have one material in process or multiple materials in process at one time. Some of the higher volume materials such as Glypure will be in production more consistently since Optima is installing equipment which will be dedicated to mostly Glypure production. The additional list of materials that can be processed are included in Attachment L and N along with the amounts of each material that could be made in a year. These quantities have not changed, but the process units (reactors) used to make the material may change with the new equipment.

New equipment is shown in Attachment I in green. The proposed new equipment includes the relocation of Reactor #5 and its associated condenser which were placed into storage at the site when equipment had to be removed after the 2020 incident. New equipment includes Reactor #5 Stripper (219S), Alumina Column (AC1-through 3), Mole Sieve Columns (MSC1 and 2), Bag Dump Station (BDS), nine reactors (R-11, R-12, R-13, R-14, R-15, R-16, R-17, R-18, and R-19), Reactor #13 Condenser (R-13C), Rail Loading at Building 114 for HMAPS (RL114), Charge Vessels (V80 and V90), Filter Dryer (FD2), Vacuum Pump (VP), Centrifuge #2, West Cake Bin (WCB), Centrate Tank (CT), Dryer (DR), Wet Cake Conveyor (WCC), four filters (FL1-4), Truck Loading and Unloading (TLU3) and Dust Collector (DCFD).

This equipment will be utilized in the same fashion as the equipment that was removed. The equipment will allow the site to be more flexible in production and will allow certain operations more of an ability to operate as needed. Specifically, as identified on Page 3 of the Attachment F the Glypure operations will operate using Reactor #11 (R-11) and Reactor #12 (R-12) (from Page 1 of the Attachment F) and then feed to Centrifuge #2 (C2), to the Wet Cake Bin (WCB), Wet Cake Conveyor (WCC), then to Dryer (DR) and then the final product is finished. Material from the Centrifuge is sent to the Centrate Tank (CT) and then to truck. Material is also recycled to Reactor #14 (R-14). This process does not have VOCs.

As with the existing system the controls remain the same. If a reactor or other process equipment is venting materials that need to be controlled, then they will vent to the main control devices as necessary to control the emissions. The main control devices are the Main Scrubber, the Incinerator, and the Incinerator Scrubber. If a process is venting something that does not require the Main Scrubber to be operational, then the Main Scrubber can be taken off line.

The emissions estimates for production of the materials that were contained in the existing permit submissions are still appropriate for the production of the same batch sizes and yearly quantities and are, therefore, sufficient for the process emissions if the existing or new equipment is used to make or process the materials.

New Material Production

HMAPS is a product that is a low molecular weight polystyrene. The polymer is used as a backbone for a fire retardant compound. HMAPS is being proposed to be produced and the equipment specific to that production is shown on the process flow diagram. Emissions from the processing of the material will include VOC, styrene, and ethylbenzene. The emissions estimate for the process is shown in Attachment N. As with the existing potential to emit, the emissions for HMAPS production is based on Emissions Masters modeling of the process. Since these are new emissions and new hazardous air pollutants, the emissions are added to the existing potential to emit for the site. An SDS for HMAPS is included in Attachment H. This is a batch process. More than one batch can be in process at a time. See the materials that are used to make HMAPS in Attachment L, Page L1.

As with the other equipment at the site, if HMAPS is not in production, the equipment identified for HMAPS production will be used in the production of other materials. The equipment being identified for HMAPS production is six reactors (R-5, R-11, R-12, R-14, R-15, and R-19), Reactor 5 Stripper (219S), and Reactor 5 Condenser (219C), Mol Sieve Columns (MSC1 and 2), Alumina Columns (AC1-3) and filters (Filters 1 through 7 (FL1 through FL7).

VOC Control Devices

The main process control devices will continue to be the existing Main Scrubber (003), the Incinerator (009), and the Incinerator Scrubber (010). These are existing control devices at the site and will be used to control the emissions consistent with the existing requirements.

ATTACHMENT H

MATERIAL AND SAFETY DATA SHEETS (MSDS)

ALBEMARLE®

SAFETY DATA SHEET

HMAPS

Preparation Date : No data available **Revision Date:** 18-Mar-2019 **Revision Number** 1.01

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Name HMAPS

Other means of identification

Recommended use of the chemical and restrictions on use

General function Intermediate.

Uses advised against No information available

Details of the supplier of the safety data sheet

Company Albemarle Corporation
451 Florida Street
Baton Rouge, LA 70801

For Non-Emergency 800-535-3030

'Competent Body for SDS' HSE@Albemarle.com

Emergency telephone number

Emergency Telephone Numbers In case of emergency, call Albemarle emergency response at +1 225 344 7147

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin Corrosion/irritation	Category 2
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3 - (H336)
Specific target organ toxicity (repeated exposure)	Category 2
Aspiration toxicity	Category 1
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1
Flammable liquids	Category 2

Label elements

Emergency Overview

Danger

Hazard Statements
Harmful if inhaled
Causes skin irritation
Suspected of causing cancer
May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure
Very toxic to aquatic life with long lasting effects
May be fatal if swallowed and enters airways
Highly flammable liquid and vapor

Physical state Liquid **Color** Clear. to Cloudy **Odor** Organic

Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
Do not breathe dust/fume/gas/mist/vapors/spray
Avoid release to the environment
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Keep cool

Response
IF exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If skin irritation occurs: Get medical advice/attention
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician Do not induce vomiting
In case of fire: Use CO2, dry chemical, or foam for extinction
Collect spillage

Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable
Other Information
No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture Mixture

Component	CAS-No	Weight %
Polystyrene	9003-53-6	40-60
Ethylbenzene	100-41-4	0-45
Cyclohexane	110-82-7	0-45

Note: The exact concentrations of the above listed chemicals are being withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

General Advice IF exposed or concerned: Get medical advice/attention.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before re-use.

Inhalation IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

Ingestion IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms Harmful if inhaled. Causes skin irritation. Suspected of causing cancer. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media Carbon dioxide, dry chemicals, foam, water spray (fog).

Unsuitable Extinguishing Media No information available.

Specific Hazards Arising from the Chemical

Combustion/explosion hazards Highly flammable liquid and vapour.

Explosion Data

Sensitivity to mechanical impact None.

Sensitivity to static discharge The vapors of this product can be ignited by static electrical energy.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Keep away from heat/sparks/open flames/hot surfaces. - No smoking Ground/bond container and receiving equipment Use explosion-proof electrical/ventilating/lighting/equipment Take precautionary measures against static

discharges Avoid contact with the skin and the eyes. Use personal protective equipment. Use only outdoors or in a well-ventilated area

Environmental Precautions

Environmental precautions Do not allow material to enter soil or surface water

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning up Absorb spillage to prevent material damage Clean contaminated surface thoroughly Take precautionary measures against static discharges

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Avoid contact with skin, eyes and clothing Use only outdoors or in a well-ventilated area Wash face, hands and any exposed skin thoroughly after handling Do not breathe vapours or spray mist. Do not eat, drink or smoke when using this product Remove all sources of ignition. Ground/bond container and receiving equipment Use explosion-proof electrical/ventilating/lighting/equipment Use only non-sparking tools Take precautionary measures against static discharges

Conditions for safe storage, including any incompatibilities

Storage Protect from sunlight and store in well-ventilated place. Keep container tightly closed. Store locked up.

Incompatible Materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Component	CAS-No	ACGIH TLV (TWA)	OSHA PEL (TWA)	NIOSH IDLH
Polystyrene	9003-53-6	-	-	-
Ethylbenzene	100-41-4	TWA: 20 ppm	TWA: 100 ppm TWA: 435 mg/m³ (vacated) TWA: 100 ppm (vacated) TWA: 435 mg/m³ (vacated) STEL: 125 ppm (vacated) STEL: 545 mg/m³	IDLH: 800 ppm TWA: 100 ppm TWA: 435 mg/m³ STEL: 125 ppm STEL: 545 mg/m³
Cyclohexane	110-82-7	TWA: 100 ppm	TWA: 300 ppm TWA: 1050 mg/m³ (vacated) TWA: 300 ppm (vacated) TWA: 1050 mg/m³	IDLH: 1300 ppm TWA: 300 ppm TWA: 1050 mg/m³

Component	CAS-No	Alberta	British Columbia	Ontario	Quebec
Polystyrene	9003-53-6	-	-	-	-
Ethylbenzene	100-41-4	TWA: 100 ppm TWA: 434 mg/m³ STEL: 125 ppm STEL: 543 mg/m³	TWA: 20 ppm	TWA: 20 ppm	TWA: 100 ppm TWA: 434 mg/m³ STEL: 125 ppm STEL: 543 mg/m³
Cyclohexane	110-82-7	TWA: 100 ppm TWA: 344 mg/m³	TWA: 100 ppm	TWA: 100 ppm	TWA: 300 ppm TWA: 1030 mg/m³

Appropriate engineering controls

Engineering Controls Showers.
Eyewash stations.
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face Protection Chemical goggles or safety glasses.

Skin Protection	Wear protective gloves/clothing.
Hand protection	Gloves resistant to chemical permeation.
Respiratory protection	Whenever workplace conditions warrant, wear properly fitted, approved respirator with high-efficiency (dust/fume/mist) filter cartridges.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Color	Clear. to Cloudy
Odor	Organic
Odor Threshold	No data available
Molecular Weight	No data available
pH	Essentially neutral
Melting point/freezing point	liquid at room temperature
Boiling Point/Range	60 °C / 140 - °F
Flash Point	-20 °C (Cyclohexane)
Evaporation Rate	No data available.
Flammability (solid, gas)	No data available
Flammability Limit in Air	
Upper flammability limit:	No data available
Lower flammability limit:	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Density	98 kg/m³ (Bulk Density)
Solubility(ies)	
Water Solubility	Insoluble
Solubility in other solvents	No data available
Partition coefficient	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Viscosity, kinematic	<6000 cSt
Dynamic viscosity	No data available
Explosive Properties	No data available
Oxidizing Properties	No data available

10. STABILITY AND REACTIVITY

Reactivity Hazard	No data available.
Stability	Stable under normal conditions.
Hazardous Reactions	No hazardous reaction expected under normal handling.
Conditions to Avoid	Keep away from heat and sources of ignition.
Materials to avoid	Oxidizing agents.
Hazardous decomposition products	None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation Harmful if inhaled. May cause drowsiness or dizziness.

Eye contact May cause slight irritation.

Skin contact Causes skin irritation.

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

Potential Health Effects

Acute Effects

Skin Corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Slightly irritating but not sufficient for classification.

Respiratory irritation No information available

Sensitization: No information available.

STOT - single exposure May cause drowsiness or dizziness.

Chronic Effects

Mutagenic Effects No information available.

Carcinogenicity This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), potentially carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Component	CAS-No	ACGIH Carcinogens	IARC	NTP	OSHA Carcinogens
Polystyrene	9003-53-6	-	Group 3	-	-
Ethylbenzene	100-41-4	A3	Group 2B	-	X
Cyclohexane	110-82-7	-	-	-	-

Reproductive Effects No information available.

STOT - repeated exposure No information available.

Chronic Effects No information available

Aspiration hazard May be fatal if swallowed and enters airways.

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 2059 mg/kg
ATEmix (dermal) 2153 mg/kg
ATEmix (inhalation-dust/mist) 1.5 mg/L
ATEmix (inhalation-vapor) 32.9 mg/L

Component Information

Component	Rat Oral LD50:	Rabbit Dermal LD50:
Ethylbenzene 100-41-4	3500 mg/kg	15500 mg/kg
Cyclohexane 110-82-7	> 5000 mg/kg	> 2000 mg/kg

Component	Rat Dermal LD50 :	Rat Inhalation LC50:
Ethylbenzene 100-41-4 (0-45)		17.2 mg/L (4 h)
Cyclohexane 110-82-7 (0-45)		>32.88 mg/L (4 h)

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects

Component	Freshwater Algae EC50/72h :	Freshwater Fish LC50/96h :	Water Flea EC50/48h :
Ethylbenzene (CAS #: 100-41-4)	4.6mg/L Selenastrum capricornutum	94.44 mg/L	1.8 - 2.9 mg/l
Cyclohexane (CAS #: 110-82-7)	500 mg/l	4.53 mg/l	0.9 mg/l

Persistence/Degradability No information available.

Bioaccumulation/ Accumulation No information available.

Mobility in Environmental Media No information available.

Component	Partition coefficient
Ethylbenzene 100-41-4	3.118
Cyclohexane 110-82-7	3.44

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Method Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Do not reuse container.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name	Flammable liquid, n.o.s. (Cyclohexane, Ethyl Benzene)
Hazard Class	3
UN No.	1993
Packing Group	II
Description	UN 1993, Flammable Liquid N.O.S (Cyclohexane, Ethyl Benzene), 3, II, RQ Marine pollutant

TDG

This material is considered as Dangerous Goods per regulations of Transport Canada. The use of the above US DOT information from US 49 CDR regulations is allowed for shipments that originate in the United States.

IMDG/IMO

IMO Class	3
Packing Group	II
UN-No	1993
IMO Labelling and Marking	3 + Marine pollutant mark
Proper Shipping Name	Flammable liquid, n.o.s. (Cyclohexane)
EmS	No information available
Marpol - Annex II	Not determined
Marpol - Annex III	Not determined
Transport Description	UN 1993, Flammable Liquid N.O.S (Cyclohexane), 3, II, Marine Pollutant

IATA/ICAO

IATA/ICAO Class	3
Packing Group	II
UN-No	1993
IATA/ICAO Labelling/Marking	Flammable liquid + Marine pollutant
Passenger Aircraft	Maximum net quantity per package: 5 L
Cargo aircraft only	Maximum net quantity per package: 60 L
Proper shipping name	Flammable liquid, n.o.s. (Cyclohexane)
Transport Description	UN 1993, Flammable Liquid N.O.S (Cyclohexane), 3, II, Marine Pollutant

15. REGULATORY INFORMATION

International Inventories	TSCA	DSL	NDSL	AICS	EINECS	ENCS	KECL	PICCS	IECSC	NZIoC	TCSI
HMAPS	X	X	-	X	-	X	X	X	X	X	X

(X) Complies (-) Does not Comply

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	Weight %	SARA 313 - De minimis
Ethylbenzene (CAS #: 100-41-4)	0-45	0.1
Cyclohexane (CAS #: 110-82-7)	0-45	1.0

SARA 311/312 Hazardous Categorization
Reportable and Threshold Planning Quantities

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Component	CERCLA RQ, lbs	SARA 302 RQ, lbs	SARA 302 TPQ, lbs
Ethylbenzene (CAS #: 100-41-4)	1000 lb	-	-
Cyclohexane (CAS #: 110-82-7)	1000 lb	-	-

State Right-to-Know

No components subject to "Right-To-Know" legislation in the following States; California, Massachusetts, New Jersey, and

Pennsylvania.

Component	California Prop. 65	New Jersey	Massachusetts	Pennsylvania
Ethylbenzene (CAS #: 100-41-4)	Carcinogen	X	X	X
Cyclohexane (CAS #: 110-82-7)	-	X	X	X

16. OTHER INFORMATION

NFPA	Health 2	Flammability 3	Instability 0	Physical Hazards -
HMIS	Health 2 *	Flammability 3	Physical Hazards 0	

Prepared By Health & Environment DepartmentAlbemarle Corporation

FOR ADDITIONAL NONEMERGENCY PRODUCT INFORMATION, CONTACT:

HEALTH AND ENVIRONMENT DEPARTMENT
ALBEMARLE CORPORATION
451 FLORIDA ST.
BATON ROUGE, LA. 70801
(800) 535-3030

Revision Date: 18-Mar-2019

Disclaimer:

The information contained herein is accurate to the best of our knowledge. The Company makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances.

End of Safety Data Sheet

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)
BUILDING 216 Blue = Remove Green = New/Change

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type[3] and Date of Change	Control Device[4] (See Note)
012	104.014	-20 Brine Tank	1999	<20,000 gal	Existing	Incinerator Incinerator Scrubber
013	104.006	-30 Brine Tank	1977	<20,000 gal	Existing	None
101	104.014	Xylene/Toluene Storage Tank	1980	<20,000 gal	Remove	Incinerator, Incinerator Scrubber
103	104.014	BI Tank	2002	7,400 gal	Existing	Main Scrubber (See Note on Page I5) Incinerator
104	104.014	Methanol Tank	2005	<20,000 gal	Existing	Incinerator Incinerator Scrubber
108	104.014	Flammable Waste Tank	1961	1,900 gal	Existing	Main Scrubber Incinerator Incinerator Scrubber
108L	104.014	Transfer Rack	1968	NA	Existing	Incinerator Incinerator Scrubber
109	104.014	Extraction Tank/Reactor #4	2019	2,000 gal	Existing	Incinerator Incinerator Scrubber
109L/ WWL	104.014	Transfer Rack	1968	NA	Existing	Incinerator Incinerator Scrubber
112	104.014	J Tank	1951	8,000 gal	Existing	Incinerator Incinerator Scrubber
114A	104.003	Reactor #3 Change Hopper	2005	360 cfh	Existing	Dust Collector 114
115A	104.003B	Reactor #6 Charge Hopper	NA	NA	Existing	Dust Collector 115

Note: The main scrubber is an acid gas scrubber. It will only be used if a process is generating acid gases. If the process does not generate acid gases, the main scrubber will not be in operation. The incinerator scrubber shall only be used when the incinerator is generating acid gases from the combustion of halogenated or sulfur containing compounds.

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.

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116A	107.020	Solids Charge Station	NA	NA	Existing	Dust Collector 116
901	104.014	Bulk Liquid Transfer	1981	NA	Existing	Incinerator Incinerator Scrubber
002	104.014	Paddle Dryer	1977	500 pph	Existing	Dryer Condenser Incinerator
235A	107.03	Super Sack Loading from Paddle Dryer	1977	NA	Existing	Dust Collector 023
004	104.014	Dryer Condenser	1977	113 cu ft	Existing	Incinerator
201	104.014	Centrifuge	1961	500 pph	Existing	Incinerator Incinerator Scrubber
201A	104.014	Wet Cake Bin	NA	NA	Existing	Incinerator Incinerator Scrubber
202	104.014	M/L Disengaging Tank	1988	925 gal	Existing	Incinerator Incinerator Scrubber
203	104.014	Reactor #3	NA	2,000 gal	Existing	Incinerator Incinerator Scrubber
203C	104.014	Reactor #3 Condenser	1977	NA	Existing	Incinerator Incinerator Scrubber
205	104.014	Reactor #1	1988	750 gal	Existing	Main Scrubber Incinerator Incinerator Scrubber
206	104.014	Reactor #2	1977	2,000 gal	Existing	Incinerator Incinerator Scrubber
206PC	104.014	Reactor #2 Primary Condenser	1980	NA	Existing	Incinerator Incinerator Scrubber
206SC	104.014	Reactor #2 Secondary Condenser	1983	NA	Existing	Incinerator Incinerator Scrubber
208	104.014	Reactor #6	1977	4,000 gal	Existing	Main Scrubber (During Reaction Step Only) Incinerator Incinerator Scrubber

Note: The main scrubber is an acid gas scrubber. It will only be used if a process is generating acid gases. If the process does not generate acid gases, the main scrubber will not be in operation. The incinerator scrubber shall only be used when the incinerator is generating acid gases from the combustion of halogenated or sulfur containing compounds.

