



**LOUISVILLE METRO
AIR POLLUTION CONTROL DISTRICT**
701 West Ormsby Ave., Suite 303, Louisville, Kentucky 40203



xx Month 2016

Statement of Basis

Owner: Clariant Corporation

Source: Clariant Corporation – Louisville West Plant

Plant Location: 1227 South 12th Street, Louisville, Kentucky 40210

Date Application Received: 04-01-2016

Application Number: 76188/76187

Date of Draft Permit: 05-06-2016

District Engineer: Virginia Rhodes

Permit No: C-0036-1000-15-V(R2)

Plant ID: 0036

SIC Code: 2819

NAICS: 325188

Introduction:

This permit will be issued pursuant to: (1) District Regulation 2.16, (2) Title 40 of the Code of Federal Regulations Part 70, and (3) Title V of the Clean Air Act Amendments of 1990. Its purpose is to identify and consolidate existing District and Federal air requirements and to provide methods of determining continued compliance with these requirements.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO₂), carbon monoxide (CO), 1 hr and 8 hr ozone (O₃), and particulate matter less than 10 microns (PM₁₀); and is a non-attainment area for the 1997 standard for particulate matter less than 2.5 microns (PM_{2.5}), unclassifiable for the 2012 standard for particulate matter less than 2.5 micron (PM_{2.5}) and partial non-attainment for sulfur dioxide (SO₂).

Application Type/Permit Activity:

- Initial Issuance
- Permit Revision
 - Administrative
 - Minor
 - Significant
- Permit Renewal

Compliance Summary:

- Compliance certification signed
- Source is out of compliance
- Compliance schedule included
- Source is operating in compliance

I. Source Information

1. **Source Description:** Clariant Corp. – Louisville West Plant manufactures customized precipitated catalysts and catalyst carriers.
2. **Project Description:** The source has requested to construct a catalyst plant consisting of tank farm loading, support synthesis, catalyst production, solvent regeneration, by-product isolation, waste gas treatment, waste water treatment; and utilities. The Company is proposing equipment additions and modifications to the proposed catalyst plant permitted under construction permit C-0036-1000-15-V(R1) which includes the addition of two new decanters P230.80 and P602.80, the removal of mobile temporary container V130.70, changing the capacity (increases and decreases) for several tanks, and new control IDs/Stack IDs for several pieces of equipment.
3. **Site Determination:** Clariant Corporation is the parent company, operates two facilities in Louisville, the South plant at 4900 Crittenden Drive and the West plant at South 12th Street. Based on information obtained from the company and the criteria used by EPA to make single source determinations, the District has determined that both locations are separate sources. Both locations would have to meet the following three criteria in order to be considered one single source for Title V and PSD/NSR applicability:
 - Same industrial grouping,
 - Common ownership or control, and,
 - Contiguous or adjacent locations.

Both locations have the same first two digit SIC code (28).

Both are 100% owned and operated by their parent company.

Neither location is contiguous or adjacent. Each plant acts independently of the other, operating separate production lines, with minimal transfer of material between plants that is commercially available from other suppliers. Furthermore, there are no Clariant Corporation dedicated transportation links between the plants.

4. Permit Revisions:

Revision	Issue Date	Public Notice Date	Type	Description
Initial	11/19/2014	9/14/2014	Initial	Initial permit issuance
R1	10/6/2015	8/29/2015	Significant Revision	Modifications and addition of equipment
R2	Xx/xx/2016	05/06/2016	Significant Revision	Modifications and addition of equipment

- 5. **Fugitive Sources:** There are fugitive PM/PM₁₀/PM_{2.5}, VOC, HAP, NO_x and TAC emissions from the manufacturing of customized precipitated catalysts and catalyst carriers.
- 6. **Emission Unit Summary:** This construction project consists of the following emission units.

TV-14-1013	
Emission Unit	Equipment Description
W62	Tank Farm
W63	Support Synthesis
W64	Catalyst Production
W65	Solvent Regeneration
W66	Co-Product Isolation
W67	Waste Gas Treatment
W68	Utilities
W69	Waste Water Treatment

7. **Plant-Wide Emission Summary:**

Pollutant	Actual Emissions (tpy) 2014 Data	Pollutant that triggered Major Source Status
CO	16.51	No
NO_x	30.95	*Yes
SO₂	0.12	No
PM	21.05	*Yes
PM₁₀/PM_{2.5}	19.93	*Yes
VOC	1.11	*Yes
Total HAPs	1.67	*Yes
CO₂e	**25,074	**No

* The source has accepted synthetic minor limits for these pollutants.

** Source: ghgdata.epa.gov

8. **Construction Permit Applicable Requirements:**

PSD 40 CFR 60 SIP 40 CFR 63
 NSR 40 CFR 61 District-Origin Other

9. **MACT Requirements:** 40 CFR 63, Subpart ZZZZ – *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

10. **Referenced Federal Regulations in Permit:**

40 CFR 63, Subpart ZZZZ – *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

40 CFR 60, Subpart Kb - *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984*

40 CFR 60, Subpart IIII - *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*

11. Regulations Not Applicable: NA

II. Regulatory Analysis

1. **Acid Rain Requirements:** The source is not subject to the Acid Rain Program.
2. **Stratospheric Ozone Protection Requirements:** This source does not manufacture, sell, or distribute any of the chemicals listed in title VI of the CAAA. Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.
3. **Prevention of Accidental Releases 112(r):** The source does manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, *Chemical Accident Prevention Provisions*, in a quantity in excess of the corresponding specified threshold amount.
4. **40 CFR Part 64 Applicability Determination:** The source is not a major source because the source has taken synthetic minor limits for all criteria pollutants. Therefore, 40 CFR 64 does not apply. 40 CFR 63 VVVVVV required Clariant West to obtain a Title V permit.
5. **Basis of Regulation Applicability**

a. **Plant-wide**

Regulation 2.03, section 6.1 requires sufficient monitoring, record keeping, and reporting to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the District upon request.

Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establishes requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards.

b. **Applicable Regulations:**

Regulation	Title	Type
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements	SIP
2.04	Construction or Modification of Major Sources in or Impacting upon Non-Attainment Areas (Emission Offset Requirements)	SIP
2.05	Prevention of Significant Deterioration of Air Quality	SIP
5.00	Standards for Toxic Air Contaminants and Hazardous air Pollutants, Definitions	Local
5.01	General Provisions	Local
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants	Local
5.14	Hazardous Air Pollutants and Source Categories	Local
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	Local
5.21	Environmental Acceptability for Toxic Air Contaminants	Local
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	Local
5.23	Categories of Toxic Air Contaminants	Local
7.08	Standards of Performance for New Process Operations	SIP
7.02	Adoption and Incorporation by Reference of Federal New Source Performance Standards	Local
7.12	Standard of Performance for New Storage Vessels for Volatile Organic Compounds	SIP
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	SIP
40 CFR 60, Subpart III	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Federal
40 CFR 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	Federal

Regulation	Title	Type
40 CFR 63, Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	Federal

c. **Basis for Applicability**

Regulation	Basis for Applicability
2.05	Establishes requirements for the prevention of deterioration of air quality in regions of the country that currently meet the NAAQS
5.00	Establishes definitions of terms used in the Strategic Toxic Air Reduction Program (STAR)
5.01	Establishes the requirements for Environmental Acceptability for Toxic Air Contaminants (TACs). (STAR)
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
5.20	Establishes the methodology for determining the benchmark ambient concentration of a toxic air contaminant (STAR)
5.21	Establishes the criteria for determining the environmental acceptability of emissions of toxic air contaminants (STAR)
5.22	Establishes the procedures for determining the maximum ambient concentration of a toxic air contaminant (STAR)
5.23	Establishes categories of toxic air contaminants. (STAR)
7.02	Adoption and Incorporation by Reference of Federal New Source Performance Standards
7.08	Establishes emission standards for processes that emit PM which were installed after September 1, 1976.
7.12	Establishes VOC standards for storage tanks constructed after April 19, 1972 with a capacity greater than 250 gallons.
7.25	Establishes VOC standards for affected facilities constructed after June 13, 1979.
40 CFR 60 Subpart III	Applies to stationary CI internal combustion engines that commence construction after July 11, 2005.
40 CFR 60 Subpart Kb	Applies to storage tanks are greater than or equal to (75 m ³) 19,812.9 gallons that were constructed, reconstructed, or modified after July 23, 1984.
40 CFR 63 Subpart ZZZZ	Applies to existing, new, and reconstructed stationary engines. The generators are stationary RICE located at an area source of HAP emissions, therefore 40 CFR 63 Subpart ZZZZ applies.

d. **Equipment**

Emission Point ID	Description	Applicable Regulation(s)	Control Device
W62 - Tank Farm			
V100.70	Mobile Temporary Container, ¹ 5,283 gallons	7.12 (Insignificant Activity)	NA
C100.1	Dryer, 110 gph	7.25 (Insignificant Activity)	PU628
V100.30	Dryer Vessel, 110 gph		
V100.31	Dryer Vessel, 110 gph		
V101.1	Storage Tank (Submerged Fill) 7,836 gallons	7.12 (Insignificant Activity)	E626.40 & PU628
V110.70	Mobile Temporary Container 5,283 gallons	STAR & 7.12	NA
C110.1	Dryer, 112 gph	STAR & 7.25	PU628
V110.30	Dryer Vessel, 112 gph		
V110.31	Dryer Vessel, 112 gph		
V131.1	Processing Tank, 758 gal	7.25 (Insignificant Activity)	NA
V132.1	Storage Tank, 4,043 gal	7.12 (Insignificant Activity)	NA
V136.1	Processing Tank, 758 gal	7.25 (Insignificant Activity)	PU628
V137.1	Dry Storage Tank 1,475 gal	7.12 (Insignificant Activity)	PU628
V140.70	Mobile Temporary Container, 5,283 gallons	STAR & 7.12	NA
C140.1	Dryer, 110 gph	STAR, 7.25	PU628
V140.30	Dryer Vessel, 110 gph		
V140.31	Dryer Vessel, 110 gph		
V150.1	Storage Tank 1, ² 15,648 gal	STAR	E624.40, C627.3, C627.4, C627.5, & PU628
V151.1	Storage Tank II, 15,648 gal	STAR	
V160.1	Vessel, 7,785 gallons	STAR, 7.25	
V161.1	Storage Tank, 7,785 gallons	STAR & 7.12	
W63 – Support Synthesis			
PU203	Bag Emptying Unit	7.08 (Insignificant Activity)	NA
R200.1	Reactor 1	7.08 & 7.25	E626.40 & PU628
R201.1	Reactor 2		
R220.1	Reactor	STAR & 7.25	E626.40 & PU628
P230.80	Decanter	STAR & 7.25	
V231.1	Re-suspension Storage Tank 1 ³ , 2,358 gallons	STAR & 7.25	

1 ISO containers (V100.70, V110.70, and V140.70) will be filled offsite and will only be used onsite to transfer material out of the containers; therefore, submerged fill is not applicable.

