



Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137



Title V Construction Permit

Permit No.: C-0036-21-0006-V

Plant ID: 0036

Effective Date: 06/01/2021

Expiration Date: 06/30/2022

Source: Clariant Corporation (West)
1227 South 12th Street
Louisville, KY 40232

Owner: Clariant Corporation
4000 Monroe Road
Charlotte, NC 28205

is authorized to install the described process equipment by the Louisville Metro Air Pollution Control District. Authorization is based on information provided with the application submitted by the company and in accordance with applicable regulations and the conditions specified herein.

Process equipment description:

This permit allows the installation of a new Co-Product Line 2 (including a filter, dryer, and bag filling unit) and the replacement of the existing filter in Co-Product Line 1 with a new filter (that serves the same purpose, but with half the capacity of the existing filter).

Public Notice Date: 04/25/2021

Permit writer: Jessica Murray

DocuSigned by:

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Air Pollution Control Officer
6/1/2021

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Construction Permit Revisions and Changes

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
C-0036-21-0006-V	04/25/2021	06/01/2021	Initial	Installation of a new Co-Product Line 2 and to replace the existing Co-Product Line 1 Filter with a new filter.

Application and Related Documents

Document Number	Date	Description
182350	1/20/2020	Confidential version of the construction application
182351	1/20/2020	Public version of the construction application
199293	1/22/2021	Confidential PTE for Co-Product Line (in Excel)
199295	2/12/2021	Confidential additional PTE information for Co-Product Line (in Excel)

Abbreviations and Acronyms

AP-42	- AP-42, <i>Compilation of Air Pollutant Emission Factors, published by U.S.EPA</i>
APCD	- Louisville Metro Air Pollution Control District
BAC	- Benchmark Ambient Concentration
BACT	- Best Available Control Technology
Btu	- British thermal unit
CEMS	- Continuous Emission Monitoring System
CFR	- Code of Federal Regulations
CO	- Carbon monoxide
District	- Louisville Metro Air Pollution Control District
EA	- Environmental Acceptability
gal	- U.S. fluid gallons
GHG	- Greenhouse Gas
HAP	- Hazardous Air Pollutant
Hg	- Mercury
hr	- Hour
in.	- Inches
lbs	- Pounds
l	- Liter
LMAPCD	- Louisville Metro Air Pollution Control District
mmHg	- Millimeters of mercury column height
MM	- Million
(M)SDS	- (Material) Safety Data Sheet
NAICS	- North American Industry Classification System
NO _x	- Nitrogen oxides
PM	- Particulate Matter
PM ₁₀	- Particulate Matter less than 10 microns
PM _{2.5}	- Particulate Matter less than 2.5 microns
ppm	- parts per million
PSD	- Prevention of Significant Deterioration
psia	- Pounds per square inch absolute
QA	- Quality Assurance
RACT	- Reasonably Available Control Technology
SIC	- Standard Industrial Classification
SIP	- State Implementation Plan
SO ₂	- Sulfur dioxide
STAR	- Strategic Toxic Air Reduction
TAC	- Toxic Air Contaminant
UTM	- Universal Transverse Mercator
VOC	- Volatile Organic Compound
w.c.	- Water column
year	- Any period of twelve consecutive months, unless "calendar year" is specified
yr	- Year, or any 12 consecutive-month period, as determined by context

Preamble

This permit covers only the provisions of Kentucky Revised Statutes Chapter 77 Air Pollution Control, the regulations of the Louisville Metro Air Pollution Control District (District) and, where appropriate, certain federal regulations. The issuance of this permit does not exempt any owner or operator to whom it has been issued from prosecution on account of the emission or issuance of any air contaminant caused or permitted by such owner or operator in violation of any of the provisions of KRS 77 or District regulations. Any permit shall be considered invalid if timely payment of annual fees is not made. The permit contains general permit conditions and specific permit conditions. General conditions are applicable unless a more stringent requirement is specified elsewhere in the permit.