1 For Emission Units (or Sources) use the following numbering system: 1S, 2S, 3S,or other appropriate designation.
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208C	104.014	Reactor #6 Condenser	NA	NA	Existing	Main Scrubber Incinerator Incinerator Scrubber
209	104.014	Reactor #8	1977	4,000 gal	Remove	Main Scrubber Incinerator Incinerator Scrubber
210	107.022	Product Packout	2005	825 scfh	Existing	Dust Collector
219	104.014	Reactor #5	1984	2,000 gal	Relocated See Page I6	Main Scrubber Incinerator Incinerator Scrubber
219C	104.014	Reactor #5 Condenser	1987	NA	Relocated See Page I6	Main Scrubber Incinerator Incinerator Scrubber
226	104.014	Caustic Tank	1988	8,000 gal	ISO Tank Storing Caustic	Incinerator Incinerator Scrubber
227	104.014	CWT Tank	2005	8,000 gal	Remove	Incinerator Incinerator Scrubber
228	104.014	Centrifuge Feed Tank	2016	500 gal	Existing	Incinerator Scrubber
229	104.014	Tanker Truck	2016	NA	Existing	Incinerator Scrubber
232	104.014	Reactor #7	2016	2,000 gal	Remove	Incinerator Scrubber
232C	104.014	Reactor #7 Condenser	2016	NA	Existing	Incinerator Scrubber

Note: The main scrubber is an acid gas scrubber. It will only be used if a process is generating acid gases. If the process does not generate acid gases, the main scrubber will not be in operation. The incinerator scrubber shall only be used when the incinerator is generating acid gases from the combustion of halogenated or sulfur containing compounds.

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.

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230	104.014	Double Cone Dryer	2016	165 CF	Remove	Incinerator Incinerator Scrubber
233	104.014	Reactor #9	2016	NA	Remove	Incinerator
234A	107.03	Super Sack Unloading to Double Cone Dryer	2016	NA	Remove	Dust Collector 116
235A	107.03	Super Sack Filling from Double Cone Dryer	2016	NA	Remove	Dust Collector 117
Fugitive	Fugitive	One (1) Filter	2016	NA	Existing	None
Fugitive	Fugitive	Two (2) Polish Filter (Change Outs)	NA	NA	Existing	None
SLM0056	NA	Caustic Weigh Tank (Insignificant/de Minimis Source)	2017	800 gal	Existing	NA
SLM0071	NA	Caustic Weigh Tank (Insignificant/de Minimis Source)	2017	800 gal	Existing	NA
SLM0070	104.014	Dean-Stark Tank	2017	200 gal	Existing	Incinerator Incinerator Scrubber
SLM0074	NA	Caustic Storage Tank	1980	NA	Remove	NA
234B	107.03	Super Sack Loading to Filter Dryer	2018	NA	Existing	Dust Collector 116 or 117
235C	107.03	Super Sack Filling from Filter Dryer	2018	NA	Existing	Dust Collector 116 or 117

Note: The main scrubber is an acid gas scrubber. It will only be used if a process is generating acid gases. If the process does not generate acid gases, the main scrubber will not be in operation. The incinerator scrubber shall only be used when the incinerator is generating acid gases from the combustion of halogenated or sulfur containing compounds.

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.

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236	104.014	Filter Dryer	2018	NA	Remove	Main Scrubber, Incinerator, Incinerator Scrubber
237	104.014	Reactor #10	2018	NA	Existing	Main Scrubber, Incinerator, Incinerator Scrubber
237C	104.014	Reactor #10 Condenser	2018	NA	Remove	Main Scrubber, Incinerator, Incinerator Scrubber
108L-A	108LA	Drum/Tote Filling Locations Scale	1961	NA	Existing	NA
108L-B	108L-B	Drum/Tote Filling Reactors (Various) 1st Floor	1961	NA	Existing	NA
108L-C	108L-C	Drum/Tote Filling Reactor 10	2018	NA	Existing	NA
108L-D	108L-D	Drum/Tote Filling Flammable Waste Tank	1961	NA	Existing	NA
New Equipment						
219	104-014	Reactor #5	1984/2023	2,000 gal	Relocated	Main Scrubber, Incinerator, Incinerator Scrubber
219S	104-014	Reactor #5 Stripper	2023	NA	New	Main Scrubber, Incinerator, Incinerator Scrubber
219C	104-014	Reactor #5 Condenser	1989/2023	NA	Relocated	Main Scrubber, Incinerator, Incinerator Scrubber
AC1-3	AC1-3	Alumina Columns	2023	NA	New	NA
MSC1-2	MSC1-2	Mole Sieve Columns	2023	NA	New	NA
BDS	BDS	Bag Dump Station	2023	NA	New	DC

Note: The main scrubber is an acid gas scrubber. It will only be used if a process is generating acid gases. If the process does not generate acid gases, the main scrubber will not be in operation. The incinerator scrubber shall only be used when the incinerator is generating acid gases from the combustion of halogenated or sulfur containing compounds.
[1]During Glypure production, the emission source vents directly to atmosphere.
K* This is a normal emission point for the emission units listed above. The "K*" has been added to indicate that this emission point is the Krovar® Technical process, the sources vent directly to the atmosphere.
Pumps and Heat Exchangers shown on drawings but not listed herein as sources.

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.
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R-11	104-014	Reactor #11	2023	4,000 gal	New	Main Scrubber, Incinerator, Incinerator Scrubber
R-12	104-014	Reactor #12	2023	4,000 gal	New	Main Scrubber, Incinerator, Incinerator Scrubber
R-13	104-014	Reactor #13	2023	3,000 gal	New	Main Scrubber, Incinerator, Incinerator Scrubber
R-13C	104-014	Reactor #13 Condenser	2023	NA	New	Main Scrubber, Incinerator, Incinerator Scrubber
R-14	104-014	Reactor #14	2023	2,000 gal	New	Main Scrubber, Incinerator, Incinerator Scrubber
R-15	104-014	Reactor #15	2023	4,000 gal	New	Main Scrubber, Incinerator, Incinerator Scrubber
R-16	104-014	Reactor #16	2023	4,000 gal	New	Main Scrubber, Incinerator, Incinerator Scrubber
R-17	104-014	Reactor #17	2023	4,000 gal	New	Main Scrubber, Incinerator, Incinerator Scrubber
R-18	104-014	Reactor #18	2023	4,000 gal	New	Main Scrubber, Incinerator, Incinerator Scrubber
R-19	104-014	Reactor #19	2023	4,000 gal	New	Main Scrubber, Incinerator, Incinerator Scrubber
RL114	104-014	Rail Loading at Building 114	Existing/2023	NA	Existing	Vapor Returned to R-14 Main Scrubber, Incinerator, Incinerator Scrubber
V80	104-014	Charge Vessel V80	2023	750 gal	New	Main Scrubber, Incinerator, Incinerator Scrubber

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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 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)
Blue = Remove Green = New/Change

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type[3] and Date of Change	Control Device[4] (See Note)
V90	104-014	Charge Vessel V90	2023	750 gal	New	Main Scrubber, Incinerator, Incinerator Scrubber
FD2	FD2	Filter Dryer 2	2023	5.0 sq meter	New	Dust Collector Vapor to R-13
VP	104-014	Vacuum Pump	2023	NA	New	Main Scrubber, Incinerator, Incinerator Scrubber
C2	C2	Centrifuge #2	2023	NA	New	NA
WCB	WCB	Wet Cake Bin	2023	NA	New	NA
CT	CT	Centrate Tank	2023	6,000 gal	New	NA
DR	DR	Dryer	2023	150 cu ft	New	Vapor to R-14
WCC	WCC	Wet Cake Conveyor	2023	NA	New	NA
FL1	FL1	Filter 1	2023	NA	New	NA
FL2	FL2	Filter 2	2023	NA	New	NA
FL3	FL3	Filter 3	2023	NA	New	NA
FL4	FL4	Filter 4	2023	NA	New	NA
FL5	FL5	Filter 5	2023	NA	New	NA
FL6	FL6	Filter 6	2023	NA	New	NA
FL7	FL7	Filter 7	2023	NA	New	NA
TLU3	TLU3	Truck Loading and Unloading	2023	NA	New	NA

Note: The main scrubber is an acid gas scrubber. It will only be used if a process is generating acid gases. If the process does not generate acid gases, the main scrubber will not be in operation. The incinerator scrubber shall only be used when the incinerator is generating acid gases from the combustion of halogenated or sulfur containing compounds.

[1]During Glypure production, the emission source vents directly to atmosphere.

K* This is a normal emission point for the emission units listed above. The "K*" has been added to indicate that this emission point is the Krovar® Technical process, the sources vent directly to the atmosphere.

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 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)
Blue = Remove Green = New/Change

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type[3] and Date of Change	Control Device[4] (See Note)
Control Devices						
023	107.022	Dust Collector	2005 (replacement)	250 cfm	Existing	NA
117	107.03	Dust Collector	2016	1,200 cfm	Existing	NA
116	107.020	Dust Collector	1988	2,800 cfm	Existing	NA
115	104.003B	Dust Collector	1978	1,300 cfm	Existing	NA
009	104.014	Incinerator	1977	10 MMBtu/hr	Existing	NA
010	104.014	Incinerator Scrubber (See Note)	1977	80 gpm	Existing	NA
003	104.014	Main Scrubber (See Note)	2007	60 gpm	Existing	NA
004	104.014[1] 104.014K*	Dryer Condenser	1977	113 cu ft	Existing	NA
114	104.003	Dust Collector	2001	400 cfm	Existing	NA
DCFD	DCFD	Dust Collector	2023	NA	New	NA

Note: The main scrubber is an acid gas scrubber. It will only be used if a process is generating acid gases. If the process does not generate acid gases, the main scrubber will not be in operation. The incinerator scrubber shall only be used when the incinerator is generating acid gases from the combustion of halogenated or sulfur containing compounds.
[1]During Glypure production, the emission source vents directly to atmosphere.
K* This is a normal emission point for the emission units listed above. The "K*" has been added to indicate that this emission point is the Krovar® Technical process, the sources vent directly to the atmosphere.

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 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)
BUILDING 114 Blue = Remove Green = New/Change

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type[3] and Date of Change	Control Device[4] (See Note)
HK004	141.004	Tank Wagon Storage	H: 1975 K: Suppliers	H: 4,300 gal K: 5,900 gal	Existing	HKCD05
HK006	141.012	Tank Car or Truck Storage	Suppliers	20,000 gal 5,000 gal	Existing	HKCD06
HK007	141.007	Tank Car	2005	NA	Existing	None
HK008	141.008	Tank Car	2005	NA	Existing	None
HK009	141.009	Storage Tank	1947	18,000 gal	Existing	None
HK010	141.010	Column	1970	550 gal	Existing	None
HK013	141.013	Tank	1978	2,000 gal	Existing	None
HK014	141.014	Tank	1970	3,950 gal	Existing	None
HK015	141.015	Non-VOC Storage Tank	1987	51,000 gal	Existing	None
HK016	141.016	Tank	1975	410 gal	Existing	None
HK101	141.001	Reactor	2003 (replacement)	4,000 gal	Existing	HKCD03
HK102	141.100	Condenser	1974	91 sq. ft.	Existing	HKCD01 HKCD02
HK103	141.100	Reactor	1974	2,000 gal	Existing	HKCD01 HKCD02

Note: Scrubbers shall be used when the process is generating acid gases.

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 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)
BUILDING 114 Blue = Remove Green = New/Change

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type[3] and Date of	Control Device[4] (See Note)
HK104	151.101	Non-VOC Storage Tank	2004 (replacement)	35,000 gal	Existing	HKCD04
HK105	NA	Column Cooler	1974	70 sq. ft.	Existing	NONE
HK106	141.002	Product Loading	1982	150 GPM	Existing	NONE
HK107	NA	Building Blower	2010	3,162 cfm	Existing	NONE
HK108	141.011	Non-VOC Storage Tank	1987	17,500 gal	Existing	HKCD10
Control Devices						
HKCD01	141.100	Thermal Oxidizer	1998	7.5 MMBt/hr	Existing	NA
HKCD02	141.100	Thermal Oxidizer Scrubber	1998	150 gal/min	Existing	NA
HKCD03	141.001	Scrubber	2008	205 gal	Existing	NA
HKCD04	151.101	Tank Scrubber	2004	300 cfm	Existing	NA
HKCD05	141.004	Scrubber	1974	10 GPM	Existing	NA
HKCD06	141.012	Scrubber	2002	25 GPM	Existing	NA
HKCD07	141.100	Tank	1975	160,000 gal	Existing	NA
HKCD08	141.100	Column	1975	15,000 lb/hr	Existing	NA
HKCD09	141.011	Scrubber	1970	5 GPM	Existing	NA
HKCD10	141.012	Carbon Absorber	2005	NA	Existing	NA

Note: Scrubbers shall be used when the process is generating acid gases.

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
BUILDING 216

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table-& Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions [4]		Maximum Potential Controlled Emissions [5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used [6]	Emission Concentration [7] (ppmv or mg/m[4])
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
Building 216 Small Lots Manufacturing , Process Emissions (See Attachment I)	Upward Vertical	See Attachment I		See Attachment I		NA	NA	PM	4.00	5.88	4.00	5.88	Gas and Solids	EE/AP -42	NA
								PM10	1.91	3.06	1.91	3.06			
								PM2.5	0.28	1.11	0.28	1.11			
								SO_2	261.53	354.28	0.03	0.09			
								VOC	321.75	109.71	22.89	13.38			
								Acetonitrile	1.35	0.35	0.05	0.02			
								Benzene	0.14	0.04	0.01	0.01			
								Butyl Carbitol	0.01	0.01	0.01	0.01			
								Catechol	0.16	0.03	0.16	0.03			
								Chromium Compounds	0.89	0.05	0.89	0.05			
								Ethylbenzene	0.26	0.05	0.0052	0.00096			
								Hexane	15.46	0.50	0.96	0.27			
								Hydrogen Chloride	524.63	403.14	0.06	0.05			
								Methanol	12.40	10.90	4.77	2.92			
								Methylene Chloride	1.88	0.23	1.87	0.23			
								Methyl Tert-Butyl Ether	46.06	8.03	0.86	0.19			
								p-Xylene	0.04	0.02	0.04	0.01			
								Styrene	0.001	0.001	0.00003	0.00002			
								Titamium Tetrachloride	0.79	0.12	0.01	0.01			
								Toluene	87.96	23.55	1.77	0.34			
								HAPS (MAX)	619.44	429.85	7.76	3.35			
104.014	Upward Vertical	Incinerator Combustion Emissions				NA	NA	PM	0.08	0.35	0.08	0.35			
								PM10	0.08	0.35	0.08	0.35			
								PM2.5	0.08	0.35	0.08	0.35			
								PM Condensable	0.06	0.26	0.06	0.26			
								PM Filterable	0.02	0.09	0.02	0.09			
								SO2	0.01	0.04	0.01	0.04			
								NO_x	0.99	4.34	0.99	4.34			
								CO	0.83	3.64	0.83	3.64			
								VOC	0.06	0.26	0.06	0.26			
								TOC	0.11	0.48	0.11	0.48			
								HAPS	0.02	0.08	0.02	0.08			

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 (i.e., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

3 List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS2, VOCs, H2S, Inorganics, Lead, Organics, O3, NO, NO2, SO2, SO3, 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 the 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).

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. (^{o}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
Various								

[1] Give at operating conditions. Include inerts.
[2] Release height of emissions above ground level.

ATTACHMENT L

EMISSION UNIT DATA SHEETS

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Information claimed confidential by
Optima Belle, LLC March 1, 2023.

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): Various (See Attachment I)

1. Name or type and model of proposed affected source:

   Building 216 Small Lots Manufacturing (SLM) – HMAPS Manufacturing – the equipment to manufacture this material is shown on Page 1 of the process flow diagrams in Attachment F. The equipment includes six reactors (R-5, R-11, R-12, R-14, R-15, and R-19), Reactor 5 Stripper (219S), and Reactor 5 Condenser (219C), Mol Sieve Columns (MSC1 and 2), Alumina Columns (AC1-3) and 7 filters (FL1 through 7). This equipment will also be used to process other materials/chemicals that the site manufactures. The emissions are controlled with the existing Incinerator (009) and Incinerator Scrubber (010).

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

   HMAPS: Total Batches per year: [redacted] Single Batch Time: [redacted] (approximated)
   Batch Loading: [redacted]

4. Name(s) and maximum amount of proposed material(s) produced per hour:

   HMAPS of [redacted]

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   [redacted]

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

N/A

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a.	NO_X	NA	lb/hr	NA	grains/ACF
b.	SO_2	NA	lb/hr	NA	grains/ACF
c.	CO	NA	lb/hr	NA	grains/ACF
d.	PM_{10}	NA	lb/hr	NA	grains/ACF
e.	Hydrocarbons	NA	lb/hr		grains/ACF
f.	VOCs	38.64	lb/hr	NA	grains/ACF
g.	Pb	NA	lb/hr		grains/ACF
h.	Specify other(s)				
	Ethylbenzene	0.26	lb/hr	NA	grains/ACF
	Styrene	0.001	lb/hr		grains/ACF
			lb/hr		grains/ACF
			lb/hr		grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. 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
None	Amount of product manufactured.
REPORTING	TESTING
None	None

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/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/AIR POLLUTION CONTROL DEVICE.

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

None.

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Information claimed confidential by
Optima Belle, LLC January 10, 2018.

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): Various (See Attachment I)

1. Name or type and model of proposed affected source:

Building 216 Small Lots Manufacturing (SLM) – Glypure Manufacturing – Glypure is an existing material that is produced at the facility. The Glypure specific equipment that is being added to manufacture this material is shown on Page 1 and 3 of the process flow diagrams in Attachment F. The equipment includes two reactors (R-11 and R-12), Centrifuge #2, West Cake Bin #2, Wet Cake Conveyor, Dryer, Centrate Tank and loading to truck. Glypure comes from the dryer. This equipment will also be used to process other materials/chemicals that the site manufactures. Glypure production does not involve regulated emissions from the process.

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

Glypure: Total Batches per year: [redacted] Single Batch Time: [redacted] (approximated)
Glypure [redacted]

4. Name(s) and maximum amount of proposed material(s) produced per hour:

Glypure [redacted]

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

NA

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

N/A

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a.	NO_X	NA	lb/hr	NA	grains/ACF
b.	SO_2	NA	lb/hr	NA	grains/ACF
c.	CO	NA	lb/hr	NA	grains/ACF
d.	PM_{10}	NA	lb/hr	NA	grains/ACF
e.	Hydrocarbons	NA	lb/hr		grains/ACF
f.	VOCs	NA	lb/hr	NA	grains/ACF
g.	Pb	NA	lb/hr		grains/ACF
h.	Specify other(s)				
	HAPs	NA	lb/hr	NA	grains/ACF
			lb/hr		grains/ACF
			lb/hr		grains/ACF
			lb/hr		grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. 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
None	Amount of product processed/dried.
REPORTING	TESTING
None	None

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/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/AIR POLLUTION CONTROL DEVICE.

