



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



November 23, 2019

**Title V Construction: C-0036-0030-19-V
 Statement of Basis**

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

Owner: Clariant Corporation
 1227 South 12th Street
 Louisville, KY 40232

Application Documents: See Table 6 in Section I

Public Comment Date: 11/23/2019

Permitting Engineer: Ulalo Chirwa

Permit Number: C-0036-0030-19-V

Plant ID: 0036

SIC: 2819

NAICS: 325188

Introduction:

This permit will be issued pursuant to District Regulation 2.03, Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements. Its purpose is to provide methods of determining continued compliance with all applicable requirements.

This permit's action allows for the construction of a silo and a dense phase transport system in the Houdry process (EU 250-W55), production rate increases to the original Houdry line, addition of a new bin vent and corrections to previous equipment that were omitted from permit 27755-14-TV(R2).

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO₂), carbon monoxide (CO), particulate matter less than 10 microns (PM₁₀), and particulate matter less than 2.5 microns (PM_{2.5}). Jefferson County is classified as a nonattainment area for ozone (O₃). This facility is located in the portion of Jefferson County that is an attainment area for sulfur dioxide (SO₂).

Permit Application Type:

- | | | |
|--|--|---|
| <input checked="" type="checkbox"/> Initial construction | <input type="checkbox"/> Construction Revision | <input type="checkbox"/> Construction renewal |
| | <input type="checkbox"/> Administrative | |
| | <input type="checkbox"/> Minor | |
| | <input type="checkbox"/> Significant | |

Compliance Summary:

- | | |
|--|---|
| <input type="checkbox"/> Compliance certification signed | <input type="checkbox"/> Compliance schedule included |
| <input type="checkbox"/> Source is out of compliance | <input checked="" type="checkbox"/> Source is operating in compliance |

I. Source Information

1. **Plantwide Overall Process Description:** Clariant Corp. – Louisville West Plant manufactures customized precipitated catalysts and catalyst carriers.
2. **Project Description:** The source is proposing the modification of the existing Houdry process (250-W55) including rate changes to the original Houdry line, the installation of a silo and dense phase transport system, the addition of control equipment and corrections to previous equipment that were omitted from permit 27755-14-TV(R2).
3. **Site Determination:** Clariant Corporation is the parent company and 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. Emission Unit Summary:

Emission Unit	Description
EU 250-W55	Houdry System: Houdry; raw material handling, catalyst forming, heat treating, screening, and packaging.

5. Permit Revisions

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
Initial	C-0036-1006-17-V	03/16/2017	04/18/2017	Initial	Entire Permit	Modifying existing equipment in the Houdry process (250-W55) ¹ .

¹ This equipment was originally listed on permit 36445-12-C.

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
Initial	C-0036-0030-19-V	xx/xx/2019	11/08/2019	Initial	Entire Permit	Modifying rates and controls associated with the original Houdry process line installed in 1993; Installation of Salco Silo, Dense Phase Transport System, and a new Bin Vent Filter; Correction made for equipment previously omitted in 27755-14-TV(R2).

6. Permit Application Documents

Document Number	Date Received	Description
70991	08/15/2019	Confidential version of the construction application
70990	08/15/2019	Public version of the construction application
119279	09/24/2019	Clarification regarding the potential emissions of stack tested equipment

7. **Fugitive Sources:** There are no fugitive emissions for this project.

8. Plantwide Emission Summary:

Pollutant	District Calculated Actual Emissions (tpy) 2017 Data	Major Source Pollutants (based on PTE)
CO	15.05	No
NO _x	45.87	*Yes
SO ₂	0.27	No
PM ₁₀	23.65	*Yes
VOC	2.38	*Yes
Total HAPs	0.39	*Yes
Single HAP		
Chromium Compounds	0.04	*Yes
Hexane	0.32	*Yes
Nickel Compounds	0.00	*Yes

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

9. Applicable Requirements:

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

10. Referenced MACT Federal Regulations: 40 CFR 63 Subpart VVVVVV, *National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources*

11. Referenced non-MACT Federal Regulations: N/A

II. Regulatory Analysis

1. Acid Rain Requirements: This equipment is not subject to the Acid Rain Program.

2. Stratospheric Ozone Protection Requirements: 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. This source does not manufacture, sell, or distribute 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: This project and affected equipment is not major for any criteria pollutant because 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}, NO_x, and VOC. In accordance with 40 CFR 64, Compliance Assurance Monitoring for Major Stationary Sources, the source is not required to propose a CAM plan based on current process and control device requirements and practices.

