



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



Permit No.: C-0042-1000-16-V

Plant ID: 0042

Effective Date: 0/00/2014

Expiration Date: 0/00/2015

Owner: Clariant Corporation
 Source: Clariant Corporation (Louisville South Plant)
 4900 Crittenden Drive
 Louisville, KY 40209

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:

Calciner 6 (101-S24), Calciner 8 (101-S25), and associated process equipment.

Applicable Regulation(s): 2.03, 2.04, 2.05, 2.16, 5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23, 7.08, 7.09, 40 CFR 63 Subpart VVVVVV

Control reference(s): N/A

Application No. 78620, 78719, 78621
 & 78954

Application Received: 7/28/2016
 & 8/3/2016

Permit Writer: Jenny Rhodes

Date of Public Comment 9/24/2016

{Manager1}
 Air Pollution Control Officer
 {date1}

Construction Permit Revisions/Changes

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
NA	644-76	12/30/1976	NA	Initial	Entire Permit	Initial Permit Issuance
NA	645-76	12/30/1976	NA	Initial	Entire Permit	Initial Permit Issuance
Initial	C-0042-1000-16-V	xx/xx/2016	09/24/2016	Significant Revision	Entire Permit	Adding a new product to existing 101-S24 Calciner 6, 101-S25 Calciner 8. New emissions include Ammonia and Carbon Monoxide.

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. 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.

Emission Point	Description	Date	Applicable Regulations ¹	Control Device	Stack ID
EU 101-S24					
DD-101-S24-003	#6 Drum Dumper	1975	5.02, 5.14, STAR, 7.08, 40 CFR 63 Subpart VVVVVV	DC-101-S03-123	S-101-S03-001
FD-101-S24-001	#6 Circle Feeder	1975		FIL-101-S03-001	
VS-101-S24-001	Screener	2009		DC-101-NOX-120	S-101-NOX-014
PD-101-S24-001	Product Drumming	1975		FIL-101-NOX-120	
HT-101-NOX-003	#6 Calciner with 2 mmbtu/hr burner	1975	5.02, 5.14,STAR, 7.08, 7.09, 40 CFR 63 Subpart VVVVVV	ED-101-NOX-003 V-101-NOX-001	S-101-NOX-013 S-101-NOX-004
EU 101-S25					
DD-101-S25-004	#8 Drum Dumper	1977	5.02, 5.14, STAR, 7.08, 40 CFR 63 Subpart VVVVVV	DC-101-S03-123	S-101-S03-001
FD-101-S25-001	#8 Circle Feeder	1977		FIL-101-S03-001	
VS-101-S25-002	Screener	2009		DC-101-NOX-120	S-101-NOX-014
PD-101-S25-001	Product Drumming	1977		FIL-101-NOX-120	
HT-101-NOX-004	#8 Calciner with 2 mmbtu/hr burner	1977	5.02, 5.14, STAR, 7.08, 7.09,40 CFR 63 Subpart VVVVVV	ED-101-NOX-006 V-101-NOX-001	S-101-NOX-013 S-101-NOX-008

Control ID	Description	Control Efficiency
DC-101-S03-123	Baghouse, Flex-Kleen, Model 58 BVBS-36	99.343% PM
FIL-101-S03-001	HEPA Filter, Torit Donaldson, Model Ultraweb	99.97% PM
ED-101-NOX-003	Eductor, Schutte & Koerting Model 9010 8"	95% PM, 75% NO _x , SO ₂ , CO and NH ₃
ED-101-NOX-006	Eductor, Schutte & Koerting Model 9010 8"	95% PM, 75% NO _x , SO ₂ , CO and NH ₃
V-101-NOX-001	Packed-Bed Scrubber, GH Hicks/NST Metals, Model CC-NOX-II (3 stages)	95% PM for each stage, 75% NO _x , SO ₂ , CO and NH ₃ for each stage
DC-101-NOX-120	Baghouse, Opti Flow, Model 1672385-1	99.786% PM
FIL-101-NOX-120	HEPA Filter	99.97% PM

¹ STAR regulations include regulations 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.