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

None.

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): Various (See Attachment I)

1. Name or type and model of proposed affected source:

   Building 216 Small Lots Manufacturing (SLM) – Small Lots Rebuild Equipment – In addition to the equipment shown on Page 1 and 3 of the process flow diagrams in Attachment F which are identified above for HMAPS and Glypure production/manufacturing there are several other pieces of equipment that are being added to the permit that will be utilized in production of current and future products. This equipment includes Charging Vessels V80 and V90, four reactors (R-13, R-16, R-17, and R-18), Supersack Solids Dumping Station (BDS), Filter Dryer (FD2), and Reactor #13 Condenser (R-13C). There are also pumps and associated with this equipment. The Main Scrubber (003), Incinerator (009), and Incinerator Scrubber (010) shown on this diagram are the existing controls that exist at the site. The emissions are controlled with the existing control devices as needed.

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

   See page L13 through L15 for different material requirements.

4. Name(s) and maximum amount of proposed material(s) produced per hour:

   See page L13 through L15 for different material production.

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   The facility undertakes various chemical operations.

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

N/A

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a.	NO_X	0.99	lb/hr	NA	grains/ACF
b.	SO_2	261.54	lb/hr	NA	grains/ACF
c.	CO	0.83	lb/hr	NA	grains/ACF
d.	PM_{10}	1.99	lb/hr	NA	grains/ACF
e.	Hydrocarbons		lb/hr		grains/ACF
f.	VOCs	302.49	lb/hr	NA	grains/ACF
g.	Pb		lb/hr		grains/ACF
h.	Specify other(s)				
	HAPs See Attachment N, Page N1, for a list of individual HAPs.	619.33	lb/hr	NA	grains/ACF
			lb/hr		grains/ACF
			lb/hr		grains/ACF
			lb/hr		grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. 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
None	Amount of product processed/dried.
REPORTING	TESTING
None	None

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/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/AIR POLLUTION CONTROL DEVICE.

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

None.

Multi-Reactor Processes

Negolyte

[redacted]

Negolyte (liquid): [redacted]

Undried LAME

[redacted]

L-Alanine Methyl Ester (LAME): [redacted]
Hydrogen Chloride: [redacted]
SO2: [redacted]

Dried LAME

[redacted]

L-Alanine Methyl Ester (LAME): [redacted]
Hydrogen Chloride: [redacted]
SO2: [redacted]

Sclareol
Batch Loading: Sclareol (Crude) Approximately [redacted]
Sclareol (Product) Approximately [redacted]

Sodium Tetraphenylborate (STPB)
Batch Loading:

[redacted]

STPB: [redacted]

D-Mannose

[redacted]

D-Mannose (dried): [redacted]

Single Reactor Process

Trimethoxyboroxine (TMBX)
Batch Loading:
[redacted]
TMBX: [redacted]

Sodium Butyl Carbitol
[redacted]
Sodium Butyl Carbitol (per batch): [redacted]
Water: [redacted]

HMA
[redacted]
HMA: [redacted]

Double Cone Dryer Processes

Catofin: Total Batches per year: 182
[redacted]

T2960
[redacted]

SR-1000.
[redacted]

Catofin: [redacted] Catofin 331
T2960: [redacted] T-2960 Catalyst
SR-1000: [redacted] SR-1000

CN-3624:
Batch Loading: [redacted] wetcake and [redacted] dried weight

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Information claimed confidential by
Optima Belle, LLC January 10, 2018.

Filter Dryer Process

Nylon Washing
Batch Loading:
Nylon: [redacted]
Nylon (washed): [redacted]
Methanol: [redacted]

Existing materials which Chemours/DuPont had permitted will also remain in the permit. This includes D5803, Sulfonamide Drying (A5546, V9367 and E9260), U9069, Fluoridone, Krovar Technical, Glycolic Acid. Optima has not batched these materials but may in the future.

HMAPS

Materials utilized in production of [redacted]

ATTACHMENT M

AIR POLLUTION CONTROL DEVICE SHEET

Attachment M
Air Pollution Control Device Sheet
(AFTERBURNER SYSTEM)

Control Device ID No. (must match Emission Units Table): B216 Incinerator (009)

Equipment Information

1. Manufacturer: North American Manufacturing Co. Model No. 6514-8	2. ☒ Thermal Energy Recovery ☐ Recuperative (Conventional) ☐ Catalytic
3. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.	
4. Combustion chamber dimensions: Length: 16 ft Diameter: 4 ft Cross-sectional area: 12.57 ft^2	5. Stack Dimensions: Height: 35 ft Diameter: 1.5 ft
6. Combustion (destruction) efficiency: Estimated: 99.9 % Minimum guaranteed: NA %	7. Retention or residence time of materials in combustion chamber: Maximum: 2 sec Minimum: 1.5 sec
8. Throat diameter: ft	9. Combustion Chamber Volume: ft^3
10. Fuel used in burners: ☒ Natural Gas ☐ Fuel Oil, Number: ☐ Other, specify:	11. Burners per afterburner: 1 Number of burners: 1 BTU/hr for burner: 10,000,000 BTU/hr
12. Fuel heating value of natural gas: Estimated: 1,020 Btu/Scf BTU/lb	13. Flow rate of natural gas: Estimated 163.4 Max 25 min/operational ft^3/min
14. Is a catalyst material used?: ☐ Yes ☒ No If yes, catalyst material used:	15. Expected frequency of catalyst replacement: NA yr(s)
	16. Date catalyst was last replaced: Month/Year: NA
17. Space Velocity of the catalyst material used: NA 1/hour	18. Catalyst area: NA ft^2
	19. Volume of catalyst bed: NA ft^3
20. Minimum loading: Maximum loading: NA	21. Temperature catalyst bed inlet: NA °F Temperature catalyst bed outlet: NA °F
22. Explain degradation or performance indicator criteria determining catalyst replacement: NA	
23. Heat exchanger used? ☐ Yes ☒ No Describe heat exchanger:	24. Heat exchanger surface area? NA ft^2
	25. Average thermal efficiency: NA %
26. Temperature of gases: After preheat: NA °F	Before preheat: Variable °F
27. Dilution air flow rate: NA ft^3/minute	
28. Describe method of gas mixing used: NA	

Waste Gas (Emission Stream) to be Burned

29. Name	Quantity Grains of H_2S/100 ft^2	Quantity-Density (LB/hr, ft^3/hr, etc)	Source of Material
Variable, depending on the products being manufactured.			

30. Estimate total combustibles to afterburner Variable lb/hr or ACF/hr

31. Estimated total flow rate to afterburner or catalyst including materials to be burned, carrier gases, auxiliary fuel, etc.: NA lb/hr, ACF/hr, or scfm
Total flow rate = Flue gas flow rate

32. Afterburner operating parameters:

	During maximum operation of feeding unit(s)	During typical operation of feeding unit(s)	During minimum operation of feeding unit(s)
Combustion chamber temperature in °F	2000°F	1850°F	1800°F
Emission stream gas temperature in	50 – 100°F	50 – 100°F	50 – 100°F
Combined gas stream entering catalyst bed in	Variable	Variable	Variable
Flue stream leaving the catalyst bed	Variable	Variable	Variable
Emission stream flow rate (scfm)	NA	NA	NA
Efficiency (VOC Reduction)	99.9 %	99.9 %	99.9 %
Efficiency (Other; specify contaminant)	NA %	NA %	NA %

33. Inlet Emission stream parameters:

	Maximum	Typical
Pressure (mmHg):	Variable, depending on process which will include halogenated and sulfonated compounds depending on the product being manufactured.	
Heat Content (BTU/scf):	1,020	<100
Oxygen Content (%):	8	<1
Moisture Content (%):	2	<1

Are halogenated organics present? ☒ Yes ☐ No Intermittent
Are particulates present? ☐ Yes ☒ No
Are metals present? ☐ Yes ☒ No

34. For thermal afterburners, is the combustion chamber temperature continuously monitored and recorded?
☒ Yes ☐ No

35. For catalytic afterburners, is the temperature rise across the catalyst bed continuously monitored and recorded? ☐ Yes ☐ No NA

36. Is the VOC concentration of exhaust monitored and recorded? ☐ Yes ☒ No

37. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
Flue gases from the incinerator are passed through the incinerator scrubber if process produces acid gases.

38. Describe the collection material disposal system:
Scrubber fluids are sent to the Waste Treatment Plant for final treatment.

39. Have you included ***Afterburner Control Device*** in the Emissions Points Data Summary Sheet? Yes

40. **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:
Incinerator Temperature	Incinerator Temperature
REPORTING:	TESTING:
None	None

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 or air control device.
RECORDKEEPING:	Please describe the proposed recordkeeping that will accompany the monitoring.
REPORTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.
TESTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.

41. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
100

42. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
99.9

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

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): DCFD

Equipment Information and Filter Characteristics

1. Manufacturer: Young Industries Self-Contained Filter/Bag Drop Station
   Model No. FBD42-8

2. Total number of compartments: 1

3. Number of compartment online for normal operation: 1

4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.

5. Baghouse Configuration: (check one)
   ☐ Open Pressure ☐ Closed Pressure ☒ Closed Suction
   ☐ Electrostatically Enhanced Fabric
   ☐ Other, Specify

6. Filter Fabric Bag Material:
   ☐ Nomex nylon ☐ Wool
   ☒ Polyester ☐ Polypropylene
   ☐ Acrylics ☐ Ceramics
   ☐ Fiber Glass
   ☐ Cotton Weight oz./sq.yd
   ☐ Teflon Thickness in
   ☐ Others, specify

7. Bag Dimension:
   Diameter NA in.
   Length 3.5 ft.

8. Total cloth area: 36 ft^2

9. Number of bags: 8

10. Operating air to cloth ratio: 33.3 ft/min

11. Baghouse Operation: ☒ Continuous (When Needed) ☐ Automatic ☐ Intermittent

12. Method used to clean bags:
   ☐ Mechanical Shaker ☐ Sonic Cleaning ☐ Reverse Air Jet
   ☐ Pneumatic Shaker ☐ Reverse Air Flow ☐ Other:
   ☐ Bag Collapse ☒ Pulse Jet
   ☐ Manual Cleaning ☐ Reverse Jet

13. Cleaning initiated by:
   ☐ Timer ☐ Frequency if timer actuated
   ☐ Expected pressure drop range in. of water ☒ Other Continuous cleaning

14. Operation Hours: Max. per day: 24
   Max. per yr: 8,760

15. Collection efficiency: Rating: 100 %
   Guaranteed minimum: 100 %

Gas Stream Characteristics

16. Gas flow rate into the collector: 1200 ACFM at Ambient °F and Ambient PSIA
   ACFM: Design: PSIA Maximum: Ambient PSIA Average Expected: Ambient

17. Water Vapor Content of Effluent Stream: NA lb. Water/lb. Dry Air

18. Gas Stream Temperature: Ambient °F

19. Fan Requirements: 1.5 hp
   OR 1,200 ft^3/min

20. Stabilized static pressure loss across baghouse. Pressure Drop: High NA in. H_2O
   Low NA in. H_2O

21. Particulate Loading: Inlet: Variable grain/scf Outlet: Variable grain/scf

22. Type of Pollutant(s) to be collected (if particulate give specific type):
Particulate – variable depending on material being produced.

23. Is there any SO_3 in the emission stream? ☒ No ☐ Yes SO_3 content: ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

	IN		OUT	
Pollutant	**lb/hr**	**grains/acf**	**lb/hr**	**grains/acf**
Particulate Matter	Variable*	NA	Variable*	NA

*This is a bag dump station with control. System is fed intermittently.

25. Complete the table:	**Particle Size Distribution at Inlet to Collector**	**Fraction Efficiency of Collector**
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	NA	Est. 95%
2 – 4		
4 – 6		
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?
- ☐ Continuous Opacity
- ☐ Pressure Drop
- ☐ Alarms-Audible to Process Operator
- ☐ Visual opacity readings, Frequency:
- ☒ Other, specify: Inspection of Bag Dump Station.

27. Describe any recording device and frequency of log entries:

None Proposed

28. Describe any filter seeding being performed:

None

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):

None

30. Describe the collection material disposal system:

Material is recycled if able. Otherwise, it is disposed as waste.

31. Have you included ***Baghouse Control Device*** in the Emissions Points Data Summary Sheet? Yes

32. **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:
None Proposed.	None Proposed.
REPORTING:	TESTING:
None Proposed.	None Proposed.

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 or air control device.
RECORDKEEPING:	Please describe the proposed recordkeeping that will accompany the monitoring.
REPORTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.
TESTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.

100%

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.

95%

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

Dust collector controls a bag dump station. The selected dust collector will be operated and maintained in accordance with the manufacturer.

ATTACHMENT N

SUPPORTING EMISSIONS CALCULATIONS

By: PEW
Date: 03/01/2023

Checked By: ABK
Date: 03/07/2023

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Information claimed confidential by Optima Belle, LLC March 1, 2023.

Total Emissions

Number of Batches in Process
Process Cycle Time (hrs)
Number of Batches Per Year (2)

[redacted]

Process Emissions

Pollutant	Uncontrolled (1)		Controlled	
	lb/hr (Max Rate)	ton/yr	lb/hr (Max Rate)	ton/yr
[redacted]	26.25	15.32	0.52	0.31
[redacted]	0.001	0.001	0.00002	0.00002
Ethylbenzene	0.26	0.05	0.0052	0.00096
[redacted]	12.13	5.02	0.2427	0.10
Styrene	0.001	0.001	0.00003	0.00002
VOC	38.64	20.39	0.77	0.41
Total HAPs	0.26	0.05	0.00521	0.00099

1. Uncontrolled emissions based on 98% control from incinerator.
2. Based on 8760 hours per year.

Volatile Organic Compound
Volatile Organic Compound and Hazardous Air Pollutant

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Information claimed confidential by
Optima Belle, LLC March 1, 2023.

Product: HMAPS (Albemarle @ Belle
Process Name: HMAPS
Production Quantity:
Process Cycle Time:
Date: 2/1/2023
File: N:\Emission Master Files\Belle\HMAPS\HMAPS Belle R_2.emm
Comments:

Compound	Activities Emitting	Emissions Uncontrolled (lb)	Emissions Controlled (lb)	Emissions Percent Removal
	16	244.3313573	244.3313573	0
	62	55.06776941	0.839509359	98.4754978
	30	0.001499385	2.99877E-05	98
Ethylbenzene	20	0.261166934	0.00263628	98.9905765
	20	0	0	
	36	17.68179297	0.353635859	98
	19	0	0	
	4	0	0	
	34	14.86315897	0.274917127	98.15034524
	2	0	0	
	27	285.9303085	285.9303085	0
	13	0	0	
Styrene	3	0.003420479	6.84096E-05	98
	11	0	0	
	14	1.471522765	1.982070919	-34.69522641

Compound	Process Cycle Average (lb/hr)	Compound Emission Hours	Compound Emission Average (lb/hr)	Max Rate (lb/hr) Within 1 hour
	9.07586484	5.324722222	45.88621662	182.8246635
	0.031184182	24.91611111	0.033693435	0.262455705
	1.11391E-06	14.74305556	2.03402E-06	1.23498E-05
Ethylbenzene	9.79265E-05	9.184722222	0.000287029	0.002592612
	0	9.184722222	0	0
	0.01313606	15.23416667	0.023213338	0.088585246
	0	12.00888889	0	0
	0	2.586944444	0	0
	0.010211995	18.6925	0.014707349	0.121339461
	0	0.505	0	0
	10.62108794	8.685555556	32.9202095	141.2213184
	0	7.504444444	0	0
Styrene	2.54112E-06	5.004722222	1.3669E-05	1.36819E-05
	0	6.505	0	0
	0.073625457	7.504166667	0.264129384	1.371769165

(1) Process Cycle Average = Compound emission quantity / Total process cycle time in hours.
(2) Compound Emission Average = Compound emission quantity / Compound emission time in hours.

Volatile Organic Compound
Volatile Organic Compound and Hazardous Air Pollutant

Classification	Activities Emitting	Emissions Uncontrolled (lb)	Emissions Controlled (lb)	Emissions Percent Removal
All Emissions	79	619.6119967	533.7145338	13.8631052
Acid	0	0	0	
Acid Gases	0	0	0	
Asbestos	0			
Base	0			
Biological	0			
CATEGORY I	0			
ASBESTOS	0			
BIOLOGICAL	0	0	0	
Cr(+6)	0	0	0	
DIOXIN	0	0	0	
HAP-PARTICULATE	0	0	0	
METAL	0	0	0	
OTHER PARTICULATE	0	0	0	
RADIONUCLIDE	0	0	0	
CATEGORY II	0	0	0	
HAP-VOC	0	0	0	
OTHER VOC	0	0	0	
CATEGORY III	0	0	0	
ACID	0	0	0	
HAP-ACID	0	0	0	
CATEGORY IV	0	0	0	
CATEGORY V (CO)	0	0	0	
CATEGORY VI (NOx)	0	0	0	
CATEGORY VII (SO2)	0	0	0	
CATEGORY VIII	0	0	0	
CO	0	0	0	
CR+6	0	0	0	
Dioxin	0	0	0	
ETG	0	0	0	
EVOS	0	0	0	
Gas	0	0	0	
HAP	23	0.264587414	0.00270469	98.97777073
Ethylbenzene	20	0.261166934	0.00263628	98.9905765
Styrene	3	0.003420479	6.84096E-05	98
Hydrogen	0	0	0	
LOC	0	0	0	
Metal	0	0	0	
NOx	0	0	0	
Particulate	0	0	0	
Pb	0	0	0	
PM10	0	0	0	
Radionuclide	0	0	0	
SO2	0	0	0	
TSP	0	0	0	
TVOS	0	0	0	
VCM	0	0	0	
VOC	62	70.19551579	1.117131176	98.40854339
[redacted]	62	55.06776941	0.839509359	98.4754978
	20	0.261166934	0.00263628	98.9905765

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Information claimed confidential by Optima Belle, LLC March 1, 2023.