2 Storage Tanks contain a non-VOC raw material; therefore, Regulation 7.12 is not applicable.

3 Recycled Storage Tanks are identified as process tanks instead of storage tanks since these tanks are washing/slurry tanks with agitation that are filled and emptied each batch; therefore, these tanks are subject to Regulation 7.25 instead of Regulation 7.12.

Emission Point ID	Description	Applicable Regulation(s)	Control Device
V232.1	Re-suspension Storage Tank 2 2,358gallons	STAR & 7.25	E626.40 & PU628
V234.1	SRS Transfer Tank, 1,340 gal	STAR & 7.25	
D240.1/ E240.40	Dryer with Heat Exchanger	STAR, 7.25, & 7.08	F240.50, E626.40, & PU628
V240.30	Transfer Vessel 238 gallons	STAR & 7.25	E626.40 & PU628
V244.1	Blender	STAR, 7.25 & 7.08	F244.50, E626.40, & PU628
F244.51	Vibrating Sieve	STAR, 7.25 & 7.08	V244.30 & PU628
244.90	Container/Drum Filling Unit		
244.91	Container/Drum Filling Unit		
PU244	Drum Emptying Unit		V244.31 & PU628
W64 – Catalyst Production			
PU300.80	Container Emptying Unit – Line 1	STAR, 7.25 & 7.08	E624.40 C627.3 C627.4 C627.5 PU628
PU305.80	Container Emptying Unit – Line 2		
R300.1	Reactor – Line 1		
R305.1	Reactor – Line 2		
R310.1	Reactor I – Line 1	STAR & 7.25	E610.40 C627.3 C627.4 C627.5 PU628
R315.1	Reactor I – Line 2		
F320.1	Filter – Line 1		E624.40 C627.3 C627.4 C627.5 PU628
F325.1	Filter – Line 2		
R311.1	Reactor II – Line 1		E610.40 C627.3 C627.4 C627.5 PU628
R316.1	Reactor II – Line 2		
V321.1	Recycled Storage Tank with agitation – Line 1 2,355 gal		E624.40 C627.3 C627.4 C627.5 PU628
V326.1	Recycled Storage Tank with agitation – Line 2 2,355 gal		
V322.1	Recycled Storage Tank – Line 1 3,207 gallons		
V323.1	SRC Transfer Tank – Line 1, 1,334 gallons		
V327.1	Recycled Storage Tank – Line 2 3,207 gallons		
V328.1	SRC Transfer Tank – Line 2 1,334 gallons		

Emission Point ID	Description	Applicable Regulation(s)	Control Device
D330.1/E330.40	Dryer with Heat Exchanger – Line 1	STAR, 7.25, & 7.08	F330.50 E624.40 C627.3 C627.4 C627.5 PU628
V330.30	Transfer Vessel 239 gallons	5.00, 5.01, 5.20, 5.21, 5.22, 5.23	E624.40 C627.3 C627.4 C627.5 PU628
		7.25	
D335.1/E335.40	Dryer with Heat Exchanger – Line 2	STAR, 7.25, & 7.08	F335.50 E624.40 C627.3 C627.4 C627.5 PU628
V335.30	Transfer Vessel 239 gallons	STAR & 7.25	E624.40 C627.3 C627.4 C627.5 PU628
V332.1	Blender – Line 1	STAR, 7.25, & 7.08	F332.50, E624.40, C627.3, C627.4, C627.5, PU628
V337.1	Blender – Line 2		F337.50, E624.40, C627.3, C627.4, C627.5, PU628
F332.51	Vibrating Sieve – Line 1		V332.30 PU628
F337.51	Vibrating Sieve – Line 2		V337.30 PU628
PU332.81	Drum Filling Unit – Line 1		V332.30 PU628
PU337.81	Drum Filling Unit – Line 2		V337.30 PU628
332.90	Off Spec Drum Filling Unit – Line 1		V332.30 PU628
337.90	Off Spec Drum Filling Unit – Line 2		V337.30 PU628
PU332.82	Drum Emptying Unit – Line 1		V332.31 PU628
PU337.82	Drum Emptying Unit – Line 2		V332.31 PU628