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.

Clariant Corp. – Louisville West Plant is a major source for PM/PM₁₀/PM_{2.5}, VOC, NO_x, 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}, NO_x, and VOC.

Pursuant to Regulation 2.16, section 4.1, 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.

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. Clariant Corp. – Louisville West Plant submitted their TAC Environmental Acceptability Demonstration to the District with the application dated August 3, 2016, revised September 16, 2016, and updated December 16, 2016. Compliance with the STAR EA Goals was demonstrated in the source's EA Demonstrations. SCREEN 3 modeling was performed for each emission point that has non-de minimis Chromium VI emissions. The carcinogen risk and non-carcinogen risk values comply with the STAR EA goals required in Regulation 5.21.

b. **Permit C-0042-1027-19-V: EU 250-W55**

i. **Equipment:**

Emission Point	Description	Construction Date	Applicable Regulations	Control Device	Stack ID
T-250-W55-105 ²	Chromium Makeup Tank, 5639 gal	2019	7.08	ED-250-W55-801 SC-250-W55-801 BMF-250-W55-801	S-251-W55-027
T-250-W55-102	HNO ₃ Storage Tank & Unload, 10,576 gal	2019	STAR	SC-250-W55-401 ³ BMF-250-W55-401	S-250-W55-017
V-250-W55-202	Alumina Silo	2019	7.08	BV-250-W55-202 BV-250-W55-203	S-250-W55-009
V-250-W55-204	Dense Phase Transport System				
CV-250-W55-403	Belt Conveyor	2019	STAR	NA	Fugitive
CV-250-W55-404/405	Belt Conveyors, only one operated at a time				
DD-250-W55-301	Drum Dumper	2019	7.08	DC-250-W55-601	S-250-W55-018
DD-250-W55-302	Drum Dumper	2019	7.08, STAR		
FD-250-W55-301	Vibratory Feeder	2019	7.08, STAR	BV-250-W55-303	S-250-W55-011
FD-250-W55-403	L/W Feeder Fines				
GR-250-W55-301	Rework Grinder				
H-250-W55-305	Fines Hopper Rework				

² Per C-0036-1006-17-V, Clariant no longer uses chromic acid flake in the W55 Houdry process. DD-250-W55-101 is no longer in use and chromium emissions are not generated in T-250-W55-105.

³ With this construction permit, the existing tank T-250-W55-102 is being vented to the existing scrubber SC-250-W55-401.