Classification	Activities Emitting	Emissions Uncontrolled (lb)	Emissions Controlled (lb)	Emissions Percent Removal
[redacted]	34	14.86315897	0.274917127	98.15034524
[redacted]	3	0.003420479	6.84096E-05	98
Unclassified	79	549.4164809	532.5974026	3.061262072
[redacted]	16	244.3313573	244.3313573	0
[redacted]	30	0.001499385	2.99877E-05	98
[redacted]	20	0	0	
[redacted]	36	17.68179297	0.353635859	98
[redacted]	19	0	0	
[redacted]	4	0	0	
[redacted]	2	0	0	
[redacted]	27	285.9303085	285.9303085	0
[redacted]	13	0	0	
[redacted]	11	0	0	
[redacted]	14	1.471522765	1.982070919	-34.69522641

Classification	Process Cycle Average (lb/hr)	Emission Hours	Emission Average (lb/hr)	Max Rate (lb/hr) Within 1 hour
All Emissions	19.82521206	30.91	17.26672707	183.0806978
Acid	0	0	0	0
Acid Gases	0	0	0	0
Asbestos	0	0	0	0
Base	0	0	0	0
Biological	0	0	0	0
CATEGORY I	0	0	0	0
ASBESTOS	0	0	0	0
BIOLOGICAL	0	0	0	0
Cr(+6)	0	0	0	0
DIOXIN	0	0	0	0
HAP-PARTICULATE	0	0	0	0
METAL	0	0	0	0
OTHER PARTICULATE	0	0	0	0
RADIONUCLIDE	0	0	0	0
CATEGORY II	0	0	0	0
HAP-VOC	0	0	0	0
OTHER VOC	0	0	0	0
CATEGORY III	0	0	0	0
ACID	0	0	0	0
HAP-ACID	0	0	0	0
CATEGORY IV	0	0	0	0
CATEGORY V (CO)	0	0	0	0
CATEGORY VI (NOx)	0	0	0	0
CATEGORY VII (SO2)	0	0	0	0
CATEGORY VIII	0	0	0	0
CO	0	0	0	0
CR+6	0	0	0	0
Dioxin	0	0	0	0
ETG	0	0	0	0
EVOS	0	0	0	0
Gas	0	0	0	0

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Information claimed confidential by Optima Belle, LLC March 1, 2023.

Classification	Activities Emitting	Emissions Uncontrolled (lb)	Emissions Controlled (lb)	Emissions Percent Removal
HAP	0.000100468	14.18944444	0.000190613	0.002592612
Hydrogen	0	0	0	0
LOC	0	0	0	0
Metal	0	0	0	0
NOx	0	0	0	0
Particulate	0	0	0	0
Pb	0	0	0	0
PM10	0	0	0	0
Radionuclide	0	0	0	0
SO2	0	0	0	0
TSP	0	0	0	0
TVOS	0	0	0	0
VCM	0	0	0	0
VOC	0.041496645	24.91611111	0.044835696	0.291780486
Unclassified	19.78371541	30.91	17.23058566	182.8431717

(1) Process Cycle Average = Classification emission quantity / Total process cycle time in hours.
(2) Emission Average = Classification emission quantity / Classification emission time in hours.

Vessel	Vent ID	Device # 1	Device # 1 Temp (°C)	Device # 2	Device # 2 Temp (°C)	Device # 3	Device # 3 Temp (°C)
CWT Belle							
Railcar	Loop	Belle Vapor Return Loop	[redacted]		[redacted]		
RX-14 Belle	Incinerator	Condenser RX-5 Hast C		Incinerator Belle			
RX-15 Belle	Incinerator	Condenser RX-5 Hast C		Incinerator Belle		Scrubber Incinerator Belle	30
RX-5 Belle	Incinerator	Condenser RX-5 Hast C		Incinerator Belle			
Tank Wagon	Incinerator	Condenser RX-5 Hast C		Incinerator Belle			

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Uncontrolled Emissions

Process: HMAPS

Emissions reported in Pounds.

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Activity	Recipe Step														
1		0	0												
2		60.9416	3.6384												
3		0	0												
4		60.9416	3.6384												
5		0	0												
6		60.9416	3.6384												
7			0			0									
8			1.4132			1.3609									
9			0			0									
10			1.4134			1.361									
11			0			0									
12			1.4135			1.3612									
13		1.1083	0.0581												
14			0.2549			0.2455									
15			0.1489			0.1434									
16			0			0									
17			0	0		0									
18			0	0		0									
19			0.6882	8.73E-05		0.664									
20			0	0		0									
21			1.9771	3.00E-04		1.9079									
22			0	0		0									
23			1.9774	3.00E-04		1.9082									
24			0	0		0									
25			0.8645	1.00E-04		1.2443									
26			0.0195	2.34E-06		0.028				0					
27			0	0		0				0					
28			0.0335	3.92E-06		0.05	0		0.0513						
29			0.0389	4.27E-06		0.058	0		0.0576						
30			0	0		0	0		0						
31			1.0384	1.00E-04		1.0152	0		1.1153						
32			0	0		0	0		0						
33			1.0391	1.00E-04		1.0155	0		1.0825						
34			0	0		0	0		0						
35			0.4094	5.88E-05		1.6798	0		0.8156						
36			0	0		0	0		0						
37		18.9964													0.0345
38			2.5347	4.00E-04		3.0236	0		6.067						
39		2.8985												0	0.0053
40		2.9928												0	0.0054
41			0	0		0	0		0						
42			0.3949	5.75E-05		0.524	0		0.6502				0.0034		
43		27.0359												0	0.0491
44			0	0		0	0		0				0		
45			0	0		0	0		0				0		
46			0.0768	8.47E-06	8.80E-05	0 0.0912	0		0.1087						
47		6.2464	0.2379	2.15E-05	2.00E-04	0		0	0.4732					0	0.0039
47						0									
48		1.2671	0.056												
49		0.9603	0.0358	3.14E-06	3.27E-05	0		0	0.0678					0	6.00E-04
49		0													
50		0	0	0	0	0		0	0					0	0
51			0	0	0	0		0	0		0			0	0
52			0.0568		5.16E-05	0			0 0.1098		1.0654			0	0.001
53			0		0	0			0 0		0			0	0
54			0		0	0			0 0		0			0	0
55									0		4.5653			0	1.3718
55			0		0	0				0	0				
56											7.0226				
57			0.8672		8.00E-04	0				1.165	10.4061				
57											0				
58			0		0	0				0	0				
59			0		0	0				0	0				
60			0		0	0				0	0				
61			0.1532		1.00E-04	0				0.0606	1.8235				
62			0		0	0				0	0				
63			0.1533		1.00E-04	0				0.0605	1.8239				
64			0		0	0				0	0				
65			0.1533		1.00E-04	0				0.0603	1.8244				
66											0				
67											69.4228				
68											0				
69											69.4228				
70											0				
71											69.4228				
72			1.1143		9.00E-04	0				0.6832	13.2724				
72											0				
73			25.5302		0.2587	0				2.2346	35.8584				
73											0				

Controlled Emissions

Process: HMAPS Emissions reported in Pounds.

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Information claimed confidential by Optima Belle, LLC March 1, 2023.

Activity	Recipe Step															
1		0	0													
2		60.9416	0.0728													
3		0	0													
4		60.9416	0.0728													
5		0	0													
6		60.9416	0.0728													
7			0				0									
8			0.0283				0.0272									
9			0				0									
10			0.0283				0.0272									
11			0				0									
12			0.0283				0.0272									
13		1.1083	0.0012													
14			0.0051				0.0049									
15			0.003				0.0029									
16			0				0									
17			0	0			0									
18			0	0			0									
19			0.0138	1.75E-08			0.0133									
20			0	0			0									
21			0.0395	5.37E-06			0.0382									
22			0	0			0									
23			0.0395	5.38E-06			0.0382									
24			0	0			0									
25			0.0173	2.24E-06			0.0249									
26			4.00E-04	4.68E-08			6.00E-04				0					
27			0	0			0				0					
28			7.00E-04	7.84E-08			0.001	0		0.001						
29			8.00E-04	8.54E-08			0.0012	0		0.0012						
30			0	0			0	0		0						
31			0.0208	2.23E-06			0.0203	0		0.0223						
32			0	0			0	0		0						
33			0.0208	2.23E-06			0.0203	0		0.0217						
34			0	0			0	0		0						
35			0.0082	1.18E-06			0.0336	0		0.0163						
36			0	0			0	0		0						
37		18.9964											0			0.1911
38			0.0507	7.60E-06			0.0605	0		0.1213						
39		2.8995											0		0	0.0292
40		2.9928											0		0	0.0301
41			0	0			0	0		0						
42			0.0079	1.15E-06			0.0105	0		0.013				6.84E-05		
43		27.0359											0		0	0.272
44			0	0			0	0		0				0		
45			0	0			0	0		0				0		
46			0.0015	1.69E-07	1.76E-06	0	0.0018	0		0.0022						
47		6.2464	4.76E-05	4.30E-07	4.48E-06	0		0		0.0095			0		0	0.0629
47							0									
48		1.2671	0.0011													
49		0.9603	7.17E-06	6.28E-08	6.54E-07	0		0		0.0014			0		0	0.0097
49		0														
50		0	0	0	0	0		0		0			0		0	0
51			0	0	0	0		0		0		0	0		0	0
52			1.14E-05		1.03E-06	0			0	0.0022		1.0654	0		0	0.0153
53			0		0	0			0	0		0	0		0	0
54			0		0	0			0	0		0	0		0	0
55									0			4.5653			0	1.3718
55			0		0	0				0		0	0			0
56												7.0226				
57			0.0173		1.62E-05	0				0.0233		10.4061				
57												0	0			0
58			0		0	0				0		0				
59			0		0	0				0		0				
60			0		0	0				0		0				
61			0.0031		2.61E-06	0				0.0012		1.8235				
62			0		0	0				0		0				
63			0.0031		2.61E-06	0				0.0012		1.8239				
64			0		0	0				0		0				
65			0.0031		2.61E-06	0				0.0012		1.8244				
66												0				
67												69.4228				
68												0				
69												69.4228				
70												0				
71												69.4228				
72			0.0223		1.73E-05	0				0.0137		13.2724				
72												0				
73			0.2553		0.0026	0				0.0223		35.8584				
73												0				

Activity	Recipe Step	Type	Activity Title

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Information claimed confidential by
Optima Belle, LLC March 1, 2023.

Emission Type	PTE Building 216				PTE Building 114			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
PM	4.08	6.23	4.08	6.23	0.06	0.26	0.06	0.26
PM10	1.99	3.41	1.99	3.41	0.06	0.26	0.06	0.26
PM2.5	0.36	1.46	0.36	1.46	0.06	0.26	0.06	0.26
SO2	261.54	354.32	0.04	0.13	0.16	0.54	0.01	0.05
NOx	0.99	4.34	0.99	4.34	1000.74	743.29	20.74	18.04
CO	0.83	3.64	0.83	3.64	0.62	2.72	0.62	2.72
VOC	321.81	109.97	22.95	13.64	1741.55	743.43	21.01	8.24
Acetonitrile	1.35	0.35	0.05	0.02				
Benzene	0.14	0.04	0.01	0.01				
Butyl Carbitol	0.01	0.01	0.01	0.01				
Catechol	0.16	0.03	0.16	0.03				
Chlorobenzene	0.00	0.00	0.00	0.00				
Chromium Compounds	0.89	0.05	0.89	0.05				
Ethylbenzene	0.26	0.05	0.0052	0.00096				
Hexane	15.46	0.50	0.96	0.27				
Hydrogen Chloride	524.63	403.14	0.06	0.05	112.50	25.02	2.25	0.50
Methanol	12.40	10.90	4.77	2.92	440.00	358.08	4.43	5.07
Methylene Chloride	1.88	0.23	1.87	0.23				
Methyl Tert-Butyl Ether	46.06	8.03	0.86	0.19				
p-Xylene	0.04	0.02	0.04	0.01				
Styrene	0.001	0.001	0.00003	0.00002				
Titanium Tetrachloride	0.79	0.12	0.01	0.01				
Toluene	87.96	23.55	1.77	0.34				
Methyl Chloride					230.00	25.32	4.60	0.51
Ammonia (NH3)					100.00	120.75	2.00	2.41
Ethanol					173.00	53.18	3.46	1.06
Tributylamine					20.00	4.19	0.40	0.08
Ethyl Chloride					398.50	56.63	7.97	1.13
Methyl Chloroformate					13.00	2.25	0.26	0.04
Triethyl Phosphite					3.50	3.00	0.07	0.06
HAPS	619.46	429.93	7.78	3.43	1181.02	465.11	19.27	7.27

Total PTE

Emission Type	Uncontrolled		Controlled	
	lb/hr	ton/yr	lb/hr	ton/yr
PM	4.14	6.49	4.14	6.49
PM10	2.05	3.67	2.05	3.67
PM2.5	0.42	1.72	0.42	1.72
SO2	261.70	354.87	0.05	0.19
NOx	1001.73	747.63	21.73	22.38
CO	1.45	6.35	1.45	6.35
VOC	2063.36	853.40	43.96	21.88
Acetonitrile	1.35	0.35	0.05	0.02
Benzene	0.14	0.04	0.01	0.01
Butyl Carbitol	0.01	0.01	0.01	0.01
Catechol	0.16	0.03	0.16	0.03
Chlorobenzene	0.00	0.00	0.00	0.00
Chromium Compounds	0.89	0.05	0.89	0.05
Ethylbenzene	0.26	0.05	0.0052	0.00096
Hexane	15.46	0.50	0.96	0.27
Hydrogen Chloride	637.13	428.16	2.31	0.55
Methanol	452.40	368.98	9.20	7.99
Methylene Chloride	1.88	0.23	1.87	0.23
Methyl Tert-Butyl Ether	46.06	8.03	0.86	0.19
p-Xylene	0.04	0.02	0.04	0.01
Styrene	0.001	0.001	0.00003	0.00002
Titanium Tetrachloride	0.79	0.12	0.01	0.01
Toluene	87.96	23.55	1.77	0.34
Methyl Chloride	230.00	25.32	4.60	0.51
Ammonia (NH3)	100.00	120.75	2.00	2.41
Ethanol	173.00	53.18	3.46	1.06
Tributylamine	20.00	4.19	0.40	0.08
Ethyl chloride	398.50	56.63	7.97	1.13
Methyl Chloroformate	13.00	2.25	0.26	0.04
Triethyl Phosphite	3.50	3.00	0.07	0.06
HAPS	1800.48	895.04	27.05	10.70

By: PEW
Date: 03/05/2023

Checked By: ABK
Date: 03/07/2023

Change of Emissions for Building 216

Building 216 Process Emissions

Pollutant	Uncontrolled		Controlled	
	lb/hr (Max Rate)	ton/yr	lb/hr (Max Rate)	ton/yr
PM	0.00	0.00	0.00	0.00
PM10	0.00	0.00	0.00	0.00
PM2.5	0.00	0.00	0.00	0.00
SO2	0.00	0.00	0.00	0.00
VOC	38.64	20.39	0.77	0.41
Acetonitrile	0.00	0.00	0.00	0.00
Benzene	0.00	0.00	0.00	0.00
Butyl Carbitol	0.00	0.00	0.00	0.00
Catechol	0.00	0.00	0.00	0.00
Chlorobenzene	0.00	0.00	0.00	0.00
Chromium Compounds	0.00	0.00	0.00	0.00
Ethylbenzene	0.26	0.05	0.0052	0.00096
Hexane	0.00	0.00	0.00	0.00
Hydrogen Chloride	0.00	0.00	0.00	0.00
Methanol	0.00	0.00	0.00	0.00
Methylene Chloride	0.00	0.00	0.00	0.00
Methyl Tert-Butyl Ether	0.00	0.00	0.00	0.00
p-Xylene	0.00	0.00	0.00	0.00
Styrene	0.001	0.001	0.00003	0.00002
Titanium Tetrachloride	0.00	0.00	0.00	0.00
Toluene	0.00	0.00	0.00	0.00
HAPS	0.26	0.05	0.005	0.00099

Incinerator Combustion Emissions

PM	0.00	0.00	0.00	0.00
PM10	0.00	0.00	0.00	0.00
PM2.5	0.00	0.00	0.00	0.00
PM Condensable	0.00	0.00	0.00	0.00
PM Filterable	0.00	0.00	0.00	0.00
SO2	0.00	0.00	0.00	0.00
NOx	0.00	0.00	0.00	0.00
CO	0.00	0.00	0.00	0.00
VOC	0.00	0.00	0.00	0.00
TOC	0.00	0.00	0.00	0.00
HAPS	0.00	0.00	0.00	0.00

By: PEW
Date: 03/05/2023

Checked By: ABK
Date: 03/07/2023

Potential to Emit for Building 216

Pollutant*	Uncontrolled		Controlled	
	lb/hr (Max Rate)	ton/yr	lb/hr (Max Rate)	ton/yr
PM	0.00	0.00	0.00	0.00
PM10	0.00	0.00	0.00	0.00
PM2.5	0.00	0.00	0.00	0.00
SO2	0.00	0.00	0.00	0.00
NOx	0.00	0.00	0.00	0.00
CO	0.00	0.00	0.00	0.00
VOC	38.64	20.39	0.77	0.41
Acetonitrile	0.00	0.00	0.00	0.00
Benzene	0.00	0.00	0.00	0.00
Butyl Carbitol	0.00	0.00	0.00	0.00
Catechol	0.00	0.00	0.00	0.00
Chlorobenzene	0.00	0.00	0.00	0.00
Chromium Compounds	0.00	0.00	0.00	0.00
Ethylbenzene	0.26	0.05	0.0052	0.00096
Hexane	0.00	0.00	0.00	0.00
Hydrogen Chloride	0.00	0.00	0.00	0.00
Methanol	0.00	0.00	0.00	0.00
Methylene Chloride	0.00	0.00	0.00	0.00
Methyl Tert-Butyl Ether	0.00	0.00	0.00	0.00
p-Xylene	0.00	0.00	0.00	0.00
Styrene	0.001	0.001	0.00003	0.00002
Titanium Tetrachloride	0.00	0.00	0.00	0.00
Toluene	0.00	0.00	0.00	0.00
HAPS	0.26	0.05	0.005	0.00099

*Individual HAPS are only process HAPS. Individual combustion HAPS are not included in the total. HAPS includes all HAPS from Process and Incinerator Combustion.