General Conditions

- G1. The owner or operator of the affected facility covered by this permit shall notify the District of any process change, equipment change, material change, or change in method or hours of operation. This requirement is applicable to those changes (except equipment changes) that may have the potential for increasing the emission of air contaminants to a level in excess of the applicable limits or standards specified in this permit or District regulations.
- G2. The owner or operator shall obtain new or revised permits from the District in accordance with District Regulation 2.16 for Title V sources, District Regulation 2.17 for FEDOOP sources or District Regulation 2.03 for other sources including:
 - a. The company relocates to a different physical address.
 - b. The ownership of the company is changed.
 - c. The name of the company as shown on the permit is changed.
 - d. Permits are nearing expiration or have expired.
- G3. The owner or operator shall submit a timely application for changes according to G2. Timely renewal is not always achievable; therefore, the company is hereby authorized to continue operation in compliance with the latest District permit(s) until the District issues the renewed permit(s).
- G4. The owner or operator shall not be authorized to transfer ownership or responsibility of the permit. The District may transfer permits after appropriate notification (Form AP- 100A) has been received and review has been made.
- G5. The owner or operator shall pay the required permit fees within 45 days after issuance of the SOF by the District, unless other arrangements have been proposed and accepted by the District.
- G6. This permit allows operation 8,760 hours per year unless specifically limited elsewhere in this permit.
- G7. The owner or operator shall submit emission inventory reports as required by Regulation 1.06.
- G8. The owner or operator shall timely report abnormal conditions or operational changes, which may cause excess emissions as required by Regulation 1.07.
- G9. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month.
- G10. If a change in the Responsible Official (RO) occurs during the term of this permit, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of the date the RO change occurs.

- G11. **Other Applicable Regulations** - The owner or operator shall comply with all applicable requirements of the following:

Regulation	Title
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance With Emissions Standards And Maintenance Requirements
1.06	Source Self-Monitoring, Emission Inventory Development and Reporting
1.07	Excess Emissions During Startups, Shutdowns, and Upset Conditions
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
1.18	Rule Effectiveness
1.19	Administrative Hearings
2.01	General Application (Permit Requirements)
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements
2.04	Construction or Modification of Major Sources in or Impacting Upon Non-Attainment Areas (Emission Offset Requirements)
2.05	Prevention of Significant Deterioration
2.06	Permit Requirements – Other Sources
2.07	Public Notification for Title V, PSD, and Other Offset Permits; SIP Revisions; and Use of Emission Reduction Credits
2.09	Causes for Permit Modification, Revocation, or Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
3.01	Ambient Air Quality Standards
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.04	Particulate and Sulfur Dioxide Reduction Requirements
4.05	Hydrocarbon and Nitrogen Oxides Reduction Requirements
4.06	Carbon Monoxide Reduction Requirements
4.07	Episode Reporting Requirements
6.01	General Provisions (Existing Affected Facilities)
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions (New Affected Facilities)

District Only Enforceable Regulations:

Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors
2.08	Emission Fee, Permit Fees and Permit Renewal Procedures
2.16	Title V Operating Permits
5.00	Definitions
5.01	General Provisions
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
5.14	Hazardous Air Pollutants and Source Categories
5.15	Chemical Accident Prevention Provisions
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant
5.21	Environmental Acceptability for Toxic Air Contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant
5.23	Categories of Toxic Air Contaminants
7.02	Adoption and Incorporation by Reference of Federal New Source Performance Standards

Emission Unit: W66**Applicable Regulations**

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
2.04	Construction or Modification of Major Sources In or Impacting Upon Non-Attainment Areas (Emission Offset Requirements)	1, 2
2.05	Prevention of Signification Deterioration of Air Quality	1, 2
2.16	Title V Operating Permits	1 through 6
7.08	Standards of Performance for New Process Operations	1 through 3
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	1 through 5