Emission Point	Description	Construction Date	Applicable Regulations	Control Device	Stack ID				
H-250-W55-302	In Use Hopper	2019	7.08	BV-250-W55-302	S-250-W55-010				
FD-250-W55-401 ⁴	F/W Feeder Alumina	2019	7.08	DC-250-W55-411	S-250-W55-015				
FD-250-W55-402 ⁴	Feeder Hercoflat	2019	7.08						
H-250-W55-303	Hercoflat Hopper	2019	7.08	DC-250-W55-601	S-250-W55-018				
H-250-W55-304	Rework Surge Hopper	2019	7.08, STAR						
H-250-W55-402/403	2 Feed Hoppers, only one operated at a time	2019	STAR	NA	Fugitive				
MM-250-W55-401/402	2 Mix Mullers, only one operated at a time	2019	7.08, STAR	ED-250-W55-401 SC-250-W55-401 BMF-250-W55-401	S-250-W55-017				
HT-250-W55-401	Proctor & Schwartz Belt Dryer, 940,000 BTU/hr								
PE-250-W55-401/402	Pellet Mills, only one operated at a time	2019	STAR	NA	Fugitive				
MS-250-W55-401	Material Spreader	2019	7.08, STAR, 40 CFR 63 VVVVVV	DC-250-W55-601	S-250-W55-018				
CV-250-W55-401	Screw Conveyor								
CV-250-W55-402	Vibratory Conveyor								
EPD-250-W55-401	401 Emergency Drumout								
DD-250-W55-401	Drum Dumper								
FD-250-W55-406	Vibratory Feeder								
H-250-W55-401	Refeed Surge Hopper								
BE-250-W55-501	Bucket Elevator								
SCV-250-W55-501	Rework Screw Conveyor								
H-250-W55-501	Dehydrator Feed Hopper								
VS-250-W55-501	Vibratory Screener					2019	7.08, STAR, 40 CFR 63 VVVVVV	DC-250-W55-601	S-250-W55-018
BE-250-W55-601	Bucket Elevator								
CV-250-W55-501 ⁵	Vibratory Feeder								
CV-250-W55-601 ⁵	Vibratory Feeder								
EPD-250-W55-501	501 Emergency Drumout								
EPD-250-W55-601	601 Emergency Drumout								
DD-250-W55-501	Drum Dumper	2019	7.08, STAR, 40 CFR 63 VVVVVV	DC-250-W55-601	S-250-W55-018				
DD-250-W55-601	Refeed Drum Dumper								
FD-250-W55-501	Vibratory Feeder								
FD-250-W55-601	Vibratory Feeder								
H-250-W55-502	Hopper								
H-250-W55-601	Heat Treater Feed								

⁴ This equipment has been re-permitted after being inadvertently removed from the permit during permitting of the 2012 expansion equipment.

⁵ Conveyors (CV-250-W55-501 and CV-250-W55-601) have been replaced with vibratory feeder.

Emission Point	Description	Construction Date	Applicable Regulations	Control Device	Stack ID
	Hopper				
H-250-W55-602	Refeed Surge Hopper	2019	7.08, STAR, 40 CFR 63 VVVVVV	DC-250-W55-601	S-250- W55-018
VS-250-W55-601	Vibratory Screener				
BE-250-W55-701	Bucket Elevator				
HE-250-W55-701	Product Cooler				
HT-250-W55-501	Dehydrator Vessel	2019	7.08, STAR	ED-250-W55-601	S-250- W55-024 or S-250- W55-036
HT-250-W55-601	Heat Treater	2019	7.08	SC-250-W55-601 V-250-W55-603 or ED-250-W55-601 SC-250-W55-601 V-250-W55-603B	
EPD-250-W55-801	801 Emergency Drumout	2019	7.08, STAR, 40 CFR 63 VVVVVV	DC-250-W55-901 FIL-250-W55-901	S-250- W55-030
CV-250-W55-801	Metering Conveyor				
FD-250-W55-901	Vibratory Feeder				
FD-250-W55-702	Vibratory Feeder	2019	7.08, STAR, 40 CFR 63 VVVVVV	ED-250-W55-801 SC-250-W55-801 BMF-250-W55-801	S-250- W55-027
FD-250-W55-703	Vibratory Feeder				
HT-250-W55-701	Wyssmont Dryer				
V-250-W55-703	Impregnator Hopper				
DD-250-W55-701	Drum Dumper	2019	7.08, STAR, 40 CFR 63 VVVVVV	ED-250-W55-901 SC-250-W55-901 ME-250-W55-901	S-250- W55-031
BE-250-W55-801	Bucket Elevator				
H-250-W55-703	Refeed Surge Hopper				
H-250-W55-801	Chrome Heat Treater Feed Hopper	2019	7.08, STAR, 40 CFR 63 VVVVVV	ED-250-W55-901 SC-250-W55-901 ME-250-W55-901	S-250- W55-031
BE-250-W55-901	Bucket Elevator				
HE-250-W55-901	Product Cooler				
V-250-W55-701	Measure Pot	2019	7.08, STAR	DC-250-W55-601	S-250- W55-018
VS-250-W55-701	Vibratory Screen	2019			
VD-250-W55-701 ⁶	Vibratory Feeder	2019	7.08	DC-250-W55-601	S-250- W55-018
HT-250-W55-801	Chrome Heat Treater	2019	7.08, STAR, 40 CFR 63 VVVVVV	SC-250-W55-802 ED-250-W55-802 SC-250-W55-801 BMF-250-W55-801	S-250- W55-027
FD-250-W55-902	Feeder	2019	7.08, STAR, 40 CFR 63 VVVVVV	DC-250-W56-959 FIL-250-W56-959	S-250- W56-032
H-250-W55-901	Final Product Surge Hopper				
SS-250-W55-901	Packager				
VS-250-W55-901	Vibratory Screen				
FD-250-W55-408 ⁷	Batch Feeder	2019	7.08, STAR, 40 CFR 63	DC-250-W55-201	S-250- W55-201