By: PEW
Date: 03/05/2023

Checked By: ABK
Date: 03/07/2023

Existing Permitted Emissions for Building 216

Building 216 Process Emissions

Pollutant	Uncontrolled		Controlled	
	lb/hr (Max Rate)	ton/yr	lb/hr (Max Rate)	ton/yr
PM	4.00	5.88	4.00	5.88
PM10	1.91	3.06	1.91	3.06
PM2.5	0.28	1.11	0.28	1.11
SO2	261.53	354.28	0.03	0.09
VOC	283.11	89.32	22.12	12.97
Acetonitrile	1.35	0.35	0.05	0.02
Benzene	0.14	0.04	0.01	0.01
Butyl Carbitol	0.01	0.01	0.01	0.01
Catechol	0.16	0.03	0.16	0.03
Chlorobenzene	0.00	0.00	0.00	0.00
Chromium Compounds	0.89	0.05	0.89	0.05
Ethylbenzene	0	0	0	0
Hexane	15.46	0.50	0.96	0.27
Hydrogen Chloride	524.63	403.14	0.06	0.05
Methanol	12.40	10.90	4.77	2.92
Methylene Chloride	1.88	0.23	1.87	0.23
Methyl Tert-Butyl Ether	46.06	8.03	0.86	0.19
p-Xylene	0.04	0.02	0.04	0.01
Styrene	0	0	0	0
Titanium Tetrachloride	0.79	0.12	0.01	0.01
Toluene	87.96	23.55	1.77	0.34
HAPS	619.18	429.80	7.75	3.35

Incinerator Combustion Emissions

PM	0.08	0.35	0.08	0.35
PM10	0.08	0.35	0.08	0.35
PM2.5	0.08	0.35	0.08	0.35
PM Condensable	0.06	0.26	0.06	0.26
PM Filterable	0.02	0.09	0.02	0.09
SO2	0.01	0.04	0.01	0.04
NOx	0.99	4.34	0.99	4.34
CO	0.83	3.64	0.83	3.64
VOC	0.06	0.26	0.06	0.26
TOC	0.11	0.48	0.11	0.48
HAPS	0.02	0.08	0.02	0.08

By: PEW
Date: 03/05/2023

Checked By: ABK
Date: 03/07/2023

Potential to Emit for Building 216

Pollutant*	Uncontrolled		Controlled	
	lb/hr (Max Rate)	ton/yr	lb/hr (Max Rate)	ton/yr
PM	4.08	6.23	4.08	6.23
PM10	1.99	3.41	1.99	3.41
PM2.5	0.36	1.46	0.36	1.46
SO2	261.54	354.32	0.04	0.13
NOx	0.99	4.34	0.99	4.34
CO	0.83	3.64	0.83	3.64
VOC	283.17	89.58	22.18	13.23
Acetonitrile	1.35	0.35	0.05	0.02
Benzene	0.14	0.04	0.01	0.01
Butyl Carbitol	0.01	0.01	0.01	0.01
Catechol	0.16	0.03	0.16	0.03
Chlorobenzene	0.00	0.00	0.00	0.00
Chromium Compounds	0.89	0.05	0.89	0.05
Ethylbenzene	0	0	0	0
Hexane	15.46	0.50	0.96	0.27
Hydrogen Chloride	524.63	403.14	0.06	0.05
Methanol	12.40	10.90	4.77	2.92
Methylene Chloride	1.88	0.23	1.87	0.23
Methyl Tert-Butyl Ether	46.06	8.03	0.86	0.19
p-Xylene	0.04	0.02	0.04	0.01
Styrene	0	0	0	0
Titanium Tetrachloride	0.79	0.12	0.01	0.01
Toluene	87.96	23.55	1.77	0.34
HAPS	619.20	429.88	7.77	3.43

*Individual HAPS are only process HAPS. Individual combustion HAPS are not included in the total. HAPS includes all HAPS from Process and Incinerator Combustion.

By: PEW
Date: 03/05/2023

Checked By: ABK
Date: 03/07/2023

Summary of Emissions and PTE

Building 216 Process Emissions with HMAPS

Pollutant	Uncontrolled		Controlled	
	lb/hr (Max Rate)	ton/yr	lb/hr (Max Rate)	ton/yr
PM	4.00	5.88	4.00	5.88
PM10	1.91	3.06	1.91	3.06
PM2.5	0.28	1.11	0.28	1.11
SO2	261.53	354.28	0.03	0.09
VOC	321.75	109.71	22.89	13.38
Acetonitrile	1.35	0.35	0.05	0.02
Benzene	0.14	0.04	0.01	0.01
Butyl Carbitol	0.01	0.01	0.01	0.01
Catechol	0.16	0.03	0.16	0.03
Chlorobenzene	0.00	0.00	0.00	0.00
Chromium Compounds	0.89	0.05	0.89	0.05
Ethylbenzene	0.26	0.05	0.0052	0.00096
Hexane	15.46	0.50	0.96	0.27
Hydrogen Chloride	524.63	403.14	0.06	0.05
Methanol	12.40	10.90	4.77	2.92
Methylene Chloride	1.88	0.23	1.87	0.23
Methyl Tert-Butyl Ether	46.06	8.03	0.86	0.19
p-Xylene	0.04	0.02	0.04	0.01
Styrene	0.001	0.001	0.00003	0.00002
Titanium Tetrachloride	0.79	0.12	0.01	0.01
Toluene	87.96	23.55	1.77	0.34
HAPS	619.44	429.85	7.76	3.35

Incinerator Combustion Emissions

PM	0.08	0.35	0.08	0.35
PM10	0.08	0.35	0.08	0.35
PM2.5	0.08	0.35	0.08	0.35
PM Condensable	0.06	0.26	0.06	0.26
PM Filterable	0.02	0.09	0.02	0.09
SO2	0.01	0.04	0.01	0.04
NOx	0.99	4.34	0.99	4.34
CO	0.83	3.64	0.83	3.64
VOC	0.06	0.26	0.06	0.26
TOC	0.11	0.48	0.11	0.48
HAPS	0.02	0.08	0.02	0.08

By: PEW
Date: 03/05/2023

Checked By: ABK
Date: 03/07/2023

Potential to Emit for Building 216

Pollutant*	Uncontrolled		Controlled	
	lb/hr (Max Rate)	ton/yr	lb/hr (Max Rate)	ton/yr
PM	4.08	6.23	4.08	6.23
PM10	1.99	3.41	1.99	3.41
PM2.5	0.36	1.46	0.36	1.46
SO2	261.54	354.32	0.04	0.13
NOx	0.99	4.34	0.99	4.34
CO	0.83	3.64	0.83	3.64
VOC	321.81	109.97	22.95	13.64
Acetonitrile	1.35	0.35	0.05	0.02
Benzene	0.14	0.04	0.01	0.01
Butyl Carbitol	0.01	0.01	0.01	0.01
Catechol	0.16	0.03	0.16	0.03
Chlorobenzene	0.00	0.00	0.00	0.00
Chromium Compounds	0.89	0.05	0.89	0.05
Ethylbenzene	0.26	0.05	0.0052	0.00096
Hexane	15.46	0.50	0.96	0.27
Hydrogen Chloride	524.63	403.14	0.06	0.05
Methanol	12.40	10.90	4.77	2.92
Methylene Chloride	1.88	0.23	1.87	0.23
Methyl Tert-Butyl Ether	46.06	8.03	0.86	0.19
p-Xylene	0.04	0.02	0.04	0.01
Styrene	0.001	0.001	0.00003	0.00002
Titanium Tetrachloride	0.79	0.12	0.01	0.01
Toluene	87.96	23.55	1.77	0.34
HAPS	619.46	429.93	7.78	3.43

*Individual HAPS are only process HAPS. Individual combustion HAPS are not included in the total. HAPS includes all HAPS from Process and Incinerator Combustion.

Optima Belle, LLC
HMAPS

Potesta & Associates, Inc.
Project No. 0101-14-0162-022

By: PEW
Date: 03/05/2023

Checked By: ABK
Date: 03/07/2023

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Total Emissions

Number of Batches in Process
Process Cycle Time (hrs)
Number of Batches Per Year (2)

Process Emissions

Pollutant	Uncontrolled (1)		Controlled	
	lb/hr (Max Rate)	ton/yr	lb/hr (Max Rate)	ton/yr (2)
[redacted]	26.25	15.32	0.52	0.31
[redacted]	0.001	0.001	0.00002	0.00002
Ethylbenzene	0.26	0.05	0.0052	0.00096
[redacted]	12.13	5.02	0.2427	0.10
Styrene	0.001	0.001	0.00003	0.00002
VOC	38.64	20.39	0.77	0.41
Total HAPs	0.261	0.049	0.00521	0.00099

1. Uncontrolled emissions based on 98% control from incinerator.
2. Based on 8,760 hours per year.

Volatile Organic Compound
Volatile Organic Compound and Hazardous Air Pollutant

By: PEW **Checked By: ABK**
Date: 03/05/2023 **Date: 03/07/2023**

Building 216 Combined Process Totals before HMAPS

Pollutant	Uncontrolled		Controlled	
	lb/hr (Max Rate)	ton/yr	lb/hr (Max Rate)	ton/yr
PM	3.6310	5.3390	3.6310	5.3390
PM10	1.7279	2.7751	1.7279	2.7751
PM2.5	0.2526	1.0072	0.2526	1.0072
SO2	237.7500	322.0655	0.0240	0.0761
VOC	257.3690	81.1997	20.1015	11.7834
Acetonitrile	1.2260	0.3131	0.0396	0.0135
Benzene	0.1204	0.0363	0.0085	0.0048
Butyl Carbitol	0.0023	0.0005	0.0023	0.0003
Catechol	0.1400	0.0190	0.1400	0.0190
Chlorobenzene	0.0000	0.0000	0.0000	0.0000
Chromium Compounds	0.8080	0.0367	0.8080	0.0367
Hexane	14.0532	0.4477	0.8675	0.2384
Hydrogen Chloride	476.9334	366.4857	0.0479	0.0367
Methanol	11.2707	9.9003	4.3348	2.6493
Methylene Chloride	1.88	0.23	1.87	0.23
Methyl Tert-Butyl Ether	41.8694	7.2962	0.7794	0.1693
p-Xylene	0.0354	0.0169	0.0354	0.0028
Titanium Tetrachloride	0.7148	0.1078	0.0000	0.0000
Toluene	79.9572	21.4071	1.6034	0.3080
HAPS	562.8839	390.7196	7.0423	3.0389

Building 216 Process Permit Limit (Above Emissions Plus 10%) before HMAPS

Pollutant	Uncontrolled		Controlled	
	lb/hr (Max Rate)	ton/yr	lb/hr (Max Rate)	ton/yr
PM	4.00	5.88	4.00	5.88
PM10	1.91	3.06	1.91	3.06
PM2.5	0.28	1.11	0.28	1.11
SO2	261.53	354.28	0.03	0.09
VOC	283.11	89.32	22.12	12.97
Acetonitrile	1.35	0.35	0.05	0.02
Benzene	0.14	0.04	0.01	0.01
Butyl Carbitol	0.01	0.01	0.01	0.01
Catechol	0.16	0.03	0.16	0.03
Chlorobenzene	0.00	0.00	0.00	0.00
Chromium Compounds	0.89	0.05	0.89	0.05
Hexane	15.46	0.50	0.96	0.27
Hydrogen Chloride	524.63	403.14	0.06	0.05
Methanol	12.40	10.90	4.77	2.92
Methylene Chloride*	1.88	0.23	1.87	0.23
Methyl Tert-Butyl Ether	46.06	8.03	0.86	0.19
p-Xylene	0.04	0.02	0.04	0.01
Titanium Tetrachloride	0.79	0.12	0.01	0.01
Toluene	87.96	23.55	1.77	0.34
HAPS (MAX)	619.18	429.80	7.75	3.35

* 10 percent not applied to Methylene Chloride

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Date: 03/05/2023

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Date: 03/07/2023

Negolyte

MULTI-REACTOR PROCESS

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Previously Permitted Batches/Year = 27

Process Emissions

Pollutant	Uncontrolled		Controlled	
	lb/hr (Max Rate)	ton/yr (27 batches)	lb/hr (Max Rate)	ton/yr (27 batches)
PM	0.12	0.03	0.12	0.03
PM10	0.05	0.03	0.05	0.03
PM2.5	0.03	0.03	0.03	0.03
VOC	4.98	0.29	0.32	0.005
Catechol	0.07	0.001	0.07	0.001
Toluene	4.98	0.29	0.321	0.005
Hydrogen Chloride	238.47	19.32	0.024	0.002
Titanium Tetrachloride	0.36	0.006	2.0E-05	5.7E-07
Total HAPs	243.80	19.61	0.34	0.01

Converted to 8,760 hrs/year, 33% Faster Time, and Number of Concurrent Batches

Hours Per Year = 8,760 hrs/yr
Batch Time = [redacted]
Faster Operating Time = 33 %
New Batch Time = [redacted]
Concurrent Batches = 3

Pollutant	Uncontrolled		Controlled	
	lb/hr (Max Rate)	ton/yr	lb/hr (Max Rate)	ton/yr
PM	0.24	0.57	0.24	0.57
PM10	0.10	0.57	0.10	0.57
PM2.5	0.06	0.57	0.06	0.57
VOC	9.96	5.53	0.64	0.09
Catechol	0.14	0.02	0.14	0.02
Toluene	9.96	5.53	0.64	0.09
Hydrogen Chloride	476.93	366.49	0.05	0.04
Titanium Tetrachloride	0.71	0.11	0.00	0.00
HAPS	487.75	372.13	0.83	0.12

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Date: 03/05/2023

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Undried LAME

MULTI-REACTOR PROCESS

Previously Permitted Batches/Year = 20

Total Emissions

Pollutant	Uncontrolled		Controlled	
	pph (Max Rate)(1)	tpy (20 batches)	pph (Max Rate)(1)	tpy (20 batches)
PM	0.32	0.01	0.32	0.01
PM10	0.15	0.01	0.15	0.01
PM2.5	0.02	0.01	0.02	0.01
SO2	118.88	19.02	0.012	0.002
VOC - Process	23.43	0.82	0.43	0.02
VOC - Filter Changeout (Fugitive)	1.21	0.01	1.21	0.01
Total VOC	24.63	0.83	1.63	0.04
HAPS (Process)				
Acetonitrile	0.61	0.02	0.02	0.0008
Hydrogen Chloride	67.75	10.84	0.01	0.001
Methanol	1.88	0.37	0.02	0.007
Methyl Tert-Butyl Ether	20.93	0.43	0.39	0.01
Total Process HAPS	91.18	11.66	0.44	0.02
HAPS (Filter Changeout)				
Methanol	1.21	0.01	1.21	0.01
Total HAPS (Filter Changeout and Process)	92.38	11.67	1.64	0.03

Converted to 8,760 hrs/year, 33% Faster Time, and Number of Concurrent Batches

Hours Per Year =	8,760 hrs/yr
Batch Time =	[redacted]
Faster Operating Time =	33 %
New Batch Time =	[redacted]
Concurrent Batches =	3

Pollutant	Uncontrolled		Controlled	
	pph (Max Rate)(1)	ton/yr	pph (Max Rate)(1)	ton/yr
PM	0.64	0.17	0.64	0.17
PM10	0.30	0.17	0.30	0.17
PM2.5	0.05	0.17	0.05	0.17
SO2	237.75	322.07	0.02	0.03
VOC - Process	46.85	13.91	0.86	0.39
VOC - Filter Changeout (Fugitive)	2.41	0.20	2.41	0.20
VOC	49.26	14.12	3.27	0.59
HAPS (Process)				
Acetonitrile	1.23	0.31	0.04	0.01
Hydrogen Chloride	135.50	183.55	0.01	0.02
Methanol	3.76	6.30	0.04	0.12
Methyl Tert-Butyl Ether	41.87	7.30	0.78	0.17
HAPS	182.35	197.47	0.87	0.32
HAPS (Filter Changeout)				
Methanol	2.41	0.20	2.41	0.20
HAPS	2.41	0.20	2.41	0.20

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Dried LAME

MULTI-REACTOR PROCESS

Previously Permitted Batches/Year = 40

Total Emissions

Pollutant	Uncontrolled		Controlled	
	pph (Max Rate)	tpy (40 batches)	pph (Max Rate)	tpy (40 batches)
PM	0.75	0.02	0.75	0.02
PM10	0.36	0.02	0.36	0.02
PM2.5	0.05	0.02	0.05	0.02
SO2	118.88	38.04	0.01	0.01
VOC	24.45	1.53	0.51	0.04
HAPS (Process)				
Acetonitrile	0.46	0.02	0.01	0.001
Hydrogen Chloride	67.75	21.68	0.01	0.003
Methanol	3.05	0.95	0.12	0.024
Methyl Tert-Butyl Ether	20.93	0.57	0.38	0.012
Total Process HAPS	92.20	23.21	0.51	0.040

Converted to 8,760 hrs/year, 33% Faster Time, and Number of Concurrent Batches

Hours Per Year = 8,760 hrs/yr
Batch Time = [redacted]
Faster Operating Time = 33 %
New Batch Time = [redacted]
Concurrent Batches = 3

Pollutant	Uncontrolled		Controlled	
	pph (Max Rate)	ton/yr	pph (Max Rate)	ton/yr
PM	1.5	0.15	1.5	0.15
PM10	0.72	0.15	0.72	0.15
PM2.5	0.1	0.15	0.1	0.15
SO2	237.75	289.60	0.02	0.08
VOC	48.91	11.65	1.01	0.30
HAPS (Process)				
Acetonitrile	0.93	0.14	0.03	0.01
Hydrogen Chloride	135.5	165.05	0.01	0.02
Methanol	6.11	7.20	0.23	0.18
Methyl Tert-Butyl Ether	41.87	4.31	0.75	0.09
HAPS	184.41	176.70	1.03	0.30

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Date: 03/05/2023

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Date: 03/07/2023

Sclareol

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MULTI-REACTOR PROCESS

Previously Permitted Batches/Year = 180
VOC Control Efficiency % = 99.9

Total Emissions						
Emissions	Uncontrolled			Controlled		
Pollutant	pph (Max Rate)(2)	ppy	tpy	pph (Max Rate)	ppy	tpy (180 batches)
VOC - Process (1)	84.2586	32,085.8277	16.0429	0.0843	32.0858	0.0160
VOC - Filter Changeout	0.22688	40.8389	0.0204	0.2269	40.8389	0.0204
Total VOC	84.4855	32,126.6665	16.0633	0.3111	72.9247	0.0365
PM	0.04463	8.03398	0.00402	0.04463	8.03398	0.00402
PM10	0.02111	3.79985	0.00190	0.02111	3.79985	0.00190
PM2.5	0.00320	0.57541	0.00029	0.00320	0.57541	0.00029

Converted to 8,760 hrs/year, 33% Faster Time, and Number of Concurrent Batches

Hours Per Year = 8,760 hrs/yr
Batch Time = [redacted]
Faster Operating Time = 33 %
New Batch Time = [redacted]
Concurrent Batches = 3

Emissions	Uncontrolled			Controlled		
Pollutant	pph (Max Rate)(2)	ppy	tpy	pph (Max Rate)	ppy	ton/yr
VOC - Process (1)	168.5172	32085.8277	54.8540	0.1685	32.0858	0.0549
VOC - Filter Changeout	0.4538	40.8389	0.0204	0.4538	40.8389	0.0698
VOC	168.9710	32,126.6665	54.8744	0.6223	72.9247	0.1247
PM	0.0893	8.03398	0.00402	0.0893	8.03398	0.0137
PM10	0.0422	3.79985	0.00190	0.0422	3.79985	0.0065
PM2.5	0.0064	0.57541	0.00029	0.0064	0.57541	0.0010

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STPB

MULTI-REACTOR PROCESS

Previously Permitted Batches/Year = 30

Calculated Emissions

Total Emissions				
Emissions	Uncontrolled		Controlled	
Pollutant	pph (Max Rate)	tpy (30 batches)	pph (Max Rate)	tpy (30 batches)
PM	0.13	0.03	0.13	0.03
PM10	0.07	0.03	0.07	0.03
PM2.5	0.03	0.03	0.03	0.03
VOC	25.47	0.72	1.17	0.15
HAPS				
Benzene	0.060	0.006	0.0043	0.001
Chlorobenzene	0	0	0	0
Hexane	7.03	0.074	0.43	0.039
Methanol	0.064	0.007	0.009	0.002
Toluene	1.77	0.083	0.362	0.037
Toluene*	0.031	0.0105	0.031	0.0105
Total	8.9484	0.1798	0.8398	0.0891

Converted to 8,760 hrs/year, 33% Faster Time, and Number of Concurrent Batches

Hours Per Year = 8,760 hrs/yr
Batch Time = [redacted]
Faster Operating Time = 33 %
New Batch Time = [redacted]
Concurrent Batches = 3

Emissions	Uncontrolled		Controlled	
Pollutant	pph (Max Rate)	ton/yr	pph (Max Rate)	ton/yr
PM	0.26	0.18	0.26	0.18
PM10	0.14	0.18	0.14	0.18
PM2.5	0.06	0.18	0.06	0.18
VOC	50.93	4.35	2.34	0.90
HAPS				
Benzene	0.12	0.04	0.01	0.00
Chlorobenzene	0.00	0.00	0.00	0.00
Hexane	14.05	0.45	0.87	0.24
Methanol	0.13	0.04	0.02	0.01
Toluene	3.53	0.50	0.72	0.22
Toluene*	0.06	0.06	0.06	0.06
HAPS	17.90	1.09	1.6796	0.54

*Uncontrolled storage tanks when process is not in operation.