Specific Conditions

S1. Standards (Regulation 2.03, section 6.1)

a. PM/PM₁₀/PM_{2.5}

- i. The owner or operator shall not allow or cause the plant-wide emissions of PM/PM₁₀/PM_{2.5} to equal or exceed 100 tons during any consecutive 12-month period. (Regulations 2.04 and 2.05)
- ii. The owner or operator shall not allow PM emissions to exceed 2.34 lb/hr per piece of equipment (DD-101-S24-003, FD-101-S24-001, HT-101-NOX-003, VS-101-S24-001, PD-101-S24-001, DD-101-S25-004, FD-101-S25-001, HT-101-NOX-004, VS-101-S25-002, and PD-101-S25-001) based on actual operating hours in a calendar day. (Regulation 7.08, section 3.1.2)²
- iii. The owner or operator shall operate and maintain at least one PM control device at all times DD-101-S24-003, FD-101-S24-001, HT-101-NOX-003, VS-101-S24-001, PD-101-S24-001, DD-101-S25-004, FD-101-S25-001, HT-101-NOX-004, VS-101-S25-002, or PD-101-S25-001 are in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 7.08)

b. Opacity

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

c. NO_x

- i. The owner or operator shall not allow or cause the plant-wide emissions of NO_x to equal or exceed 100 tons during any consecutive 12-month period. (Regulations 2.04 and 2.05)
- ii. The owner or operator shall not cause to be discharged into the atmosphere from either HT-101-NOX-003 or HT-101-NOX-004 any NO_x fumes in excess of 300 ppm by volume expressed as NO₂. (Regulation 7.08, section 4)
- iii. The owner or operator shall operate and maintain control devices ED-101-NOX-003, ED-101-NOX-006, and V-101-NOX-001 at all times HT-101-NOX-003 or HT-101-NOX-004 are in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 7.08)³

² This equipment can meet the Regulation 7.08 PM standard with at least one PM control device in operation.

³ This equipment can meet the Regulation 7.08 NO_x standard after the second control device.

d. **SO₂**

- i. The owner or operator shall not allow or cause the plant-wide emissions of SO₂ to equal or exceed 100 tons during any consecutive 12-month period. (Regulations 2.04 and 2.05)
- ii. The owner or operator shall not release a process gas stream from HT-101-NOX-003 or HT-101-NOX-004 each containing sulfur dioxide with a concentration greater than 28.63 grains per 100 dscf at 0% excess oxygen. (Regulation 7.09, section 4)⁴

e. **CO**

The owner or operator shall not allow or cause the plant-wide emissions of CO to equal or exceed 100 tons during any consecutive 12-month period. (Regulations 2.04 and 2.05)

f. **HAP**

- i. The owner or operator shall not allow or cause the plant-wide emissions of any single HAP to equal or exceed 10 tons during any consecutive 12-month period. (Regulations 2.04)
- ii. The owner or operator shall not allow or cause the plant-wide emissions of total HAP to equal or exceed 25 tons during any consecutive 12-month period. (Regulations 2.04)
- iii. *Management practices.* The owner or operator shall comply with the following paragraphs. (40 CFR 63 Subpart VVVVVV)
 - 1) Each process vessel must be equipped with a cover or lid that must be closed at all times when it is in metal HAP service, except for manual operations that require access, such as material addition and removal, inspection, sampling and cleaning. This requirement does not apply to process vessels containing only metal HAP that are in a liquid solution or other form that will not result in particulate emissions of metal HAP (e.g., metal HAP that is in ingot, paste, slurry, or moist pellet form or other form). (40 CFR 63.11495(a)(1))
 - 2) The owner or operator must conduct inspections of process vessels and equipment for each CMPU in metal HAP service, as specified in the following paragraphs to determine that the process vessels and equipment are sound and free of leaks. (40 CFR 63.11495(a)(3))
 - (a) Inspections must be conducted at least quarterly. (§63.11495(a)(3)(i))
 - (b) For these inspections, detection methods incorporating sight, sound, or smell are acceptable. Indications of a leak identified using such methods constitute a leak unless you

⁴ This equipment cannot exceed the standard uncontrolled.

- demonstrate that the indications of a leak are due to a condition other than loss of HAP. If indications of a leak are determined not to be HAP in one quarterly monitoring period, you must still perform the inspection and demonstration in the next quarterly monitoring period. (§63.11495(a)(3)(ii))
- (c) Inspections must be conducted while the subject CMPU is operating. (§63.11495(a)(3)(iv))
 - (d) No inspection is required in a calendar quarter during which the subject CMPU does not operate for the entire calendar quarter and is not in organic HAP service or metal HAP service. If the CMPU operates at all during a calendar quarter, an inspection is required. (§63.11495(a)(3)(v))
- 3) The owner or operator must repair any leak within 15 calendar days after detection of the leak, or document the reason for any delay of repair. For the purposes of this paragraph, a leak will be considered “repaired” if a condition specified in one of the following paragraphs is met. (40 CFR 63.11495(a)(4))
- (a) The visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated, or (§63.11495(a)(4)(i))
 - (b) No bubbles are observed at potential leak sites during a leak check using soap solution, or (§63.11495(a)(4)(ii))
- 4) The owner or operator must keep records of the dates and results of each inspection event, the dates of equipment repairs, and, if applicable, the reasons for any delay in repair. (40 CFR 63.11495(a)(5))
- iv. Startup, shutdown, and malfunction (SSM) provisions in subparts that are referenced in 40 CFR 63.11495(a) and (b) do not apply. (40 CFR 63.11495(c))
 - v. *General duty.* At all times, the owner or operator must operate and maintain any affected CMPU, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the CMPU. (40 CFR 63.11495(d))
 - vi. *Emissions from metal HAP process vents.* For all metal HAP process vents from each CMPU with collective uncontrolled metal HAP emissions equal to or greater than 400 lb/yr, the owner or operator shall reduce collective uncontrolled emissions of total metal HAP emissions by ≥ 95 percent by