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

Equipment: W66 - Co-Product Isolation

EU	Emission Point	Description	Install Date	Applicable Regulations	Control ID	Stack ID
W66	F604.1	Line 1 Funda Filter	New	7.25, STAR	C627.3, C627.4, C627.5, F628.50 & PU628	ST628 .190
	F605.1	Line 2 Funda Filter	New			
	D609.1	Line 2 Dryer	New	7.08, 7.25, STAR	V332.30, F628.50, PU628	
	PU611	Line 2 Bag Filling Unit	New			

Control Devices

Control ID	Description	Performance Indicator ¹	Control Efficiency	Stack ID
F628.50	HEPA Filter	Differential pressure: 0.01" w.c. – 5" w.c.	99.97% PM	ST628.190
C627.3	VUM – Eductor, using Sodium Hydroxide solution as the scrubbing liquid	pH Range: 9 – 14 Liquid Flow Pressure Range: 40 – 75 psi	99.5% HCl	ST628.190
C627.4	VUM – Recirculated Packed Bed Scrubber (Stage 1), using Sodium Hydroxide solution as the scrubbing liquid	pH Range: 9 – 14 Liquid Flow Pressure Range: 20 – 55 psi		ST628.190
C627.5	VUM – Recirculated Packed Bed Scrubber (Stage 2), using Sodium Hydroxide solution as the scrubbing liquid			ST628.190
V332.30	Normag – Absorber	Visual inspection for presence of white oil absorption medium	95% PM	ST628.190
PU628	Zeeco – Natural Gas Non-assisted Flare ²	Visual inspection for presence of flame or flame detector	99.9% VOC	ST628.190

¹ Performance Indicators may be re-established through performance testing.

² The efficiency of the flare PU628 was reported as 99.9% from the stack test performed October 8th, 2020.

U1 Specific Conditions

S1. Standards

[Regulation 2.03, section 6.1]

a. Control Device Operation

For EP F604.1, F605.1, D609.1, and PU611 the owner or operator shall operate and maintain the control devices C627.3, C627.4, C627.5, PU628, F628.50, and V332.30 at all times an associated emission point is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to minimize emissions.

[Regulations 2.05, 5.00 and 5.21, Regulation 7.08, section 3.1.2]

b. HAP

i. The owner or operator shall not allow plantwide single HAP emissions to exceed 10 tons per consecutive 12-month period for each HAP. [Regulation 2.16, section 4.1.1]

ii. The owner or operator shall not allow plantwide total HAP emissions to exceed 25 tons per consecutive 12-month period. [Regulation 2.16, section 4.1.1]

c. Opacity

The owner or operator shall not allow or cause visible emissions to equal or exceed twenty percent (20%) opacity. [Regulation 7.08, section 3.1.1]

d. PM/PM₁₀/PM_{2.5}

i. The owner or operator shall not allow or cause the plantwide emissions of PM/PM₁₀/PM_{2.5} to equal or exceed 100 tons during any consecutive 12-month period. [Regulation 2.05]

ii. The owner or operator shall not allow or cause PM emissions to exceed the following limits, based on actual operating hours in a calendar day. [Regulation 7.08, section 3.1.2]

EU	EP	Emission Limit (lb/hr)
W66	PU611	2.34
	D609.1	2.34

e. TAC

- i. The owner or operator shall not allow hexane, toluene, or HCl emissions to exceed de minimis levels from F604.1, F605.1, D609.1, and PU611. [Regulations 5.00 and 5.21] (See Comments 1, 2, and 3.)
- ii. The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be de minimis. [Regulations 5.00 and 5.21]
- iii. If the TAC does not have an established BAC or de minimis value, the owner or operator shall calculate and report these values. The form, located in Attachment B, may be used for determining BAC and de minimis values. [Regulation 5.20, Sections 3 and 4]
- iv. For eductor C627.3 when the process equipment is in operation, the owner or operator shall:
 - (1) Maintain a pH range of 9 – 14 unless a new pH range is established through performance testing.
 - (2) Maintain a nozzle pressure of 40-75 psi unless a new nozzle pressure range is established through performance testing.
- v. For two-stage scrubber C627.4 and C627.5 when the process equipment is in operation, the owner or operator shall:
 - (1) Maintain a pH range of 9 – 14 unless a new pH range is established through performance testing.
 - (2) Maintain a nozzle pressure of 20-55 psi unless a new nozzle pressure range is established through performance testing.