By: PEW
Date: 03/05/2023

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Date: 03/07/2023

D-Mannose

MULTI-REACTOR PROCESS

Previously Permitted Batches/Year = 31

Process Emissions

Pollutant	Uncontrolled		Controlled	
	lb/hr (Max Rate)(1)	ton/yr (31 batches)	lb/hr (Max Rate)(1)	ton/yr (31 batches)
PM	0.24	0.03	0.24	0.03
PM10	0.11	0.02	0.11	0.02
PM2.5	0.02	0.01	0.02	0.01
Ethanol	2.57	0.20	0.01	0.01
Methanol	0.28	0.02	0.01	0.01
VOC	2.85	0.22	0.02	0.02
Total HAPs	0.28	0.02	0.01	0.01

Converted to 8,760 hrs/year, 33% Faster Time, and Number of Concurrent Batches

Hours Per Year = 8,760 hrs/yr
Batch Time = [redacted]
Faster Operating Time = 33 %
New Batch Time = [redacted]
Concurrent Batches = 3

Pollutant	Uncontrolled		Controlled	
	lb/hr (Max Rate)(1)	ton/yr	lb/hr (Max Rate)(1)	ton/yr
PM	0.48	0.57	0.48	0.57
PM10	0.22	0.38	0.22	0.38
PM2.5	0.04	0.19	0.04	0.19
Ethanol	5.14	3.78	0.02	0.19
Methanol	0.56	0.38	0.02	0.19
VOC	5.70	4.16	0.04	0.38
Total HAPs	0.56	0.38	0.02	0.19

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Date: 03/05/2023

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D-Mannose

MULTI-REACTOR PROCESS

Fugitive Emissions (Filter Changeouts)

Pollutant	Uncontrolled		Controlled	
	lb/hr (Max Rate)(1)	ton/yr (31 batches)	lb/hr (Max Rate)(1)	ton/yr (31 batches)
Ethanol	2.30	0.14	2.30	0.14
Methanol	0.08	0.01	0.08	0.01
VOC	2.38	0.15	2.38	0.15
Total HAPs	0.08	0.01	0.08	0.01

Converted to 8,760 hrs/year, 33% Faster Time, and Number of Concurrent Batches

Hours Per Year =	8,760 hrs/yr
Batch Time =	[redacted]
Faster Operating Time =	33 %
New Batch Time =	[redacted]
Concurrent Batches =	3

Pollutant	Uncontrolled		Controlled	
	lb/hr (Max Rate)(1)	ton/yr	lb/hr (Max Rate)(1)	ton/yr
Ethanol	4.60	2.65	4.60	2.65
Methanol	0.16	0.19	0.16	0.19
VOC	4.76	2.84	4.76	2.84
Total HAPs	0.16	0.19	0.16	0.19

Total PTE

Pollutant	Uncontrolled		Controlled	
	lb/hr (Max Rate)(1)	ton/yr	lb/hr (Max Rate)(1)	ton/yr
PM	0.48	0.57	0.48	0.57
PM10	0.22	0.38	0.22	0.38
PM2.5	0.04	0.19	0.04	0.19
Ethanol	9.74	6.43	4.62	2.84
Methanol	0.72	0.57	0.18	0.38
VOC	10.46	7.00	4.80	3.22
HAPS	0.72	0.57	0.18	0.38

By: PEW
Date: 03/05/2023

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Date: 03/07/2023

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TMBX

SINGLE REACTOR PROCESS

Previously Permitted Batches/Year = 100

Total Emissions

Pollutant	Uncontrolled		Controlled	
	pph (Max Rate)	tpy (100 batches)	pph (Max Rate)	tpy (100 batches)
PM	0.80	0.05	0.80	0.05
PM10	0.38	0.02	0.38	0.02
PM2.5	0.06	0.01	0.06	0.01
VOC	6.98	0.74	5.37	0.57

Converted to 8,760 hrs/year, 33% Faster Time, and Number of Concurrent Batches

Hours Per Year =	8,760 hrs/yr
Batch Time =	[redacted]
Faster Operating Time =	33 %
New Batch Time =	[redacted]
Concurrent Batches =	2

Pollutant	Uncontrolled		Controlled	
	pph (Max Rate)	ton/yr	pph (Max Rate)	ton/yr
PM	1.61	0.69	1.61	0.69
PM10	0.76	0.28	0.76	0.28
PM2.5	0.12	0.14	0.12	0.14
VOC	13.97	10.20	10.75	7.86

By: PEW
Date: 03/05/2023

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Date: 03/07/2023

Sodium Butyl Carbitol

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SINGLE REACTOR PROCESS

Previously Permitted Batches/Year = 100

Process Emissions

Pollutant	Uncontrolled		Controlled	
	lb/hr (Max Rate)	ton/yr	lb/hr (Max Rate)	ton/yr
Emission Point 104.014				
Butyl Carbitol (VOC/HAP)	0.001	0.0002	0.001	0.0001
Heptane (VOC)	0.69	0.15	0.63	0.06
Total VOC	0.69	0.15	0.63	0.06
Emission Point 104.003A / 104.003B				
PM	0.05	0.002	0.05	0.002
PM10	0.02	0.001	0.02	0.001
PM2.5	0.003	0.0002	0.003	0.0002

Converted to 8,760 hrs/year, 33% Faster Time, and Number of Concurrent Batches

Hours Per Year = 8,760 hrs/yr
Batch Time = [redacted]
Faster Operating Time = 33 %
New Batch Time = [redacted]
Concurrent Batches = 2

Pollutant	Uncontrolled		Controlled	
	lb/hr (Max Rate)	ton/yr	lb/hr (Max Rate)	ton/yr
Emission Point 104.014				
Butyl Carbitol	0.0023	0.0005	0.0023	0.0003
Heptane (VOC)	1.3820	0.3725	1.2543	0.1592
VOC	1.3844	0.3730	1.2567	0.1595
HAPS	0.0023	0.0000	0.0023	0.0000
Emission Point 104.003A / 104.003B				
PM	0.0921	0.0057	0.0921	0.0057
PM10	0.0436	0.0027	0.0436	0.0027
PM2.5	0.0066	0.0004	0.0066	0.0004

By: PEW
Date: 03/05/2023

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Date: 03/07/2023

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SINGLE REACTOR PROCESS

Prevously Permitted Batches Per Year = 487

Total Emissions

Pollutant	Uncontrolled		Controlled	
	pph (Max Rate)	tpy (487 batches)	pph (Max Rate)	tpy (487 batches)
VOC	0.36	0.83	0.36	0.71
HAPS				
Methanol	0.36	0.83	0.36	0.70
HAPS	0.36	0.83	0.36	0.70

Converted to 8,760 hrs/year, 33% Faster Time, and Number of Concurrent Batches

Hours Per Year = 8,760 hrs/yr
Batch Time = [redacted]
Faster Operating Time = 33 %
New Batch Time = [redacted]
Concurrent Batches = 2

Pollutant	Uncontrolled		Controlled	
	pph (Max Rate)	tpy	pph (Max Rate)	tpy
VOC	0.72	2.469	0.72	2.112
HAPS				
Methanol	0.71	2.469	0.71	2.083
HAPS	0.71	2.469	0.71	2.083

By: PEW
Date: 03/05/2023

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Date: 03/07/2023

Catofin

DOUBLE CONE DRYER PROCESS

Previously Permitted Batches/Year = 182

Catofin

Pollutant	Uncontrolled		Controlled	
	pph	tpy	pph	tpy
PM	0.2616	0.0238	0.2616	0.0238
PM10	0.1237	0.0113	0.1237	0.0113
PM2.5	0.0187	0.0017	0.0187	0.0017
Chromium Compounds	0.4040	0.0368	0.4040	0.0368
HAPS	0.5464	0.0497	0.5464	0.0497

Converted to 8,760 hrs/year, 33% Faster Time, and Number of Concurrent Batches

Hours Per Year = 8,760 hrs/yr
Batch Time = [redacted]
Faster Operating Time = 33 %
New Batch Time = [redacted]
Concurrent Batches = 1

Pollutant	Uncontrolled		Controlled	
	pph	tpy	pph	tpy
PM	0.5231	0.0238	0.5231	0.0238
PM10	0.2474	0.0112	0.2474	0.0112
PM2.5	0.0375	0.0017	0.0375	0.0017
Chromium Compounds	0.8080	0.0367	0.8080	0.0367
HAPS	1.0929	0.0497	1.0929	0.0497

Optima Belle, LLC

Potesta & Associates, Inc.
Project No. 0101-14-0162-022

By: PEW
Date: 03/05/2023

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Optima Belle, LLC January 10, 2018.

Checked By: ABK
Date: 03/07/2023

SR-1000

DOUBLE CONE DRYER PROCESS

Previously Permitted Batches/Year = 60

Total Emissions

Pollutant	Uncontrolled		Controlled	
	pph (Max Rate)(1)	tpy (60 batches)	pph (Max Rate)(1)	tpy (60 batches)
PM	0.24	0.01	0.24	0.01
PM10	0.11	0.003	0.11	0.003
PM2.5	0.02	0.0005	0.02	0.0005
VOC	35.02	3.06	0.46	0.02
HAPs				
p-Xylene	0.02	0.003	0.02	0.001
Toluene	35.00	3.06	0.44	0.02

Converted to 8,760 hrs/year, 33% Faster Time, and Number of Concurrent Batches

Hours Per Year = 8,760 hrs/yr
Batch Time = [redacted]
Faster Operating Time = 33 %
New Batch Time = [redacted]
Concurrent Batches = 1

Pollutant	Uncontrolled		Controlled	
	pph (Max Rate)(1)	tpy	pph (Max Rate)(1)	tpy
PM	0.47	0.037	0.47	0.037
PM10	0.22	0.017	0.22	0.017
PM2.5	0.03	0.003	0.03	0.003
VOC	70.04	15.890	0.92	0.087
HAPs				
p-Xylene	0.04	0.017	0.04	0.003
Toluene	70.00	15.873	0.88	0.084
HAPS	70.04	15.89	0.92	0.09

By: PEW
Date: 03/05/2023

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Information claimed confidential by
Optima Belle, LLC January 10, 2018.

Checked By: ABK
Date: 03/07/2023

T2960

DOUBLE CONE DRYER PROCESS

Previously Permitted Batches/Year = 100

Total Emissions

Pollutant	Uncontrolled		Controlled	
	pph (Max Rate)(1)	tpy (100 batches)	pph (Max Rate)(1)	tpy (100 batches)
PM	0.16	0.01	0.16	0.01
PM10	0.08	0.004	0.08	0.004
PM2.5	0.01	0.001	0.01	0.001
VOC	4.06	0.31	0.17	0.02

Converted to 8,760 hrs/year, 33% Faster Time, and Number of Concurrent Batches

Hours Per Year =	8,760 hrs/yr
Batch Time =	[redacted]
Faster Operating Time =	33 %
New Batch Time =	[redacted]
Concurrent Batches =	1

Pollutant	Uncontrolled		Controlled	
	pph (Max Rate)(1)	tpy	pph (Max Rate)(1)	tpy
PM	0.32	0.06	0.32	0.06
PM10	0.15	0.03	0.15	0.03
PM2.5	0.02	0.00	0.02	0.00
VOC	8.12	2.28	0.34	0.13

By: PEW
Date: 03/05/2023

Checked By: ABK
Date: 03/07/2023

CN-3624

DOUBLE CONE DRYER PROCESS

Total Emissions

Number of Batches in Process	1
Number of Batches Per Year	150

Process Emissions

Pollutant	Uncontrolled		Controlled	
	lb/hr (Max Rate)	ton/yr	lb/hr (Max Rate)	ton/yr
PM	0.36	4.08	0.36	4.08
PM10	0.17	1.93	0.17	1.93
PM2.5	0.03	0.30	0.03	0.30
Hydrogen Chloride	0	0	0.0002	0.00003
Isopropyl Alcohol	1.67	0.41	1.50	0.29
Methylene Chloride	1.88	0.23	1.87	0.23
VOC	3.54	0.64	3.38	0.52
HAPS	1.88	0.23	1.88	0.23

By: PEW
Date: 03/05/2023

Checked By: ABK
Date: 03/07/2023

Nylon Washing

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FILTER DRYER PROCESS

Previously Permitted Batches/Year = 200

Total Emissions

Pollutant	Uncontrolled		Controlled	
	pph(Max Rate)	tpy (200 batches)	pph(Max Rate)	tpy (200 batches)
VOC	2.20	0.22	0.59	0.18
HAPS				
Methanol	2.20	0.22	0.59	0.18
Total Process HAPS	2.20	0.22	0.59	0.18

Converted to 8,760 hrs/year, 33% Faster Time, and Number of Concurrent Batches

Hours Per Year = 8,760 hrs/yr
Batch Time = [redacted]
Faster Operating Time = 67 %
New Batch Time = [redacted]
Concurrent Batches = 1

Pollutant	Uncontrolled		Controlled	
	pph (Max Rate)	tpy	pph (Max Rate)	tpy
VOC	4.39	0.23	1.18	0.19
HAPS				
Methanol	4.39	0.23	1.18	0.19
HAPS	4.39	0.23	1.18	0.19

By: PEW
Date: 03/05/2023

Checked By: ABK
Date: 03/07/2023

SLM Incinerator Criteria

Burner Rating =	10	MMBTU/HR
Heat Rating of Natural Gas =	1,020	BTU/CF
Fuel Use =	9,803.92	SCFH
	0.009804	MMSCF/HR
Operating Hours per Year =	8,760	HR/YR
Fuel Use per Year =	85.882	MMSCF/YR

Emission Type	Emissions lb/MMSCF[2]	Uncontrolled		Controlled	
		lb/hr	tpy	lb/hr	tpy
PM	7.6	0.08	0.35	0.08	0.35
PM10[1]	7.6	0.08	0.35	0.08	0.35
PM2.5[1]	7.6	0.08	0.35	0.08	0.35
PM Condensable	5.7	0.06	0.26	0.06	0.26
PM Filterable	1.9	0.02	0.09	0.02	0.09
SO2	0.6	0.01	0.04	0.01	0.04
NOx	100	0.99	4.34	0.99	4.34
CO	84	0.83	3.64	0.83	3.64
VOC	5.5	0.06	0.26	0.06	0.26
TOC	11	0.11	0.48	0.11	0.48
HAPS	See following page.	0.02	0.08	0.02	0.08
				Rounding =	2

1. It is assumed that PM and PM2.5 are equal to PM10.
2. Emission factors from AP-42, Section 1.4., Table 1.4-1 and 1.4-2.

By: PEW **Checked By: ABK**
Date: 03/05/2023 **Date: 03/07/2023**

SLM Incinerator HAPS

Burner Rating = 10.00 MMBTU/HR
Operating Hours = 8,760 HR/YR
Conversion from lb/10^6 scf to lb/MMBtu (divide by)[(1)] = 1,020 BTU/CF

CAS No.	Hazardous Air Pollutants	EF[1]		Uncontrolled		Controlled	
		lb/10^6 scf	lb/MMBtu	lb/hr	tpy	lb/hr	tpy
91-57-6	2-Methylnaphthalene	2.40E-05	2.35E-08	2.35E-07	1.03E-06	2.35E-07	1.03E-06
56-49-5	3-Methylchloranthrene	1.80E-06	1.76E-09	1.76E-08	7.73E-08	1.76E-08	7.73E-08
57-97-6	7,12-Dimethylbenz(a)anthracene	1.60E-05	1.57E-08	1.57E-07	6.87E-07	1.57E-07	6.87E-07
83-32-9	Acenaphthene	1.80E-06	1.76E-09	1.76E-08	7.73E-08	1.76E-08	7.73E-08
203-96-8	Acenaphthylene	1.80E-06	1.76E-09	1.76E-08	7.73E-08	1.76E-08	7.73E-08
120-12-7	Anthracene	2.40E-06	2.35E-09	2.35E-08	1.03E-07	2.35E-08	1.03E-07
56-55-3	Benz(a)anthracene	1.80E-06	1.76E-09	1.76E-08	7.73E-08	1.76E-08	7.73E-08
71-43-2	Benzene	2.10E-03	2.06E-06	2.06E-05	9.02E-05	2.06E-05	9.02E-05
50-32-8	Benzo(a)pyrene	1.20E-06	1.18E-09	1.18E-08	5.15E-08	1.18E-08	5.15E-08
205-99-2	Benzo(b)fluoranthene	1.80E-06	1.76E-09	1.76E-08	7.73E-08	1.76E-08	7.73E-08
191-24-2	Benzo(g,h,i)perylene	1.20E-06	1.18E-09	1.18E-08	5.15E-08	1.18E-08	5.15E-08
205-82-3	Benzo(k)fluoranthene	1.80E-06	1.76E-09	1.76E-08	7.73E-08	1.76E-08	7.73E-08
218-01-9	Chrysene	1.80E-06	1.76E-09	1.76E-08	7.73E-08	1.76E-08	7.73E-08
53-70-3	Dibenzo(a,h)anthracene	1.20E-06	1.18E-09	1.18E-08	5.15E-08	1.18E-08	5.15E-08
25321-22-6	Dichlorobenzene	1.20E-03	1.18E-06	1.18E-05	5.15E-05	1.18E-05	5.15E-05
206-44-0	Fluoranthene	3.00E-06	2.94E-09	2.94E-08	1.29E-07	2.94E-08	1.29E-07
86-73-7	Fluorene	2.80E-06	2.75E-09	2.75E-08	1.20E-07	2.75E-08	1.20E-07
50-00-0	Formaldehyde	7.20E-02	7.06E-05	7.06E-04	3.09E-03	7.06E-04	3.09E-03
110-54-3	Hexane	1.80E+00	1.76E-03	1.76E-02	7.73E-02	1.76E-02	7.73E-02
193-39-5	Indeno(1,2,3-cd)pyrene	1.80E-06	1.76E-09	1.76E-08	7.73E-08	1.76E-08	7.73E-08
91-20-3	Naphthalene	6.10E-04	5.98E-07	5.98E-06	2.62E-05	5.98E-06	2.62E-05
85-01-8	Phenanathrene	1.70E-05	1.67E-08	1.67E-07	7.30E-07	1.67E-07	7.30E-07
129-00-0	Pyrene	5.00E-06	4.90E-09	4.90E-08	2.15E-07	4.90E-08	2.15E-07
108-88-3	Toluene	3.40E-03	3.33E-06	3.33E-05	1.46E-04	3.33E-05	1.46E-04
7440-38-2	Arsenic	2.00E-04	1.96E-07	1.96E-06	8.59E-06	1.96E-06	8.59E-06
7440-41-7	Beryllium	1.20E-05	1.18E-08	1.18E-07	5.15E-07	1.18E-07	5.15E-07
7440-43-9	Cadmium	1.10E-03	1.08E-06	1.08E-05	4.72E-05	1.08E-05	4.72E-05
7440-47-3	Chromium	1.40E-03	1.37E-06	1.37E-05	6.01E-05	1.37E-05	6.01E-05
7440-48-4	Cobalt	8.40E-05	8.24E-08	8.24E-07	3.61E-06	8.24E-07	3.61E-06
7439-96-5	Manganese	3.80E-04	3.73E-07	3.73E-06	1.63E-05	3.73E-06	1.63E-05
7439-97-6	Mercury	2.60E-04	2.55E-07	2.55E-06	1.12E-05	2.55E-06	1.12E-05
7440-02-0	Nickel	2.10E-03	2.06E-06	2.06E-05	9.02E-05	2.06E-05	9.02E-05
7782-49-2	Selenium	2.40E-05	2.35E-08	2.35E-07	1.03E-06	2.35E-07	1.03E-06
			VOC HAPs Subtotal	0.0184	0.081	0.0184	0.081
			Metal HAPs Subtotal	0.000055	0.000239	0.000055	0.000239
			Total HAPs	0.0185	0.081	0.0185	0.081