weight by routing emissions from a sufficient number of the metal process vents through a closed-vent system to any combination of control devices, according to the requirements of §63.11496(f)(3). The requirements of this paragraph §63.11495(f) do not apply to metal HAP process vents from CMPU containing only metal HAP that are in a liquid solution or other form that will not result in particulate emissions of metal HAP (e.g., metal HAP that is in ingot, paste, slurry, or moist pellet form or other form). (40 CFR 63.11495(f) and Table 4)

g. TAC

- i. 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)
- ii. The owner or operator shall not allow emissions of Chromium VI, Cobalt, Copper, Nickel, or Ammonia to exceed *de minimis* levels. (Regulations 5.00 and 5.21)⁵
- iii. The owner or operator shall operate and maintain control devices DC-101-S03-123, FIL-101-S03-001, ED-101-NOX-003, ED-101-NOX-006, V-101-NOX-001, DC-101-NOX-120, FIL-101-NOX-120 at all times the associated process equipment is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet *de minimis* levels. (Regulations 5.00 and 5.21)

S2. Monitoring and Record Keeping (Regulation 2.03, section 6.1)

The owner or operator shall maintain the required records for a minimum of 5 years and make the records readily available to the District upon request.

a. PM/PM₁₀/PM_{2.5}

- i. The owner or operator shall calculate and record the plant-wide consecutive 12-month PM/PM₁₀/PM_{2.5} emissions for each month in the reporting period. 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: (See Attachment A – Default Emission Factors, Calculation Methodologies, & Stack Tests)

$$PM/PM_{10}/PM_{2.5} = \sum_1^x [U_x(1 - C_{Conx})] + \sum_1^z U_z + F$$

Where:

- PM/PM₁₀/PM_{2.5} = Total plant-wide emissions of PM/PM₁₀/PM_{2.5}
- U_x = Uncontrolled PM emission from each Emission Point (x)
- C_{Conx} = Control Efficiency of each control device for each Emission Point (x)

⁵ All control devices are needed for this equipment to meet *de minimis* levels controlled.

U_z = Uncontrolled PM/PM₁₀/PM_{2.5} emissions from each uncontrolled Emission Point (z) during bypass events
 F = Total plant-wide fugitive PM/PM₁₀/PM_{2.5} emissions

- ii. For each PM/PM₁₀/PM_{2.5} emission point, the owner or operator shall monitor and maintain records of the throughput of each raw material during each calendar month.
- iii. The owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of DC-101-S03-123, ED-101-NOX-003, ED-101-NOX-006, and DC-101-NOX-120 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.
- iv. If there is any time that DD-101-S24-003, FD-101-S24-001, HT-101-NOX-003, VS-101-S24-001, PD-101-S24-001, DD-101-S25-004, FD-101-S25-001, HT-101-NOX-004, VS-101-S25-002, or PD-101-S25-001 are in operation and at least one PM control device is not in operation, then the owner or operator shall keep a record of the following for each bypass event:⁶
 - 1) Date;
 - 2) Start time and stop time;
 - 3) Identification of the control device and process equipment;
 - 4) PM/PM₁₀/PM_{2.5} emissions during the bypass in lb/hr;
 - 5) Summary of the cause or reason for each bypass event;
 - 6) Corrective action taken to minimize the extent or duration of the bypass event; and
 - 7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

b. Opacity

- i. The owner or operator shall, monthly, conduct a one-minute visible emissions survey, during normal operation, of the emission points. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.
- ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR

⁶ DD-101-S24-003, FD-101-S24-001, HT-101-NOX-003, VS-101-S24-001, PD-101-S24-001, DD-101-S25-004, FD-101-S25-001, HT-101-NOX-004, VS-101-S25-002, and PD-101-S25-001 each have two PM control devices in series. Only one of the PM control devices are needed to meet the PM standard; therefore, this equipment is only considered to be "bypassed" when both control devices in series are bypassed at the same time.