Emission Point ID	Description	Applicable Regulation(s)	Control Device
W65- Solvent Regeneration			
V400.1	SRS Storage Tank (Submerged Fill) 20,296 gal	STAR, 7.12, & 40 CFR 60 Subpart Kb	E626.40 PU628
E403.41/ C403.10/ E403.40/ E403.42	Reboiler with Column, Overhead Interchange and Condenser	STAR & 7.25	
V403.30	Reflux Vessel		
E403.43/ C403.20/ E403.44	Reboiler with Column and Condenser	STAR	
V403.31	Reflux Vessel		
V404.1	Storage Tank (Submerged Fill) 19,628 gallons	STAR & 7.12	
C406.1/C406.2	Dryer	STAR & 7.25	PU628
V406.30	Dryer Vessel	STAR & 7.25	PU628
V407.1	Storage Tank 2,629 gallons	STAR &, 7.12	NA
V410.1	SRC Storage Tank I (Submerged Fill) 20,248 gal	STAR, 7.12, & 40 CFR 60 Subpart Kb	E624.40 C627.3 C627.4 C627.5 PU628
V420.1	SRC Storage Tank II (Submerged Fill) 20,248 gal		
C413.10/ E413.40/ E413.41	1 st Stage Distillation Column and Falling Film Evaporator with Condenser	STAR & 7.25	
V413.30	Reflux Drum, 383 gallons	STAR & 7.25	
C414.10 /E414.40/ E414.41	2 nd Stage Distillation Column and Falling Film Evaporator with Condenser	STAR & 7.25	E624.40 C627.3 C627.4 C627.5 PU628
V414.30	Reflux Drum, 180 gallons		
C415.10/ E415.40/ E415.41	3 rd Stage Distillation Column and Falling Film Evaporator with Condenser		
V415.30	Reflux Drum, 90 gallons	STAR, 7.12, & 40 CFR 60 Subpart Kb	
V447.1	Storage Tank (Submerged Fill) 20,278 gallons		
V448.1	Storage Tank (Submerged Fill) 20,278 gallons		
V427.1	Storage Tank (Submerged Fill) 7,862 gallons		
V428.1	Storage Tank (Submerged Fill) 7,862 gallons	STAR & 7.25	
V437.1	Storage Tank/Mixing Vessel ³ 1,982 gallons	STAR & 7.12	
V417.1	Storage Tank, 5,285 gallons	STAR & 7.12	
V417.2	Storage Tank, 5,285 gallons	STAR & 7.12	
W66 – Co-Product Isolation			
V600.1	SRC Storage (Surge/Transfer Vessel with Agitation) and Cooling Tank, 6,835 gallons	STAR & 7.25	E624.40 C627.3 C627.4

Emission Point ID	Description	Applicable Regulation(s)	Control Device
V601.1	Tank, 3,246 gallons		C627.5 PU628
P602.80	Decanter		
V602.1	Tank1, 3,246 gallons		
V603.1	Tank 2, 3,252 gallons		
V608.1	SRC Transfer Tank, 1,309 gal		
D606.1/ E606.40	Dryer with Heat Exchanger	STAR, 7.25, & 7.08	F606.50 E624.40 C627.3 C627.4 C627.5 PU628
V606.30	Transfer Vessel 680 gallons	STAR & 7.25	E624.40 C627.3 C627.4 C627.5 PU628
PU607	Big-Bag Filling Unit	STAR, 7.25, & 7.08	V332.30 & PU628
W67 – Waste gas Treatment			
V610.1	Recovered Solvent Storage (Transfer Vessel) Tank, 1,500 gal	STAR & 7.25	C627.3 C627.4 C627.5 PU628
V624.1	Recovered Solvent Storage (Transfer Vessel) Tank, 1,500 gal		
V626.1	Recovered Solvent Storage (Transfer Vessel) Tank, 1,500 gal		
W68 - Utilities			
E011.1/E011.2	Cooling Tower (Insignificant Activity)	7.08	NA
V690.1	Blow-Down Tank		NA
PU075	Emergency Generator, Kohler, Model 250REOZJE, Tier 3 Engine, 255 KW, 342 HP, Displacement 9 liters (Insignificant Activity)	40 CFR 60 Subpart III 40 CFR 63 Subpart ZZZZ	NA
	Emergency Generator Tank, 472 gallons (Insignificant Activity)	Regulation 1.02, Appendix A, Section 3.9.2	NA
P-0001	Fire Pump, Clarke, 86 HP, Displacement 4.5 Liters (Insignificant Activity)	40 CFR 60 Subpart III 40 CFR 63 Subpart ZZZZ	NA
T-0001	Fire Pump Tank, 185 gallons (Insignificant Activity)	Regulation 1.02, Appendix A, Section 3.9.2	NA
W69 – Waste Water Treatment			
V691.1	Emergency Drainage Tank 12,764 gallons	STAR	NA
V650.1	Phase Separator, 3,600 gal	STAR & 7.25	NA
V650.30	Phase Separator , 15 gallons	STAR & 7.25	

Emission Point ID	Description	Applicable Regulation(s)	Control Device
V651.1	Waste Water Tank 1, 8,000 gallons	STAR & 7.25	NA
V651.2	Waste Water Tank 2, 8,000 gallons	STAR & 7.25	NA
NA	Valves and Flanges	STAR, 7.25	NA

Control Device			
Control ID	Description	Control Efficiency	Stack ID
F240.50	Wuxi - Baghouse/Fabric Filter	95%	ST628.190
F244.50	Wuxi - Baghouse/Fabric Filter	95%	ST628.190
F330.50	Wuxi - Baghouse/Fabric Filter	95%	ST628.190
F332.50	Wuxi - Baghouse/Fabric Filter	95%	ST628.190
F335.50	Wuxi - Baghouse/Fabric Filter	95%	ST628.190
F337.50	Wuxi - Baghouse/Fabric Filter	95%	ST628.190
F606.50	Wuxi - Baghouse/Fabric Filter	95%	ST628.190
C627.3	Eductor to control non-VOC HAP	99.5% combined	ST628.190
C627.4	Recirculated Packed Bed Scrubber (Stage 1) to control non-VOC HAP		ST628.190
C627.5	Recirculated Packed Bed Scrubber (Stage 2) to control non-VOC HAP		ST628.190
E610.40	Jinshan Boiler - Shell & Tube Condenser (BACT)	95%	ST628.190
E624.40	Jinshan Boiler - Shell & Tube Condenser (BACT)	95%	ST628.190
E626.40	Jinshan Boiler - Shell & Tube Condenser (BACT)	95%	ST628.190
V244.30	Normag - Absorber to control PM	95%	ST628.190
V244.31	Normag - Absorber to control PM	95%	ST628.190
V332.30	Normag - Absorber to control PM	95%	ST628.190
V332.31	Normag - Absorber to control PM	95%	ST628.190
V607.3	Normag - Absorber to control PM	95%	ST628.190
PU628	Zeeco - Natural Gas Flare to control VOCs, Hexane, and Toluene (BACT)	75%	ST628.190