References:
[(1)] AP42 Table 1.4-3 and Table 1.4-4

Kretine Process

Emission From Vent Scrubber (HKCD03)
Emission Reduction Efficiency 99.9 %

Pollutant	Uncontrolled	Controlled	Uncontrolled	Controlled
	lb/hr	lb/hr	tpy	tpy
VOC	500	0.5	250	0.25
Methanol	230	0.23	110	0.11

Hexazinone Process
Existing Batches Per Year 781
Proposed Batches Per Year 234
Emission Reduction Efficiency 98 %

Pollutant	Existing				New	
	Uncontrolled	Controlled	Controlled	EF	Uncontrolled	Controlled
	lb/hr	lb/hr	tpy	ton/batch	tpy	tpy
Hydrogen Chloride	112.50	2.25	1.67	2.14E-03	25.02	0.50
Nitrous Oxides as NO2	1000.00	20	49.4	6.33E-02	740.05	14.80
Sulfur Dioxide	0.15	0.003	0.012	1.54E-05	0.50	0.01
Methyl Chloride	230.00	4.6	1.69	2.16E-03	25.32	0.51
Ammonia (NH3)	100.00	2	8.06	1.03E-02	120.75	2.41
Methanol	210.00	4.2	16.56	2.12E-02	248.08	4.96
Ethanol	173.00	3.46	3.55	4.55E-03	53.18	1.06
Tributylamine	20.00	0.4	0.28	3.59E-04	4.19	0.08
Ethyl Chloride	398.50	7.97	3.78	4.84E-03	56.63	1.13
Methyl Chloroformate	13.00	0.26	0.15	1.92E-04	2.25	0.04
Triethyl Phosphite	3.50	0.07	0.2	2.56E-04	3.00	0.06
HAPS	951.00	19.02	23.7		355.05	7.10

Thermal Oxidizer Combustion Emissions

Pollutant	Uncontrolled		Controlled	
	lb/hr	tpy	lb/hr	tpy
PM	0.06	0.26	0.06	0.26
PM10	0.06	0.26	0.06	0.26
PM2.5	0.06	0.26	0.06	0.26
PM Condensable	0.04	0.18	0.04	0.18
PM Filterable	0.02	0.09	0.02	0.09
SO2	0.01	0.04	0.01	0.04
NOx	0.74	3.24	0.74	3.24
CO	0.62	2.72	0.62	2.72
VOC	0.05	0.22	0.05	0.22
TOC	0.09	0.39	0.09	0.39
HAPS	0.02	0.06	0.02	0.06

Potential to Emit at B114

Pollutant	Uncontrolled		Controlled	
	lb/hr	tpy	lb/hr	tpy
PM	0.06	0.26	0.06	0.26
PM10	0.06	0.26	0.06	0.26
PM2.5	0.06	0.26	0.06	0.26
VOC	1741.55	743.43	21.01	8.24
SO2	0.16	0.54	0.01	0.05
NOx[1]	1000.74	743.29	20.74	18.04
CO	0.62	2.72	0.62	2.72
Hydrogen Chloride	112.50	25.02	2.25	0.50
Methyl Chloride	230.00	25.32	4.60	0.51
Ammonia (NH3)	100.00	120.75	2.00	2.41
Methanol	440.00	358.08	4.43	5.07
Ethanol	173.00	53.18	3.46	1.06
Tributylamine	20.00	4.19	0.40	0.08
Ethyl Chloride	398.50	56.63	7.97	1.13
Methyl Chloroformate	13.00	2.25	0.26	0.04
Triethyl Phosphite	3.50	3.00	0.07	0.06
HAPS	1181.02	465.11	19.27	7.27

Notes
1. NOx includes process Nitrous Oxides as NO2

By: PEW
Date: 03/05/2023

Checked By: ABK
Date: 03/07/2023

B114 Thermal Oxidizer Criteria

Burner Rating =	7.5	MMBTU/HR
Heat Rating of Natural Gas =	1,020	BTU/CF
Fuel Use =	7,352.94	SCFH
	0.007353	MMSCF/HR
Operating Hours per Year =	8,760	HR/YR
Fuel Use per Year =	64.412	MMSCF/YR

Emission Type	Emissions lb/MMSCF[2]	Uncontrolled		Controlled	
		lb/hr	tpy	lb/hr	tpy
PM	7.6	0.06	0.26	0.06	0.26
PM10[1]	7.6	0.06	0.26	0.06	0.26
PM2.5[1]	7.6	0.06	0.26	0.06	0.26
PM Condensable	5.7	0.04	0.18	0.04	0.18
PM Filterable	1.9	0.02	0.09	0.02	0.09
SO2	0.6	0.01	0.04	0.01	0.04
NOx	100	0.74	3.24	0.74	3.24
CO	84	0.62	2.72	0.62	2.72
VOC	5.5	0.05	0.22	0.05	0.22
TOC	11	0.09	0.39	0.09	0.39
HAPS	See following page.	0.02	0.06	0.02	0.06

2

1. It is assumed that PM and PM2.5 are equal to PM10.
2. Emission factors from AP-42, Section 1.4., Table 1.4-1 and 1.4-2.

By: PEW
Date: 03/05/2023

Checked By: ABK
Date: 03/07/2023

B114 Thermal Oxidizer HAPS

Burner Rating = 7.50 MMBTU/HR
Operating Hours = 8,760 HR/YR
Conversion from lb/10^6 scf to lb/MMBtu (divide by)[(1)] = 1,020 BTU/CF

CAS No.	Hazardous Air Pollutants	EF[1]		Uncontrolled		Controlled	
		lb/10^6 scf	lb/MMBtu	lb/hr	tpy	lb/hr	tpy
91-57-6	2-Methylnaphthalene	2.40E-05	2.35E-08	1.76E-07	7.73E-07	1.76E-07	7.73E-07
56-49-5	3-Methylchloranthrene	1.80E-06	1.76E-09	1.32E-08	5.80E-08	1.32E-08	5.80E-08
57-97-6	7,12-Dimethylbenz(a)anthracene	1.60E-05	1.57E-08	1.18E-07	5.15E-07	1.18E-07	5.15E-07
83-32-9	Acenaphthene	1.80E-06	1.76E-09	1.32E-08	5.80E-08	1.32E-08	5.80E-08
203-96-8	Acenaphthylene	1.80E-06	1.76E-09	1.32E-08	5.80E-08	1.32E-08	5.80E-08
120-12-7	Anthracene	2.40E-06	2.35E-09	1.76E-08	7.73E-08	1.76E-08	7.73E-08
56-55-3	Benz(a)anthracene	1.80E-06	1.76E-09	1.32E-08	5.80E-08	1.32E-08	5.80E-08
71-43-2	Benzene	2.10E-03	2.06E-06	1.54E-05	6.76E-05	1.54E-05	6.76E-05
50-32-8	Benzo(a)pyrene	1.20E-06	1.18E-09	8.82E-09	3.86E-08	8.82E-09	3.86E-08
205-99-2	Benzo(b)fluoranthene	1.80E-06	1.76E-09	1.32E-08	5.80E-08	1.32E-08	5.80E-08
191-24-2	Benzo(g,h,i)perylene	1.20E-06	1.18E-09	8.82E-09	3.86E-08	8.82E-09	3.86E-08
205-82-3	Benzo(k)fluoranthene	1.80E-06	1.76E-09	1.32E-08	5.80E-08	1.32E-08	5.80E-08
218-01-9	Chrysene	1.80E-06	1.76E-09	1.32E-08	5.80E-08	1.32E-08	5.80E-08
53-70-3	Dibenzo(a,h)anthracene	1.20E-06	1.18E-09	8.82E-09	3.86E-08	8.82E-09	3.86E-08
25321-22-6	Dichlorobenzene	1.20E-03	1.18E-06	8.82E-06	3.86E-05	8.82E-06	3.86E-05
206-44-0	Fluoranthene	3.00E-06	2.94E-09	2.21E-08	9.66E-08	2.21E-08	9.66E-08
86-73-7	Fluorene	2.80E-06	2.75E-09	2.06E-08	9.02E-08	2.06E-08	9.02E-08
50-00-0	Formaldehyde	7.20E-02	7.06E-05	5.29E-04	2.32E-03	5.29E-04	2.32E-03
110-54-3	Hexane	1.80E+00	1.76E-03	1.32E-02	5.80E-02	1.32E-02	5.80E-02
193-39-5	Indeno(1,2,3-cd)pyrene	1.80E-06	1.76E-09	1.32E-08	5.80E-08	1.32E-08	5.80E-08
91-20-3	Naphthalene	6.10E-04	5.98E-07	4.49E-06	1.96E-05	4.49E-06	1.96E-05
85-01-8	Phenanathrene	1.70E-05	1.67E-08	1.25E-07	5.48E-07	1.25E-07	5.48E-07
129-00-0	Pyrene	5.00E-06	4.90E-09	3.68E-08	1.61E-07	3.68E-08	1.61E-07
108-88-3	Toluene	3.40E-03	3.33E-06	2.50E-05	1.10E-04	2.50E-05	1.10E-04
7440-38-2	Arsenic	2.00E-04	1.96E-07	1.47E-06	6.44E-06	1.47E-06	6.44E-06
7440-41-7	Beryllium	1.20E-05	1.18E-08	8.82E-08	3.86E-07	8.82E-08	3.86E-07
7440-43-9	Cadmium	1.10E-03	1.08E-06	8.09E-06	3.54E-05	8.09E-06	3.54E-05
7440-47-3	Chromium	1.40E-03	1.37E-06	1.03E-05	4.51E-05	1.03E-05	4.51E-05
7440-48-4	Cobalt	8.40E-05	8.24E-08	6.18E-07	2.71E-06	6.18E-07	2.71E-06
7439-96-5	Manganese	3.80E-04	3.73E-07	2.79E-06	1.22E-05	2.79E-06	1.22E-05
7439-97-6	Mercury	2.60E-04	2.55E-07	1.91E-06	8.37E-06	1.91E-06	8.37E-06
7440-02-0	Nickel	2.10E-03	2.06E-06	1.54E-05	6.76E-05	1.54E-05	6.76E-05
7782-49-2	Selenium	2.40E-05	2.35E-08	1.76E-07	7.73E-07	1.76E-07	7.73E-07
			VOC HAPs Subtotal	0.0138	0.061	0.0138	0.061
			Metal HAPs Subtotal	0.000041	0.000179	0.000041	0.000179
			Total HAPs	0.0139	0.061	0.0139	0.061

References:
(1) AP42 Table 1.4-3 and Table 1.4-4

ATTACHMENT O

MONITORING/RECORDKEEPING/REPORTING/TESTING PLANS

ATTACHMENT O

MONITORING/RECORDKEEPING/ REPORTING/TESTING PLANS

Optima Belle, LLC plans to follow the monitoring, recordkeeping, reporting, and testing required by the issued permit.

ATTACHMENT P

PUBLIC NOTICE

AIR QUALITY PERMIT NOTICE

Notice of Application

Notice is given that Optima Belle, LLC has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Modification to Regulation 13 Permit R13-2093H to revise the permit for new equipment, remove equipment, and a new product at the facility on W. DuPont Avenue near Belle, Kanawha County, West Virginia. The latitude and longitude coordinates are: 38.239659 and -81.551886.

The applicant estimates change in the potential to discharge the following Regulated Air Pollutants from the facility will be: VOC of 0.41 tons per year (tpy), Ethylbenzene of 0.00096 tpy, Styrene of 0.00002 tpy for total hazardous air pollutants of 0.00099 tpy.

Startup of operation is planned to begin on or about August 15, 2023. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice. Written comments will also be received via email at DEPAirQualityPermitting@WV.gov.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, Extension 41281, during normal business hours.

Dated this the (PLEASE INSERT DAY) day of March 2023.

By: Optima Chemical Group, LLC
Doug Cochran
Vice President of Business Development
200 Willacoochee Highway
Douglas, Georgia 31535

ATTACHMENT Q

BUSINESS CONFIDENTIAL CLAIMS

(e) The period of time for which confidential treatment is desired (e.g., until a certain date, until the occurrence of a specified event or permanently); and,

(f) Signature of a responsible official or an authorized representative of such person.

3. At the same time as the information claimed confidential is submitted to the DAQ on colored paper, a complete set of the information, including the cover document previously required under paragraph 2, must be submitted on white paper with the information claimed to be confidential blacked or whited out and the words Redacted Copy Claim of Confidentiality marked clearly on each such page, so that the information is suitable for public disclosure. In the case of drawings and blueprints, mark each page with the words Redacted Copy Claim of Confidentiality, include the title or legend of the drawing, and black or white out the information claimed confidential. The redacted page may be 8½" x 11" in size.

4. In the case of a permit application or supplemental information to an application, DAQ requires an applicant to submit three (3) copies of the application. Of those three (3) copies, one (1) must be a complete set of the application containing the information claimed confidential on colored paper and two (2) must be redacted copies. The DAQ reserves the right, however, to request additional copies of the information containing the confidential material.

Attachment

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 Doug Cochran *(Please use blue ink)* DATE: 3/17/23 *(Please use blue ink)*

35B. Printed name of signee: Doug Cochran		35C. Title: Vice President of Business Development
35D. E-mail: dcochran@optimachem.com	36E. Phone: (912) 720-5190	36F. FAX: Use email
36A. Printed name of contact person (if different from above): Michelle Given		36B. Title: EHS Manager
36C. E-mail: mgiven@optimachem.com	36D. Phone: (304) 949-7162	36E. FAX: Use email

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

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

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

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

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

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

Attachment Q
Business Confidential Claim

Company Name	Optima Belle, LLC	**Responsible Official**		
Company Address	900 W. DuPont Avenue	**Confidential Information Designee in State of WV**	**Name**	Doug Cochran
	Belle, WV 25015		**Title**	Vice President of Business Development
			Address	200 Willacoochee Highway
Person/Title Submitting Confidential Information	Doug Cochran			Douglas, GA 31535
	Vice President of Business Development		**Phone**	(912) 720-5190
			Fax	(912) 384-6330

Reason for Submittal Of Confidential Information : R13 Class II Administrative Update

Identification of Confidential Information	**Rationale for Confidential Claim 45CSR31-4.1a-e**	**Confidential Treatment Time Period**
-Equipment design and capacity information -Process descriptions -Process flow diagrams	a. Information initially claimed confidential by E.I. Dupont De Nemours and Company, Inc. and The Chemours Company FC, LLC. Information continues to be confidential under Optima Belle, LLC. The claim has not expired by its term, or been waived or withdrawn. The confidential information should continue to be maintained as such for an indefinite time period. See attached for b-e	Permanent

Responsible Official Signature:	Doug Cochran
Responsible Official Title:	Vice President of Business Development
Date Signed:	3/17/23

NOTE: Must be signed and dated in **BLUE INK**.

Rationale for Confidentiality Claim (Cont.)

b. Information claimed confidential is not available to the general public. Within the company, Optima Belle, LLC (Optima) distributes technical information on a need-to-know basis and has used its business confidentiality policy to prevent inadvertent dissemination of information. This policy includes:

    * Marking of business confidential documents,
    * Limited distribution of documents,
    * Shredding of confidential documents before disposal.

    Employees are aware of the competitive nature of their business and are trained in guarding confidential information.

c. Information revealing the process technology in this submittal is not reasonably obtainable by persons other than Optima employees who need to know. To maintain the confidentiality of such information, Optima employees involved with confidential information sign a confidentiality agreement.

d. There is no statute that has been reviewed that requires disclosure of information claimed to be confidential.

e. Optima claims business confidentiality protection for the information submitted since disclosure would allow competent engineers within a competitor's company to determine the manner or process by which Optima produces this product and would provide competitors information without paying for technology or conducting research and development necessary to obtain the technology.

APPENDIX 1

YOUNG INDUSTRIES SELF-CONTAINED FILTER/BAG DUMP STATION SPECIFICATIONS

THE YOUNG INDUSTRIES, INC.
16 PAINTER STREET, MUNCY, PA 17756
WWW.YOUNGINDS.COM

QUOTATION NO. 111-22-0578-2

Optima Belle 901 West Dupont Ave Belle, WV 25105 NAME: John Sawyer EMAIL: jsawyer@optimachem.com	FROM: Curtiss F. Wykoff Project Engineer Phone: (570) 546-1843 Cell: (570) 916-1726 DATE: February 28, 2023

The Young Industries, Inc. (hereinafter referred to as "Seller") is pleased to submit this quotation for the Machinery, equipment and/or services described below and on additional pages if required, subject to the Terms and Conditions of Sales as posted https://www.younginds.com/TC/QTC.pdf.

CUSTOMER'S INQUIRY: Proposal for a FBD42-8 Filter/Bag Dump Station.

ITEM NO. 1:

ONE (1) - Young Industries Self-Contained Filter/Bag Dump Station. Assembly includes a continuous-cleaning, pulse jet "Uni-Cage" Filter and integral fan as specified below.