⁶ Previously, omitted equipment located between product cooler (HE-250-W55-250) and vibratory screener (VS-250-W55-701).

⁷ This construction permit authorizes an increase in production rate for this emission point.

Emission Point	Description	Construction Date	Applicable Regulations	Control Device	Stack ID
			VVVVVV		
V-250-W55-220 ⁸	Salco Silo	2019	7.08	BV-250-W55-222 BV-250-W55-203	S-250- W55-009
V-250-W55-224 ⁸	Dense Phase Transport System	2019	7.08	BV-250-W55-222 BV-250-W55-203	S-250- W55-009
STAR Regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.					

Control ID	Description	Control Efficiency
ED-250-W55-801	Eductor, Schutte & Koerting, Model 7014 S 14	95%
BMF-250-W55-401	Cartridge Filter, Monsanto, Model 392-035	95%
BMF-250-W55-801	Brinks Mist Eliminator, Monsanto, Model 392-035	99%
BV-250-W55-202	Bin Vent Filter, Mikropul, Model 100S-8-20-TC	99.343%
BV-250-W55-203	Bin Vent Filter, Mikropul, Model 100S-8-20-TC	99.343%
BV-250-W55-302	Bin Vent Filter, Mikropul, Model 165-8-30B	99.343%
BV-250-W55-303	Bin Vent Filter, Nol-Tech, Model 600FR-32	99.343%
BV-250-W55-222 ⁹	Bin Vent Filter, Mikropul, Model 100S-8-20 TR "B"	99.343%
DC-250-W55-201	Baghouse, Donaldson Torit DFT 3-18	99.786%
DC-250-W55-411	Baghouse, Flex Kleen, Model CDC-2-2-8 III	95 % PM
DC-250-W55-601	Baghouse, Mikro-Pulsaire, Model 500-S-20-20-C	99.343%
DC-250-W55-901	Baghouse, Torit, Model DFT 2-8	99.786%
DC-250-W56-959	Baghouse, Torit, Model DFT 2-8	99.786%
ED-250-W55-401	Eductor, Schutte & Koerting, Model 7014 S 14	95% PM, 75%
ED-250-W55-601	Eductor, Schutte & Koerting, Model 7014 S 14	95% PM, 75%
ED-250-W55-801	Eductor, Schutte & Koerting, Model 7014 S 14	95% PM, 75%
ED-250-W55-802	Eductor, Schutte & Koerting, Model 7014 S 14	95% PM, 75%
ED-250-W55-901	Eductor, Anderson, Model P-6542-1	95% PM, 75%
FIL-250-W55-901	HEPA filter, Donaldson Model Ultra-Lok	99.97%
FIL-250-W56-959	HEPA filter, Donaldson Model Ultra-Lok	99.97%
SC-250-W55-401	Impingement Scrubber, W.W. Sly, Model 330	95% PM, 75% NO _x
SC-250-W55-601	Impingement Scrubber, W.W. Sly, Model 330	95% PM, 75% NO _x
SC-250-W55-801	Impingement Scrubber, W.W. Sly, Model 330	95% PM, 75%
SC-250-W55-802	Impingement Scrubber, W.W. Sly, Model 330	95% PM, 75%
SC-250-W55-901	Spray Tower, Anderson, Model P-6542-1	95% PM, 75%
ME-250-W55-901	Mist Eliminator, Anderson, Model 1.9 CHEAF Aerosol Collector	95%
V-250-W55-603	Packed Tower Scrubber, Croll Reynolds, Model 48T-24NOX	95% PM, 75%
V-250-W55-603B	Packed Bed Scrubber, Croll-Reynolds Co., Inc. Model NOx Absorption-48T-24 NOx	95% PM, 75% NO _x