e. **Standards/Operating Limits**

i. **Plant-wide**

- 1) Clariant Corp. – Louisville West Plant is a major source for PM/PM₁₀/PM_{2.5}, VOC, NOX, single HAP, and total HAPs. To preclude the requirements of Regulation 2.04, Construction or Modification of Major Sources In or Impacting Upon Non-Attainment Areas, and Regulation 2.05, Prevention of Significant Deterioration of Air Quality, the source is subject to a plant-wide limit of less than 100 tons during any consecutive 12-month period for PM/PM₁₀/PM_{2.5}, NOX, and VOC.
- 2) Pursuant to Regulation 2.17, section 5.1, the source is required to limit the plant-wide emissions of any individual HAP to less than 10 tons during any consecutive 12-month period. For all HAPs combined, the source is required to limit the plant-wide emissions of all HAPs to less than 25 tons during any consecutive 12-month period.

ii. **VOC**

- 1) For equipment V131.1, Valves/Flanges, V651.1, and V651.2; Regulation 7.25 establishes a plant-wide VOC limit of 5 tons per year for all affected facilities, unless Best Available Control Technology (BACT) level of control is utilized to reduce the VOC emissions.
- 2) The Company submitted a BACT analysis dated March 31, 2014; revised July 9, 2014; and revised April 11, 2016; for this project that that showed that for V160.1, R200.1, R201.1, R220.1, PU230.80, V231.1, V232.1, V234.1, D240.1/E240.40, V240.30, V244.1, PU300.80, PU305.80, R300.1, R305.1, R310.1, R315.1, F320.1, F325.1, R311.1, R316.1, V321.1, V323.1, V326.1, V322.1, V327.1, V328.1, D330.1/E330.40, V330.30, D335.1/E335.40, V335.30, V332.1, V337.1, E403.41/C403.10/E403.40/E403.42, V403.30, E403.43/C403.20/E403.44, V403.31, C413.10/E413.40/E413.41, V413.30, C414.10/E414.40/E414.41, V414.30, C415.10/E415.40/E415.41, V415.30, V437.1, V600.1, V601.1, P602.80, V602.1, V603.1, V608.1, D606.1/E606.40, and V606.30; venting to the condensers is considered BACT based on 95% control efficiency and potential controlled VOC emissions of 46.83 tpy.
- 3) The Company submitted a BACT analysis dated June 8, 2015; revised April 11, 2016; for equipment V100.30,

V100.31, V110.30, V110.31, V140.30, V140.31, C100.1, C110.1, V136.1, C140.1, F244.51, 244.90, 244.91, PU244, F332.51, F337.51, PU332.81, PU337.81, 332.90, 337.90, PU332.80, PU337.80, C406.1/C406.2, V406.30, PU607, V610.1, V624.1, and V626.1; that showed that venting to flare PU628 is considered BACT at 98% control efficiency and potential controlled VOC emissions of 0.60 tpy.

- 4) Regulation 7.12 establishes VOC standards for storage tanks with a capacity greater than 250 gallons. For storage vessels (V132.1, V137.1, V161.1, V417.1, V417.2 and V407.1), the source shall not store materials with an as stored vapor pressure of greater than or equal to 1.5 psia.
- 5) Regulation 7.12, section 3.3 requires that storage vessels (V101.1, V400.1, V404.1, V410.1, V420.1, V427.1, V428.1, V447.1, and V448.1) be equipped with a permanent submerged fill pipe. All of these storage vessels are equipped with submerged fill.
- 6) Regulation 7.12, section 4.1 establishes VOC operating requirements for storage tanks with a capacity greater than 250 gallons. For all storage tanks subject to Regulation 7.12, the owner or operator shall ensure that there are no visible holes, tears, or other openings in the seal or any seal fabric.
- 7) 40 CFR 60 Subpart Kb establishes operating requirements for storage tanks with a capacity greater than 75 m³ that are used to store volatile organic liquids that were constructed, reconstructed, or modified after July 23, 1984.

iii. **PM/PM₁₀/PM_{2.5}**

- 1) Regulation 7.08, section 3.1.2 establishes PM standards for process equipment. Per Table 1 to Regulation 7.08, the maximum allowable emission rate is 2.34 lb PM/hr for equipment with a process weight rate of less than or equal to 1,000 pounds per hour.
- 2) The potential PM emissions from all emission points in this project subject to Regulation 7.08, except for emission points D606.1 and PU607, cannot exceed the standard uncontrolled. Emission points D606.1 and PU607 cannot exceed the standard controlled and will be required to be controlled at all times.