OPERATING CONDITIONS:

MATERIAL	-	Unknown
POUNDS/HOUR	-	Unknown

SPECIFICATIONS:

MODEL	-	FBD42-8
STYLE	-	Hopper type
FILTER CLOTH AREA	-	36 sq. ft.
FILTER MEDIA	-	14 oz. polyester felt
NUMBER OF BAGS	-	Eight (8)
BAG LENGTH	-	42"
FAN (HP)/VOLUME	-	1 1/2 / 1200 CFM
FACE VELOCITY	-	135 ft./minute
FAN NOISE LEVEL	-	Less than 80 DBA
DIMENSIONS	-	Per drawing 4-6177-21.00

CONSTRUCTION:

HOUSING	-	316 S/S where product contacts
PLENUM ACCESS DOOR	-	316 S/S
BAG GRATE (REMOVABLE)	-	316 S/S
FILTER CAGES	-	S/S (Style D)

BY: *Curtiss F. Wykoff*

HOPPER OUTLET	-	8" Square flange.
TYPE SUPPORTS	-	Four (4) support legs, 316 S/S
CHARGE OPENING DOOR	-	Included, 316 S/S
MAGNEHELIC GAUGE	-	Included
ENGRG. SPEC. 185.200		
WELDING	-	Class 1
GRINDING, EXTERIOR	-	Class 2
GRINDING, INTERIOR	-	Class 2
CLEAN-UP, EXTERIOR	-	Class 2
CLEAN-UP, INTERIOR	-	Class 2

ELECTRICAL/AIR: (Style 3)

PUSHBUTTON STATION, ENCLOSURE AND VOLTAGE	-	NEMA 7/9, 1/60/120 VAC
MOUNTING AND WIRING TO SOLENOID	-	By Young Industries
SOLENOID ENCLOSURE AND VOLTAGE	-	NEMA 7/9, 1/60/120 VAC
FILTER TIMER (IN PUSHBUTTON STATION)	-	1/60/120 VAC
MOTOR ENCLOSURE	-	Explosion proof, Class 1, Group D, Class 2, Groups F & G
MOTOR VOLTAGE	-	3/60/230-460 VAC
COMPRESSED AIR REQUIREMENTS	-	2 SCFM & 80 PSIG
MOTOR STARTERS	-	By Customer

TOTAL PRICE FOR ITEM NO. 1, QUOTED (not including options or alternates), F.O.B., MUNCY, PENNSYLVANIA or FACTORY OF MANUFACTURE.....$29,710.00

DRAWINGS: Component drawings can be submitted for your approval in 20 - 30 working days after our receipt of a formal purchase order. Upon return of customer approved drawings, corrections will be made, if required and final drawings returned to you in 20 days for your records. Any changes occurring during the approval process will be analyzed to determine if the equipment price will need to be adjusted. The customer will be notified of any price changes.

SHIP SCHEDULE: 20 - 24 weeks after settlement of all engineering details. This schedule is based on items of equipment manufactured by The Young Industries, Inc. On outside purchased items, delivery will be based on current schedule of our suppliers at time of order placement.

FREIGHT: Unless purchased with the additional Freight line items, the equipment listed in this proposal does not include shipping costs. Young Industries can ship freight collect, F.O.B. Muncy PA or F.O.B. Shipping Point (freight costs not included) but will need the buyers preferred carrier and account number to do so. The equipment can also ship Pre-paid and add, using Young Industries preferred carrier with the shipping costs invoiced in addition to the equipment costs, and to be paid by the buyer. Freight terms must be clearly defined in any purchase order resulting from this proposal.

TERMS OF PAYMENT: For any order resulting from this quotation, the customer will be invoiced 40 percent of order value, with receipt of purchase order, payable NET 30 days from invoice date. The balance of order to be invoiced as shipped or complete awaiting customer inspection or authorization to ship, net 30 days, with 30 percent prepayment applied against each invoice. "Established credit", or any other credit extension, shall be approved in

writing by an authorized officer of seller in Muncy, Pennsylvania. Interest at the rate of eighteen percent (18%) per annum shall be applied to all invoices not paid in full within thirty (30) days of the date of the invoice.

This quotation will be held open for thirty (30) days unless extended in writing by The Young Industries, Inc., Muncy, Pennsylvania.

If favored with an order drawing approval and release for fabrication must be completed in a timely manner to avoid possible price adjustment. If projects are put on hold Young Industries reserve the right to review pricing once the project is released from hold status. If price adjustment is required new pricing will be submitted for review and approval prior to release for fabrication.

Prices quoted include only those items listed and are based on the quantities specified. Additions, deletions, or price changes due to quantity revisions will be made by quotation.

The system and/or equipment described in this quotation is guaranteed to perform as specified for the service condition described. Factors not included in this specification which may in any way affect the operation of the system or equipment are to be considered the responsibility of the customer.

Unless Young Industries, Inc has received a sample of the products being handled in the above equipment and/or systems; the design is based on past experience with similar materials. The physical characteristics of the materials handled can affect the operation of the equipment and design rate of the system. However, to guarantee the equipment and system performance it is mandatory for Young Industries to test the materials handled. Young Industries wants a sample of up to 50 pounds in size for bench testing and visual product verification. Shipment of additional material may be required to permit further testing in our laboratory. An MSDS is required for all materials prior to receipt of the materials. Bench testing and visual product verification tests are performed at no charge. All test material shipping cost are the responsibility of the customer. Young Industries, Inc cannot dispose test materials. All test materials will be returned to the customer.

The Young Industries, Inc. cannot assume any responsibility for the abrasive or corrosive nature of material processed or handled in this equipment; nor does presentation of this proposal carry with it any representation of service life against such abrasion or corrosion.

When equipment is quoted to handle combustible powders, Young Industries has utilized NFPA guidelines **(NFPA 68-Guide of Venting of Deflagrations, NFPA 69-Standard on Explosive Prevention Systems, NFPA 77-Recommended Practice on Static Electric, NFPA 652- Standard on the Fundamentals of Combustible Dust, and NFPA 654-Standard for the prevention of fire and dust explosions for combustible dusts)** in the design of the equipment offered in this quotation. Ultimately the safety of the system and equipment design for the intended process is the responsibility of the owner/operator and their designated Authority Having Jurisdiction (AHJ). Young Industries will work with the owner/operator to address issues around the handling of combustible dusts as it relates to the equipment offered in this quotation.

Unless otherwise stated, all Young Industries, Inc. equipment requiring shop paint will be primed and painted with one (1) coat of blue or gray epoxy paint, applied in accordance with our standard preparation and painting methods. Items not of our manufacture will be painted in accordance with the vendor's standard procedures.

ENGINEERING DOCUMENTATION: All drawings will only be sent by email in a PDF file format. All correspondence, specifications, manuals, etc. will only be sent by email in a .pdf file format. Other file formats and/or hard copies of the engineering documentations can be provided at an additional cost to the Buyer.

SOFTWARE PROGRAMS: All software programs and electrical controls supplied with equipment or systems include preliminary testing only. All other testing is at the Buyer's expense. Final software changes may be

required in the field after final installation and connection of all the field devices. The final modifications will be at the Buyer's expense.

FACTORY ACCEPTANCE SUPPORT: Upon completion of installation, if the Buyer so desires, The Young Industries, Inc. will provide Factory Acceptance Support to check over the installation, start-up the equipment, place it in commercial operation and instruct the purchaser's operators in its proper care and maintenance. This service is to be billed at an additional rate of **$1,600.00 USD** per day plus travel and living expenses per day.

OTHER FACTORY ACCEPTANCE SUPPORT: If Buyer so desires, The Young Industries, Inc. can provide other Factory Acceptance Support at the additional rate of **$1,600.00 USD** per day plus travel and living expenses per day.

A normal workday will be 8 hours, except for a day with travel involved. A day combining work and travel will extend through 12 hours. Customer requests for Saturday or Sunday will be considered as overtime. Factory Acceptance Support shall be invoiced on a monthly basis. Each invoice shall be due and payable in United States funds, net Thirty (30) days from date of invoice. Interest at the rate of eighteen percent (18%) per annum shall be applied to all invoices not paid in full within thirty (30) days of the date of the invoice.

NOISE GENERATING UNITS: The Young Industries, Inc. cannot guarantee that all equipment quoted herein, will meet the noise level requirements of the Williams-Steiger Occupational Safety & Health Act of 1970 (OSHA). The Young Industries, Inc. cannot be held responsible if the equipment quoted exceeds the limits established by OSHA. If it is determined, by the customer, that an employee's exposure to the generated noise level is in violation of OSHA regulations, The Young Industries, Inc. can submit a quotation for adequate acoustical enclosure of accepted design that will comply with the regulations of the customer's particular installation.

WARNING: ELECTRICAL GROUNDING AND BONDING IS REQUIRED. UNGROUNDED MACHINERY PRESENTS A POTENTIAL HAZARD OF FATAL ELECTRICAL SHOCK FROM ELECTRICAL POWER SOURCES. STATIC ELECTRICITY MAY ALSO ACCUMULATE ON UNGROUNDED/UNBONDED EQUIPMENT. STATIC ELECTRICITY DISCHARGE FROM UNGROUNDED EQUIPMENT OR BETWEEN UNBONDED PIECES OF EQUIPMENT MAY CAUSE EXPLOSION OR FIRE IF FLAMMABLE VAPOR OR DUST IS PRESENT. THIS WARNING ALSO APPLIES TO MOVABLE CONTAINERS SUCH AS DRUMS, TOTES, BOXES, AND BAGS.

ELECTRICAL EQUIPMENT MUST BE INSTALLED WITH ALL FIRE AND ELECTRICAL CODES AND MUST BE INSTALLED BY A CERTIFIED PROFESSIONAL ELECTRICIAN.

MATERIAL OF CONSTRUCTION: The Young Industries, Inc. reserves the right to upgrade material of construction as follows unless "DO NOT SUBSTITUTE MATERIAL OF CONSTRUCTION" is noted on quote or purchase order:

304 S/S may be upgraded to 304L S/S, 316 S/S or 316L S/S.
304L S/S may be upgraded to 316L S/S.
316 S/S may be upgraded to 316L S/S.
Carbon steel may be upgraded to any of the above.

We trust that this offering is sufficient in detail for your review. Thank you for your interest in Young Industries equipment. If you have any questions, need additional information, or if Young Industries can be of further service, please feel free to contact our local representative, Bob Chmielewski of AIR.BTU-BECO, Inc., or me directly any time.

Very truly yours,

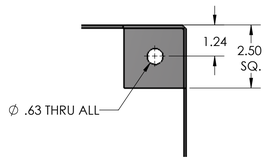
THE YOUNG INDUSTRIES, INC.

Curtiss F. Wykoff
Project Engineer
Project Engineering/
Bulk Materials Systems Div.
E-Mail: cfwykoff@younginds.com

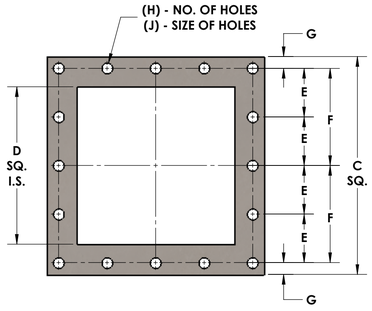
cc: Jim Shook
AIR.BTU, Inc.
597 High Street
PO Box 1050
Worthington, OH 43085-1050
Phone: 614/889-1161
Mobile: 614-264-6462
E-Mail: jshook@airbtu.com
Website: http://www.airbtu.com

Bob Chmielewski
AIR.BTU-BECO, Inc.
38500 Chardon Road
Willoughby, OH 44094
Mobile: 330-274-6143
Office: 440-808-6666
E-Mail: bobc@blakeslee-equipment.com
Website: wwww.blakeslee-equipment.com

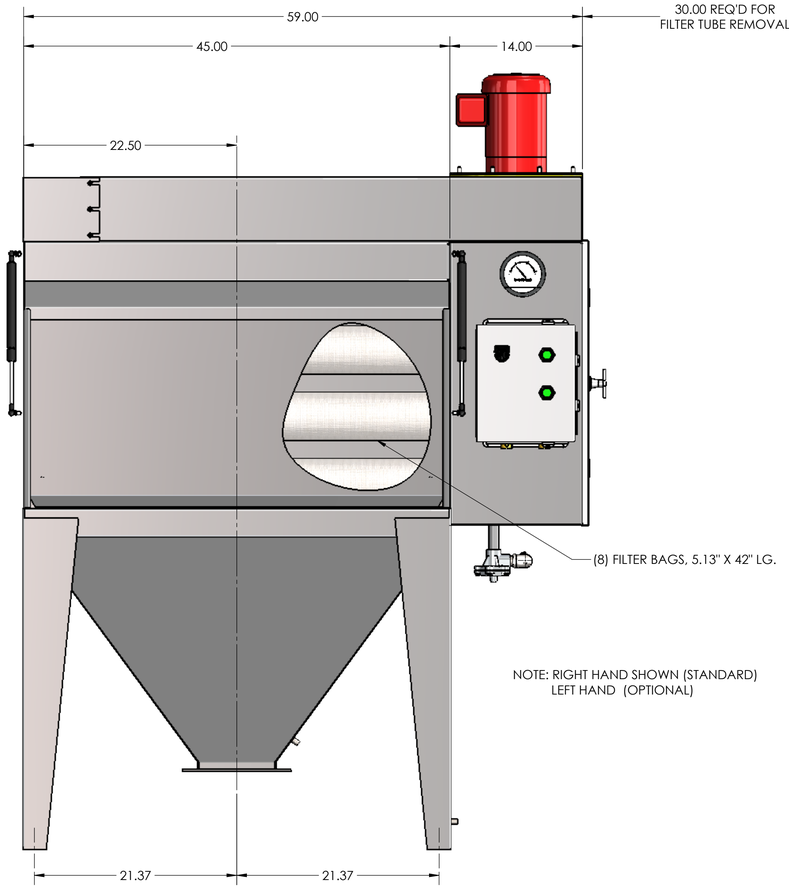
NOTE: THE INTENT OF THIS DRAWING IS TO SHOW STANDARD DIMENSIONS & FEATURES. ACTUAL DIMENSIONS & FEATURES MAY CHANGE DEPENDING ON THE APPLICATION REQUIREMENTS. NOT FOR FABRICATION.



DETAIL: MOUNTING PAD

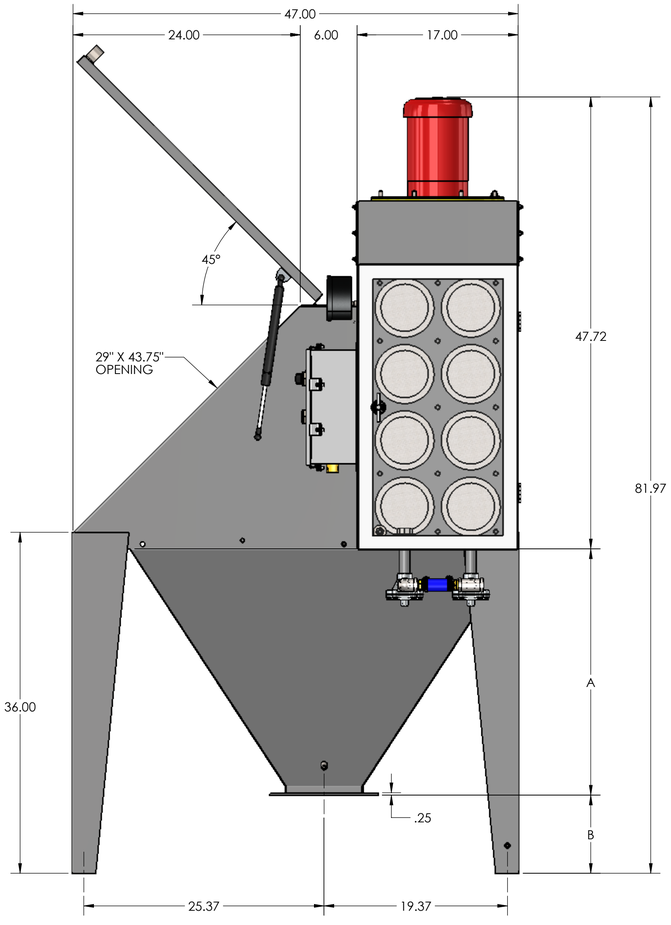


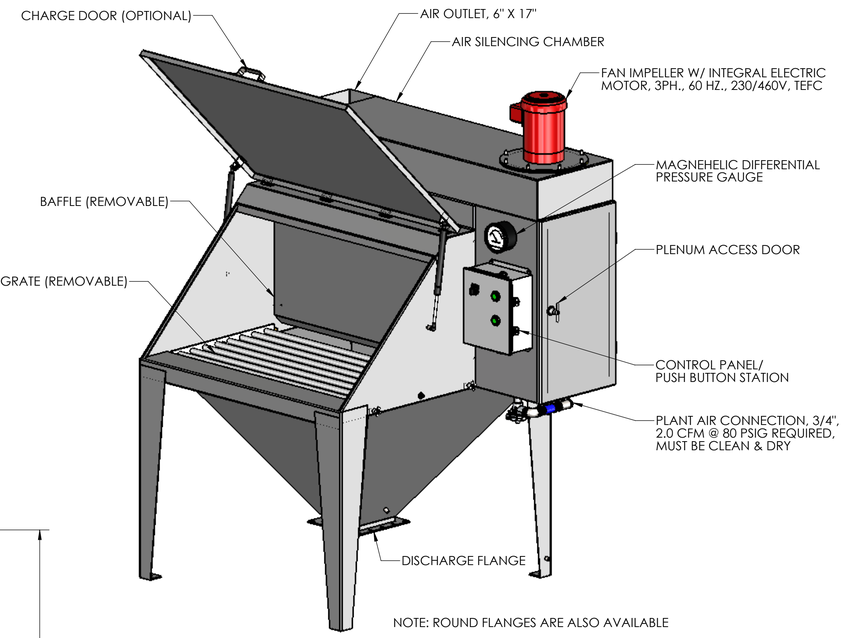
DETAIL: DISCHARGE FLANGE



VIEW SHOWN WITHOUT CHARGE DOOR FOR CLARITY

NOTE: RIGHT HAND SHOWN (STANDARD)
LEFT HAND (OPTIONAL)





NOTE: ROUND FLANGES ARE ALSO AVAILABLE

DISCHARGE FLANGE	A	B	C	D	E	F	G	H	J
6 X 6	27"	7.25"	9.5"	6"	-	4.12"	.62"	8	.56"
8 X 8	26"	8.25"	11.5"	8"	2.56"	5.12"	.62"	16	.56"
10 X 10	25"	9.25"	14.75"	10"	3.19"	6.38"	1"	16	.56"
12 X 12	25"	9.25"	16.75"	12"	3.69"	7.38"	1"	16	.56"

NOTE: SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTIFICATION

GENERAL TOLERANCES
UNLESS OTHERWISE SPECIFIED THE FOLLOWING SHALL APPLY
MACHINING - .XX= .02 .XXX= .005 ANGLE= .50° SURFACE ROUGHNESS HEIGHT 63 MICROINCHES OR LESS
FABRICATION - UNDER 6 6 TO 24 24 TO 60 OVER 60 ± .06 ± .12 ± .19 ± .25
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

REV. NO.	DESCRIPTION	DATE	BY

REVISIONS

CUSTOMER:

CUSTOMER PO NUMBER:

YOUNG JOB NUMBER:

TITLE
FILTER BAG DUMP STATION, HOPPER STYLE,
MODEL FBD 42-8

THE YOUNG INDUSTRIES, INC.
MUNCY, PENNSYLVANIA 17756
TELEPHONE: 570-546-3165

DRAWN BY: BMF	DATE: 3/29/18
CHECKED BY:	SCALE=1:8
DRAWING NUMBER S-21118-01	SHEET 1 OF 1 / REV: 00