⁸ New process equipment, emissions are controlled by a new Bin Vent Filter (BV-250-W55-222).

⁹ New control equipment, emissions are routed to the existing Bin Vent Filter (BV-250-W55-203).

ii. **Standards/Operating Limits**

1) **HAP**

- (a) Regulation 2.16, section 4.1.1 establishes a standard for a single HAP to not equal or exceed 10 tons and total HAP emissions to not equal or exceed 25 tons during any consecutive 12-month period.
- (b) Clariant shall comply with 40 CFR 63 Subpart VVVVVV.

2) **Opacity**

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

3) **PM/PM₁₀/PM_{2.5}**

In accordance with Regulation 7.08, Table 1, PM standards are determined by the following equations, respectively:

$$E = 3.59(P)^{0.62} \quad \text{if } P \leq 30 \text{ tons/hr}$$

4) **NO_x**

Regulation 7.08, section 4 establishes a NO_x standard of 300 ppm by volume expressed as NO₂ or an invisible discharge.

5) **TAC**

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 calculations with their application for all TACs associated with this project. The following TACs were identified in the application for this project:

TAC	Abbreviation	TAC Category	Environmentally Acceptability Demonstration
Chromium III	Cr III	1	<i>De minimis</i> Controlled
Chromium VI	Cr VI	1	SCREEN 3
Nitric Acid	HNO ₃	2	<i>De minimis</i> Controlled

III. **Other Requirements**

- 1. **Temporary Sources:** The source did not request to operate any temporary facilities.

2. **Short Term Activities:** The source did not report any short term activities.
3. **Emissions Trading:** N/A
4. **Operational Flexibility:** The source did not request any operational flexibility for these emission points.
5. **Compliance History:**

Date	Description	Penalty	Status
06/11/2015	Visible NOx plume	\$14,250	In compliance
08/31/2015	Visible NOx plume		In compliance
10/27/2015	Visible NOx plume		In compliance
11/02/2015	Visible NOx plume		
08/22/2017 11/09/2017	Visible NOx plume	\$3000	In compliance
04/13/2017	TAC emissions exceed environmentally acceptable (EA) levels	\$7500	In compliance
04/13/2017	TAC emissions exceed environmentally acceptable (EA) levels		In compliance
01/09/2018 06/10/2018	Visible NOx plume		In compliance
12/04/2018 12/25/2018	Visible NOx plume	\$5000	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	Emission Factors
T-250-W55-105	2% Loss PM/PM ₁₀ /PM _{2.5}
T-250-W55-102	PV = nRT and AP-42 Chapter 7.1
V-250-W55-202	AP-42 Chapter 11.12
V-250-W55-204	1% Loss PM/PM ₁₀ /PM _{2.5}
CV-250-W55-403	Nitric Acid % loss based on content of material throughput
CV-250-W55-404/405	Nitric Acid % loss based on content of material throughput
DD-250-W55-301	1% Loss PM/PM ₁₀ /PM _{2.5}
DD-250-W55-302	1% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM
FD-250-W55-301	0.25% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM
FD-250-W55-403	0.25% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM
GR-250-W55-301	1% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM
H-250-W55-305	0.5% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM
H-250-W55-302	1% Loss PM/PM ₁₀ /PM _{2.5}
FD-250-W55-401	0.25% Loss PM/PM ₁₀ /PM _{2.5}
FD-250-W55-402	0.25% Loss PM/PM ₁₀ /PM _{2.5}
H-250-W55-303	0.5% Loss PM/PM ₁₀ /PM _{2.5}
H-250-W55-304	0.5% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM

H-250-W55-402/403	Nitric Acid% loss based on content of material throughput
MM-250-W55-401/402	1% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM Nitric Acid% loss based on content of material throughput
HT-250-W55-401	0.25% Loss PM/PM ₁₀ /PM _{2.5} Nitric Acid% loss based on content of material throughput
PE-250-W55-401/402	Nitric Acid% loss based on content of material throughput
MS-250-W55-401	Nitric Acid% loss based on content of material throughput
CV-250-W55-401	0.5% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM
CV-250-W55-402	0.25% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM
EPD-250-W55-401	0.25% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM
DD-250-W55-401	1% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM
FD-250-W55-406	0.25% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM
H-250-W55-401	0.5% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM
BE-250-W55-501	0.25% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM
SCV-250-W55-501	0.5% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM
H-250-W55-501	0.5% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM
VS-250-W55-501	0.5% Loss PM/PM ₁₀ /PM _{2.5} and Nitric Acid PM
BE-250-W55-601	0.25% Loss PM/PM ₁₀ /PM _{2.5}
CV-250-W55-501	0.25% Loss PM/PM ₁₀ /PM _{2.5}
CV-250-W55-601	0.25% Loss PM/PM ₁₀ /PM _{2.5}
EPD-250-W55-501	0.25% Loss PM/PM ₁₀ /PM _{2.5}
EPD-250-W55-601	0.25% Loss PM/PM ₁₀ /PM _{2.5}
DD-250-W55-501	1% Loss PM/PM ₁₀ /PM _{2.5}
DD-250-W55-601	1% Loss PM/PM ₁₀ /PM _{2.5}
FD-250-W55-501	0.25% Loss PM/PM ₁₀ /PM _{2.5}
FD-250-W55-601	0.25% Loss PM/PM ₁₀ /PM _{2.5}
H-250-W55-502	0.5% Loss PM/PM ₁₀ /PM _{2.5}
H-250-W55-601	0.5% Loss PM/PM ₁₀ /PM _{2.5}
H-250-W55-602	0.5% Loss PM/PM ₁₀ /PM _{2.5}
VS-250-W55-601	0.5% Loss PM/PM ₁₀ /PM _{2.5}
BE-250-W55-701	0.25% Loss PM/PM ₁₀ /PM _{2.5}
HE-250-W55-701	0.25% Loss PM/PM ₁₀ /PM _{2.5}
HT-250-W55-501	0.5% Loss PM/PM ₁₀ /PM _{2.5} NO _x is based on Nitric Acid Content
HT-250-W55-601	0.25% Loss PM/PM ₁₀ /PM _{2.5}
EPD-250-W55-801	0.25% Loss PM/PM ₁₀ /PM _{2.5} Chromium VI% loss based on content of material throughput
CV-250-W55-801	0.25% Loss PM/PM ₁₀ /PM _{2.5} Chromium VI and III% loss based on content of material throughput
FD-250-W55-901	0.25% Loss PM/PM ₁₀ /PM _{2.5} Chromium VI and III% loss based on content of material throughput
FD-250-W55-702	0.25% Loss PM/PM ₁₀ /PM _{2.5} 2.39 x 10 ⁻⁵ lb Cr VI/hr TAC and 4.60 x 10 ⁻⁵ lb Cr VI/hr HAP throughput modified from stack test
FD-250-W55-703	0.25% Loss PM/PM ₁₀ /PM _{2.5}