- 3) Regulation 7.08, section 3.1.1 establishes a standard for opacity to not equal or exceed 20%.

iv. **TAC**

- 1) Regulations 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. Clariant submitted potential emissions calculation with their application for all TACs associated with this project. The potential controlled TAC emissions are de minimis for this project as described in Regulation 5.21 Section 2. The following TACs were identified in the application for this project:

TAC	Abbreviation	TAC Category
Hexane	C ₆ H ₁₄	4
Hydrochloric acid (hydrogen chloride)	HCl	2
Toluene	C ₇ H ₈	2

- 2) The source is required to be environmentally acceptable for all TACs in accordance with Regulation 5.01, 5.21, and 5.23. The source shall not increase the TAC content in a raw material or substitute any raw materials or additional TACs for those identified in the initial permit application for the processes or equipment that would result in an increase in the quantity of a TAC above de minimis levels or those previously demonstrated to be environmentally acceptable without prior notification to, and approval by, the District.
- 3) The level of controls needed to meet the TAC de minimis levels in Regulation 5.21 are listed in the table below (1st indicates first control device needed, etc.). The starred (*) emission units can meet the de minimis values without a control device.

Emission Point	Hexane	HCl	Toluene
W62 - Tank Farm			
V100.70	--	--	--
C100.1	--	--	--
V100.30	--	--	--
V100.31	--	--	--
V101.1	--	--	--

Emission Point	Hexane	HCl	Toluene
V110.70	--	--	--
C110.1	*	--	--
V110.30	*	--	--
V110.31	*	--	--
V131.1	--	--	--
V132.1	--	--	--
V136.1	--	--	--
V137.1	--	--	--
V140.70	--	--	*
C140.1	--	--	*
V140.30	--	--	*
V140.31	--	--	*
V150.1	--	*	--
V151.1	--	*	--
V160.1	--	*	*
V161.1	--	*	*
W63 – Support Synthesis			
R200.1	--	--	--
R201.1	--	--	--
R220.1	*	--	--
P230.80	*	--	--
V231.1	*	--	--
V232.1	*	--	--
V234.1	*	--	--
D240.1/E240.40	*	--	--
V240.30	*	--	--
V244.1	*	--	--
F244.51	*	--	--
244.90	*	--	--
244.91	*	--	--
PU244	*	--	--
W64 – Catalyst Production			
PU300.80	*	--	--
PU305.80	*	--	--
R300.1	*	--	--
R305.1	*	--	--
R310.1	*	2 nd	--
R315.1	*	2 nd	--
F320.1	*	*	*
F325.1	*	*	*
R311.1	*	1 st	*
R316.1	*	1 st	*
V321.1	--	*	*

Emission Point	Hexane	HCl	Toluene
V326.1	--	*	*
V322.1	*	--	--
V323.1	*	*	*
V327.1	*	--	--
V328.1	*	*	*
D330.1/E330.40	*	*	*
V330.30	*	*	*
D335.1/E335.40	*	*	*
V335.30	*	*	*
V332.1	*	*	--
V337.1	*	*	--
F332.51	*	*	--
F337.51	*	*	--
PU332.81	*	*	--
PU337.81	*	*	--
332.90	*	*	--
337.90	*	*	--
PU332.82	*	*	--
PU337.82	*	*	--
W65- Solvent Regeneration			
V400.1	*	--	--
E403.41/ C403.10/ E403.40/ E403.42	*	--	--
V403.30	*	--	--
E403.43/C403.20/E403.44	*	--	--
V403.31	*	--	--
V404.1	*	--	--
C406.1/C406.2	*	--	--
V406.30	*	--	--
V407.1	*	--	--
V410.1	*	*	*
V420.1	*	*	*
C413.10/E413.40/E413.41	*	1 st	*
V413.30	*	*	*
C414.10/E414.40/E414.41	*	1 st	*
V414.30	*	*	*
C415.10/E415.40/E415.41	*	1 st	*
V415.30	*	*	*
V447.1	*	*	*
V448.1	*	*	*
V427.1	*	*	*
V428.1	*	*	*
V437.1	*	*	*
V417.1	--	*	*

Emission Point	Hexane	HCl	Toluene
V417.2	--	*	*
W66 – By-Product Isolation			
V600.1	*	1 st	--
V601.1	*	*	*
P602.80	*	*	*
V602.1	*	*	--
V603.1	*	*	--
V608.1	*	*	*
D606.1/E606.40	*	*	--
V606.30	*	--	--
PU607	*	*	--
W67 – Waste gas Treatment			
V610.1	*	*	*
V624.1	*	*	*
V626.1	*	--	--
W69 – Waste Water Treatment			
V691.1	--	*	--
V650.1	*	--	*
V650.30	*	--	*
V651.1	*	--	*
V651.2	*	--	*
Valves and Flanges	*	*	*

III. Other Requirements

- Temporary Sources:** The source did not request to operate any temporary facilities.
- Short Term Activities:** The source did not report any short term activities.
- Emissions Trading:** N/A
- Operational Flexibility:** The source did not request any operational flexibility for these emission points.
- Compliance History:**

Date	Description	Penalty	Status
04/11/2007	Exceeding ASL for Nickel Oxide	\$1000	In compliance
09/08/2010	Visible NO _x plume	\$1000	In compliance
6/11/15	Visible NO _x plume	\$14,250	In compliance
8/31/15	Excursions from operating ranges		Not resolved
10/27/15	Visible NO _x plume		In compliance

6. Calculation Methodology

Generally, emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc) or hours of operation of the equipment by the appropriate emission factor and accounting for any control devices unless otherwise approved in writing by the District. Approved emission factors determined by future stack test can replace the emission factors below:

Emission Point ID	Description	Acceptable Emission Factor Sources
W62 - Tank Farm		
V100.70	Mobile Temporary Container	AP-42 Chapter 7.1
C100.1	Dryer	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
V100.30	Dryer Vessel	
V100.31	Dryer Vessel	
V101.1	Storage Tank (Submerged Fill)	AP-42 Chapter 7.1
V110.70	Mobile Temporary Container	AP-42 Chapter 7.1
C110.1	Dryer	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
V110.30	Dryer Vessel	
V110.31	Dryer Vessel	
V131.1	Processing Tank	AP-42 Chapter 7.1
V132.1	Storage Tank	AP-42 Chapter 7.1
V136.1	Processing Tank	AP-42 Chapter 7.1
V137.1	Storage Tank	AP-42 Chapter 7.1
V140.70	Mobile Temporary Container	AP-42 Chapter 7.1
C140.1	Dryer	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
V140.30	Dryer Vessel	
V140.31	Dryer Vessel	
V150.1	Storage Tank I	AP-42 Chapter 7.1
V151.1	Storage Tank II	AP-42 Chapter 7.1
V160.1	Vessel	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
V161.1	Storage Tank	AP-42 Chapter 7.1
PU203	Bag Emptying Unit	1% Loss PM/PM ₁₀ /PM _{2.5}
R200.1	Reactor 1	1% Loss PM/PM ₁₀ /PM _{2.5} Vapor Displacement & Vessel Heating Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994

Emission Point ID	Description	Acceptable Emission Factor Sources
R201.1	Reactor 2	1% Loss PM/PM ₁₀ /PM _{2.5} Vapor Displacement & Vessel Heating Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
R220.1	Reactor	Vapor Displacement & Vessel Heating Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
P230.80	Decanter	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
V231.1	Re-suspension Storage Tank 1	
V232.1	Re-suspension Storage Tank 2	
V234.1	SRS Transfer Tank	
D240.1/E240.40	Dryer with Heat Exchanger	1% Loss PM/PM ₁₀ /PM _{2.5}
V240.30	Transfer Vessel	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
V244.1	Blender	1% Loss PM/PM ₁₀ /PM _{2.5} Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
F244.51	Vibrating Sieve	0.5% Loss PM/PM ₁₀ /PM _{2.5} Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
244.90	Container/Drum Filling Unit	1% Loss PM/PM ₁₀ /PM _{2.5} Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
244.91	Container/Drum Filling Unit	
PU244	Drum Emptying Unit	
W64 – Catalyst Production		
PU300.80	Container Emptying Unit – Line 1	1% Loss PM/PM ₁₀ /PM _{2.5} Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
PU305.80	Container Emptying Unit – Line 2	

Emission Point ID	Description	Acceptable Emission Factor Sources
R300.1	Reactor – Line 1	1% Loss PM/PM ₁₀ /PM _{2.5} Vapor Displacement & Vessel Heating Calculations from EPA Document, “Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document,” EPA-453/R-93-017, February 1994
R305.1	Reactor – Line 2	
R310.1	Reactor I – Line 1	Vapor Displacement & Vessel Heating Calculations from EPA Document, “Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document,” EPA-453/R-93-017, February 1994
R315.1	Reactor I – Line 2	
F320.1	Filter – Line 1	Vapor Displacement Calculations from EPA Document, “Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document,” EPA-453/R-93-017, February 1994
F325.1	Filter – Line 2	
R311.1	Reactor II – Line 1	Vapor Displacement & Vessel Heating Calculations from EPA Document, “Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document,” EPA-453/R-93-017, February 1994
R316.1	Reactor II – Line 2	
V321.1	Recycled Storage Tank with agitation – Line 1	AP-42 Chapter 7.1
V326.1	Recycled Storage Tank with agitation – Line 2	AP-42 Chapter 7.1
V322.1	Recycled Storage Tank – Line 1	AP-42 Chapter 7.1
V323.1	SRC Transfer Tank – Line 1	Vapor Displacement Calculations from EPA Document, “Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document,” EPA-453/R-93-017, February 1994
V327.1	Recycled Storage Tank – Line 2	
V328.1	SRC Transfer Tank – Line 2	
D330.1/E330.40	Dryer with Heat Exchanger – Line 1	1% Loss PM/PM ₁₀ /PM _{2.5}
V330.30	Transfer Vessel	Vapor Displacement Calculations from EPA Document, “Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document,” EPA-453/R-93-017, February 1994
D335.1/E335.40	Dryer with Heat Exchanger – Line 2	1% Loss PM/PM ₁₀ /PM _{2.5}

Emission Point ID	Description	Acceptable Emission Factor Sources
V335.30	Transfer Vessel	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
V332.1	Blender – Line 1	1% Loss PM/PM ₁₀ /PM _{2.5} Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
V337.1	Blender – Line 2	
F332.51	Vibrating Sieve – Line 1	0.5% Loss PM/PM ₁₀ /PM _{2.5} Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
F337.51	Vibrating Sieve – Line 2	
PU332.81	Drum Filling Unit – Line 1	1% Loss PM/PM ₁₀ /PM _{2.5} Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
PU337.81	Drum Filling Unit – Line 2	
332.90	Off Spec Drum Filling Unit – Line 1	
337.90	Off Spec Drum Filling Unit – Line 2	
PU332.82	Drum Emptying Unit – Line 1	
PU337.82	Drum Emptying Unit – Line 2	
W65- Solvent Regeneration		
V400.1	SRS Storage Tank (Submerged Fill)	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994 or AP-42 Chapter 7.1
E403.41/ C403.10/ E403.40/ E403.42	Reboiler with Column, Overhead Interchange and Condenser	1 kg VOC/hr per Manufacturer Information
V403.30	Reflux Vessel	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
E403.43/ C403.20/ E403.44	Reboiler with Column and Condenser	1 kg VOC/hr per Manufacturer Information