f. VOC

- i. The owner or operator shall not allow or cause the plantwide VOC emissions to equal or exceed 100 tons during any consecutive 12-month period. [Regulation 2.04]
- ii. For the equipment F604.1, F605.1, D609.1, and PU611 where flare PU628 is considered BACT; the owner or operator shall utilize VOC BACT as defined below: [Regulation 7.25, section 3] ³
 - (1) The owner or operator shall ensure that the control efficiency of the flare not fall below 99.9%. (BACT) [Regulation 7.25, section 3.1]

³ The company submitted a BACT analysis dated June 8, 2015, August 7, 2015, April 11, 2016 and January 20, 2021 demonstrating that venting to flare PU628 is considered BACT. A stack test was conducted on October 2020 that showed the flare PU628 to have control efficiency of 99.9%. The District accepted the BACT determination.

- (2) The owner or operator shall operate flare PU628 at all times the process equipment is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (BACT) [Regulation 7.25, section 3.1]

S2. Monitoring and Record Keeping [Regulation 2.03, section 6.1]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Control Device Operation [Regulation 2.05]

- i. The owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of C672.3, C672.4, C672.5, PU628, F628.50, and V332.30 for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.
- ii. For any period of operating outside the established performance indicator range the owner or operator shall maintain the following records:
 - (1) The date,
 - (2) The observed performance indicator value,
 - (3) Corrective action taken to minimize the extent of the excursion, and
 - (4) Measures implemented to prevent reoccurrence.

b. HAP

- i. The owner or operator shall report the consecutive 12-month plantwide emissions of each individual HAP for each month in the reporting period.
- ii. The owner or operator shall report the consecutive 12-month plantwide emissions of total HAP for each month in the reporting period.

c. Opacity

There are no monitoring or recordkeeping requirements for this emission unit.⁴

d. PM/PM₁₀/PM_{2.5}

⁴ The District has determined that no periodic visible emissions surveys are required for this emission unit because the potential controlled emissions are very low.

- i. For each PM/PM₁₀/PM_{2.5} emission point, the owner or operator shall monthly monitor and maintain records of the throughput of each raw material during each calendar month.
- ii. The owner or operator shall monthly calculate and record the plantwide consecutive 12-month PM/PM₁₀/PM_{2.5} emissions for each month in the reporting period. This must include all Emission Points and fugitive sources. Where appropriate, the specific Emission Point control efficiencies and/or emission factors shall be applied. The calculation shall be performed as follows unless otherwise approved in writing by the District:

$$\begin{aligned}
 & \text{PM/PM}_{10}/\text{PM}_{2.5} \\
 &= \sum_x \left\{ \left[\left(U_x \times C_{\text{Cap}x} \right) \times (1 - C_{\text{Con}x}) \right] + \left[U_x \times (1 - C_{\text{Cap}x}) \right] \right\} \\
 &+ \sum_z U_z + F
 \end{aligned}$$

Where:

- PM/PM₁₀/PM_{2.5} = Total plantwide emissions of PM/PM₁₀/PM_{2.5}
- U_x = Uncontrolled PM emission from each Emission Point (x)
- C_{Capx} = Capture efficiency of each Emission Point (x)
- C_{Conx} = Control Efficiency of each control device for each Emission Point (x)
- U_z = Uncontrolled PM/PM₁₀/PM_{2.5} emissions from each uncontrolled Emission Point (z)
- F = Total plantwide fugitive PM/PM₁₀/PM_{2.5} emissions