	2.39 x 10 ⁻⁵ lb Cr VI/hr TAC and 4.60 x 10 ⁻⁵ lb Cr VI/hr HAP throughput modified from stack test
HT-250-W55-701	0.25% Loss PM/PM ₁₀ /PM _{2.5} 2.39 x 10 ⁻⁵ lb Cr VI/hr TAC and 4.60 x 10 ⁻⁵ lb Cr VI/hr HAP throughput modified from stack test
V-250-W55-703	0.25% Loss PM/PM ₁₀ /PM _{2.5} 2.99 x 10 ⁻⁶ lb Cr VI/hr TAC and 5.75 x 10 ⁻⁶ lb Cr VI/hr HAP throughput modified from stack test
DD-250-W55-701	1% Loss PM/PM ₁₀ /PM _{2.5} 5.83 x 10 ⁻⁷ lb Cr VI/hr TAC and 1.12 x 10 ⁻⁶ lb Cr VI/hr HAP throughput modified from stack test
BE-250-W55-801	0.25% Loss PM/PM ₁₀ /PM _{2.5} 5.83 x 10 ⁻⁷ lb Cr VI/hr TAC and 1.12 x 10 ⁻⁶ lb Cr VI/hr HAP throughput modified from stack test
H-250-W55-703	0.5% Loss PM/PM ₁₀ /PM _{2.5} 5.61 x 10 ⁻⁷ lb Cr VI/hr TAC and 2.92 x 10 ⁻⁷ lb Cr VI/hr HAP throughput modified from stack test
H-250-W55-801	0.5% Loss PM/PM ₁₀ /PM _{2.5} 1.17 x 10 ⁻⁶ lb Cr VI/hr TAC and 2.24 x 10 ⁻⁶ lb Cr VI/hr HAP throughput modified from stack test
BE-250-W55-901	0.25% Loss PM/PM ₁₀ /PM _{2.5} 8.96 x 10 ⁻⁴ lb Cr VI/hr TAC, 1.72 x 10 ⁻³ lb Cr VI/hr HAP, 1.58 x 10 ⁻⁴ lb Cr III/hr TAC and 2.32 x 10 ⁻⁴ lb Cr III/hr HAP throughput modified from stack test
HE-250-W55-901	0.25% Loss PM/PM ₁₀ /PM _{2.5} 1.46 x 10 ⁻⁵ lb Cr VI/hr TAC, 2.80 x 10 ⁻⁵ lb Cr VI/hr HAP, 1.29 x 10 ⁻⁴ lb Cr III/hr TAC and 1.88 x 10 ⁻⁴ lb Cr III/hr HAP throughput modified from stack test
V-250-W55-701	0.25% Loss PM/PM ₁₀ /PM _{2.5}
VS-250-W55-701	0.5% Loss PM/PM ₁₀ /PM _{2.5}
VD-250-W55-701	0.25% Loss PM/PM ₁₀ /PM _{2.5}
HT-250-W55-801	0.25% Loss PM/PM ₁₀ /PM _{2.5} 1.46 x 10 ⁻⁵ lb Cr VI/hr TAC, 2.80 x 10 ⁻⁵ lb Cr VI/hr HAP, 1.29 x 10 ⁻⁴ lb Cr III/hr TAC and 1.88 x 10 ⁻⁴ lb Cr III/hr HAP throughput modified from stack test
FD-250-W55-902	0.25% Loss PM/PM ₁₀ /PM _{2.5} Chromium VI and III% loss based on content of material throughput
H-250-W55-901	0.5% Loss PM/PM ₁₀ /PM _{2.5} Chromium VI and III% loss based on content of material throughput
SS-250-W55-901	0.5% Loss PM/PM ₁₀ /PM _{2.5} Chromium VI and III% loss based on content of material throughput
VS-250-W55-901	0.5% Loss PM/PM ₁₀ /PM _{2.5} Chromium VI and III% loss based on content of material throughput
FD-250-W55-408	0.5% Loss PM/PM ₁₀ /PM _{2.5}
V-250-W55-220	AP-42 Chapter 11.12
V-250-W55-224	1% Loss PM/PM ₁₀ /PM _{2.5}

7. Insignificant Activities:

Equipment		Quan.	PTE (tpy)	Regulation Basis
FB-250-W55-701	Heater Assembly, Direct Fired (2.257 MMBtu/hr)	1	0.97 tpy NOx	Reg. 1.02, Section 1.38.1.2.1
FB-250-W55-801B	Firebox, 1.5 MMBtu/hr	1	0.32 tpy NOx	