Emission Point ID	Description	Acceptable Emission Factor Sources
V403.31	Reflux Vessel	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
V404.1	Storage Tank (Submerged Fill)	AP-42 Chapter 7.1
C406.1/ C406.2	Dryer	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
V406.30	Dryer Vessel	
V407.1	Storage Tank	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994 or AP-42 Chapter 7.1
V410.1	SRC Storage Tank 1 (Submerged Fill)	
V420.1	SRC Storage Tank II (Submerged Fill)	
C413.10/ E413.40/ E413.41	1 st Stage Distillation Column and Falling Film Evaporator with Condenser	AP-42 Emission Factor 3.3 lb VOC/ton (Table 4.7-1)
V413.30	Reflux Drum	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
C414.10/ E414.40/ E414.41	2 nd Stage Distillation Column and Falling Film Evaporator with Condenser	AP-42 Emission Factor 3.3 lb VOC/ton (Table 4.7-1)
V414.30	Reflux Drum	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
C415.10/ E415.40/ E415.41	3 rd Stage Distillation Column and Falling Film Evaporator with Condenser	AP-42 Emission Factor 3.3 lb VOC/ton (Table 4.7-1)
V415.30	Reflux Drum	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
V447.1	Storage Tank (Submerged Fill)	AP-42 Chapter 7.1
V448.1	Storage Tank (Submerged Fill)	AP-42 Chapter 7.1

Emission Point ID	Description	Acceptable Emission Factor Sources
V427.1	Storage Tank (Submerged Fill)	AP-42 Chapter 7.1
V428.1	Storage Tank (Submerged Fill)	AP-42 Chapter 7.1
V437.1	Recycle Storage Tank/Mixing Vessel	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
V417.1	Storage Tank	AP-42 Chapter 7.1
V417.2	Storage Tank	AP-42 Chapter 7.1
W66 – Co-Product Isolation		
V600.1	SRC Storage (Surge/Transfer Vessel with Agitation) and Cooling Tank	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
V601.1	Tank	
P602.80	Decanter	
V602.1	Tank1	
V603.1	Tank 2	
V608.1	SRC Transfer Tank	
D606.1/ E606.40	Dryer with Heat Exchanger	1% Loss PM/PM ₁₀ /PM _{2.5}
V606.30	Transfer Vessel	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
PU607	Big-Bag Filling Unit	1% Loss PM/PM ₁₀ /PM _{2.5}
W67 – Waste gas Treatment		
V610.1	Recovered Solvent Storage (Transfer Vessel) Tank	Vapor Displacement Calculations from EPA Document, "Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document," EPA-453/R-93-017, February 1994
V624.1	Recovered Solvent Storage (Transfer Vessel) Tank	
V626.1	Recovered Solvent Storage (Transfer Vessel) Tank	
W68 - Utilities		
E011.1/E011.2	Cooling Tower	AP-42 Chapter 13.4, Table 13.4-1

Emission Point ID	Description	Acceptable Emission Factor Sources
PU075	Emergency Generator, Kohler, Model 250REOZJE, Tier 3 Engine, 255 KW, 342 HP, Displacement 9 liters	Manufacturer Certification for PM, NOx, CO and VOC AP-42 Chapter 3.3 for SO2, CO2 and HAP
P-0001		Manufacturer Certification for PM, NOx, CO and VOC AP-42 Chapter 3.3 for SO2, CO2 and HAP
W69 – Waste Water Treatment		
V691.1	Emergency Drainage Tank	AP-42 Chapter 7.1
V650.1	Phase Separator	Vapor Displacement Calculations from EPA Document, “Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document,” EPA-453/R-93-017, February 1994
V650.30	Phase Separator	
V651.1	Waste Water Tank 1	Vapor Displacement Calculations from EPA Document, “Control Volatile Organic Compound Emissions from Batch Processes – Alternative Control Techniques Information Document,” EPA-453/R-93-017, February 1994 or AP-42 Chapter 7.1
V651.2	Waste Water Tank 2	
Fugitives		SOCMI Default-Zero Emission Rates
PU628	Natural Gas Combustion Flare	AP-42 Chapter 13-5

7. Insignificant Activities

Insignificant Activities		
Description	Quantity	Basis (Regulation 1.02)
V100.70, Mobile Temporary Container, 5,283 gallons	1	Section 1.38.1.2.1
C100.2/C100.3, Dryer, 110 gph	1	Section 1.38.1.2.1
V101.1, Storage Tank, 6,787 gallons	1	Section 1.38.1.2.1
V131.1, Processing Tank, 775 gallons	1	Section 1.38.1.2.1
V132.1, Storage Tank, 3,453 gallons	1	Section 1.38.1.2.1
V136.1, Processing Tank, 775 gallons	1	Section 1.38.1.2.1
V137.1, Dry Storage Tank2, 2,205 gallons	1	Section 1.38.1.2.1
PU203, Bag Emptying Unit	1	Section 1.38.1.2.1
E011.1/E011.2, Cooling Tower	1	Section 1.38.1.2.1
PU075 Emergency Generator, Kohler, Model 250REOZJE, Tier 3 Engine, 255 KW, 342 HP, Displacement 9 liters	1	Section 1.38.1.2.1
PU075 Emergency Generator Tank, 472 gallons	1	Section 3.9.2
P-0001 Fire Pump, Clarke, 86 HP, Displacement 4.5 Liters	1	Section 1.38.1.2.1
T-0001 Fire Pump Tank, 185 gallons	1	Section 3.9.2