- iii. For emission points D609.1 and PU611, for any period of time when the process was operating and a PM/PM₁₀/PM_{2.5} control device was not operating, the owner or operator shall maintain the following records:
 - (1) The duration of the control device downtime;
 - (2) The process throughput during the control device downtime;
 - (3) PM/PM₁₀/PM_{2.5} (tons); and
 - (4) Summary information on the cause of the event, corrective action taken, and measures implemented to prevent reoccurrence.

e. TAC

- i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to SDS, analysis of emissions, and/or modeling results.
- ii. The owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions if a new TAC is introduced or the content of a TAC in a raw material increases above de minimis.
- iii. The owner or operator shall maintain the following records for eductor C627.3:
 - (1) Maintain daily records of the pH;
 - (2) Maintain daily records of the nozzle pressure;
 - (3) Record a negative declaration for any day the process was not operating.
 - (4) Record any parameter excursions and corrective actions taken.
- iv. The owner or operator shall maintain the following records for the two stage scrubber (C627.4, C627.5):
 - (1) Maintain daily records of the pH;
 - (2) Maintain daily records of the nozzle pressure;
 - (3) Record a negative declaration for any day the process was not operating.
 - (4) Record any parameter excursions and corrective actions taken.

f. VOC

- i. For each VOC emission point, the owner or operator shall monthly monitor and maintain records of the throughput of all VOC containing materials during each calendar month.
- ii. The owner or operator shall monthly calculate and record the plantwide consecutive 12-month VOC emissions for each month in the reporting

period. This must include all Emission Points and fugitive sources. Where appropriate, the specific Emission Point control efficiencies and/or emission factors shall be applied. The calculations shall be performed as follows unless otherwise approved in writing by the District: (See Attachment A – Default Emission Factors, Calculation Methodologies, & Stack Tests)

$$\text{VOC} = \sum_1^x \{[(U_x \times C_{\text{Cap}x}) \times (1 - C_{\text{Con}x})] + [(U_x \times (1 - C_{\text{Cap}x}))]\} + \sum_1^z U_z + F$$

Where:

VOC	=	Total plantwide emissions of VOCs
U_x	=	Uncontrolled VOC emission from each Emission Point (x)
$C_{\text{Cap}x}$	=	Capture efficiency of each Emission Point (x)
$C_{\text{Con}x}$	=	Control Efficiency of each control device for each Emission Point (x)
U_z	=	Uncontrolled VOC emissions from each uncontrolled Emission Point (z)
F	=	Total plantwide fugitive VOC emissions

iii. For the equipment venting to the flare PU628 (F604.1, F605.1, D609.1, and PU611):

- 1) The flare, PU628, will operate at all times the process is in operation and will not be bypassed during maintenance activities. The operator will verify the continuous presence of the flame at the flare during process operations.
- 2) For any period of time when the process was operating and the flare, PU628, was not operating, the owner or operator shall maintain the following records:
 - (a) The duration of the control device downtime;
 - (b) The process throughput during the control device downtime;
 - (c) The emissions of VOC (tons), VOC (tons/month), VOC (tons/12-month period); and
 - (d) Summary information on the cause of the event, corrective action taken, and measures implemented to prevent reoccurrence.

S3. Reporting

[Regulation 2.03, section 6.1]

The owner or operator shall submit semi-annual compliance reports that include the information in this section. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. The compliance reports shall be postmarked within 60 days following

the end of each reporting period. All compliance reports shall include the following certification statement per Regulation 2.16, section 3.5.11

- “Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete”.
- Signature and title of the responsible official of the company.

The compliance reports are due on or before the following dates of each calendar year:

<u>Reporting Period</u>	<u>Report Due Date</u>
January 1 through June 30	August 29
July 1 through December 31	March 1 of the following year

a. Control Device Operation

- i. Identification of all periods of operating outside the established performance indicator range for a control device, including the information below, or a negative declaration if there were no excursions during the reporting period.
 - (1) The date,
 - (2) The observed performance indicator value, and
 - (3) Corrective action taken to minimize the extent of the excursion, and
 - (4) Measures implemented to prevent reoccurrence.

b. HAP

- i. The owner or operator shall report the consecutive 12-month plantwide emissions of each individual HAP for each month in the reporting period.
- ii. The owner or operator shall report the consecutive 12-month plantwide emissions of total HAP for each month in the reporting period.

c. Opacity

There are no reporting requirements for the emission unit.

d. PM/PM₁₀/PM_{2.5}

The owner or operator shall report the plantwide consecutive 12-month emissions of PM/PM₁₀/PM_{2.5} for each month in the reporting period.

e. TAC

- i. Any conditions that were inconsistent with those conditions analyzed in the most recent Environmental Acceptability Demonstration.
- ii. For scrubber C627.3, the owner or operator shall report the following:
 - (1) Any failure to maintain daily records of the pH or nozzle pressure;
 - (2) Any excursions of the pH range or nozzle pressure.
 - (3) Any corrective actions taken for any excursions of the pH range or nozzle pressure.
 - (4) Report a negative declaration if no deviations occurred during the report period.
- iii. For scrubber C627.4 and C627.5, the owner or operator shall report the following:
 - (1) Any failure to maintain daily records of the pH or scrubbing liquid nozzle pressure;
 - (2) Any excursions of the pH range or scrubbing liquid nozzle pressure.
 - (3) Any corrective actions taken for any excursions of the pH range or scrubbing liquid nozzle pressure.
 - (4) Report a negative declaration if no deviations occurred during the report period.

f. VOC

- i. The owner or operator shall report the plantwide consecutive 12-month emissions of VOCs for each month in the reporting period.
- ii. For the equipment venting to the flare PU628 (F604.1, F605.1, D609.1, and PU611), the owner or operator shall report the following:
 - (1) The consecutive 12-month emissions of VOCs for each month in the reporting period.
 - (2) Identification of all periods when a process was operating and an associated control device was not operating, including the information below:
 - (a) The duration of the control device downtime;
 - (b) The process throughput during the control device downtime;
 - (c) The emissions of VOC (tons), VOC (tons/month), VOC (tons/12-month period); and

- (d) Summary information on the cause of the event, corrective action taken, and measures implemented to prevent reoccurrence.
- iii. The owner or operator shall report any deviations from monitoring and recordkeeping requirements, or a negative declaration if requirements were met.

Comments

1. Clariant submitted an EA demonstration on January 20, 2021, showing that the potential TAC emissions of Hexane are de minimis uncontrolled for F604.1, F605.1, and PU611, and are de minimis after the first control, the flare PU628, for D609.1. The potential TAC emissions of Toluene are de minimis uncontrolled for F604.1 and F605.1. The potential TAC emissions of Hydrogen Chloride are de minimis after the first control, the scrubber C627.3, .4, and .5, for F604.1 and F605.1 and are de minimis uncontrolled for D609.1 and PU611.
2. The potential TAC emissions are below de minimis in Regulations 5.00 and 5.21. The control devices needed are listed in the table below.

EU	EP	Hexane	Toluene	HCl
W66	F604.1	Unc	Unc	C627.3, .4, .5
	F605.1	Unc	Unc	C627.3, .4, .5
	D609.1	PU628	--	Unc
	PU611	Unc	--	Unc

“--” This emission point has no emissions of the specified TAC.

3. The company submitted an EA demonstration on January 20, 2021, to show that their equipment meets de minimis levels at the time of permit issuance.

STAR De Minimis Levels		
TAC	lb/hr	lb/annual avg. period
Hexane	378	336000
Toluene	2700	2400000
HCl	10.80	9600