Part 60, Appendix A, within 24 hours of the initial observation.

- iii. The owner or operator shall, monthly, maintain records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

c. **NO_x**

- i. The owner or operator shall calculate and record the plant-wide consecutive 12-month NO_x emissions for each month in the reporting period.

$$NOx = \sum_1^x [U_x(1 - C_{conx})] + \sum_1^z U_z + F$$

Where:

NO _x	=	Total plant-wide emissions of NO _x
U _x	=	Uncontrolled NO _x emission from each Emission Point (x)
C _{conx}	=	Control Efficiency of each control device for each Emission Point (x)
U _z	=	Uncontrolled NO _x emissions from each uncontrolled Emission Point (z) during bypass events
F	=	Total plant-wide fugitive NO _x emissions

- ii. The owner or operator shall monitor and maintain records of the throughput of each raw material during each calendar month.
- iii. The owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of ED-101-NOX-003, ED-101-NOX-006, and V-101-NOX-001 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.
- iv. If there is any time that HT-101-NOX-003 or HT-101-NOX-004 are in operation and either ED-101-NOX-003, ED-101-NOX-006, or V-101-NOX-001 are not in operation, then the owner or operator shall keep a record of the following for each bypass event:
 - 1) Date;
 - 2) Start time and stop time;
 - 3) Identification of the control device and process equipment;
 - 4) Stack gas flowrate (acfm) during the bypass;
 - 5) Stack gas temperature during the bypass;

- 6) NOx emissions during the bypass in ppm calculated by the following:

$$NOx \text{ (ppm)} = \frac{(NOx\%)(lb \frac{Product}{hr}) / (Density \text{ of } NOx \text{ } 0.119362 \left(\frac{lb}{ft^3}\right))}{\left\{ [Flowrate \text{ (acfm)}] (60 \text{ min/hr}) \left(\frac{519 \text{ Rankin}}{Stack \text{ Temp. Rankin}}\right) \right\}} (1,000,000)$$

- 7) Summary of the cause or reason for each bypass event;
- 8) Corrective action taken to minimize the extent or duration of the bypass event; and
- 9) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

d. SO₂

The owner or operator shall calculate and record the plant-wide consecutive 12-month SO₂ emissions for each month in the reporting period. 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: (See Attachment A – Default Emission Factors, Calculation Methodologies, & Stack Tests)

$$SO_2 = \sum_1^x [U_x(1 - C_{Conx})] + \sum_1^z U_z + F$$

Where:

- SO₂ = Total plant-wide emissions of SO₂
- U_x = Uncontrolled SO₂ emission from each Emission Point (x)
- C_{Conx} = Control Efficiency of each control device for each Emission Point (x)
- U_z = Uncontrolled SO₂ emissions from each uncontrolled Emission Point (z) during bypass events
- F = Total plant-wide fugitive SO₂ emissions

e. CO

The owner or operator shall calculate and record the plant-wide consecutive 12-month CO emissions for each month in the reporting period. 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: (See Attachment A – Default Emission Factors, Calculation Methodologies, & Stack Tests)

$$CO = \sum_1^x [U_x(1 - C_{Conx})] + \sum_i^z U_z + F$$

Where:

- CO = Total plant-wide emissions of CO

- U_x = Uncontrolled CO emission from each Emission Point (x)
- C_{Conx} = Control Efficiency of each control device for each Emission Point (x)
- U_z = Uncontrolled CO emissions from each uncontrolled Emission Point (z) during bypass events
- F = Total plant-wide fugitive CO emissions

f. **HAP**

- i. The owner or operator shall monthly calculate and record the plant-wide consecutive 12-month emissions of each single HAP and total HAP 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: (See Attachment A – Default Emission Factors, Calculation Methodologies, & Stack Tests)

$$HAP_A = \sum_1^x [U_x(1 - C_{Conx})] + \sum_i^z U_z + F$$

Where:

- HAP_A = Total plant-wide emissions of an individual HAP (A)
- U_x = Uncontrolled HAP emission from each Emission Point (x)
- C_{Conx} = Control Efficiency of each control device for each Emission Point (x)
- U_z = Uncontrolled HAP emissions from each uncontrolled Emission Point (z) during bypass events
- F = Total plant-wide fugitive HAP emissions

- ii. For each HAP emission point, the owner or operator shall monitor and maintain records of the monthly throughput of each HAP-containing raw material and the HAP content. HAP content in both base metal form and compound form shall be kept for HAP compounds.
- iii. The owner or operator must determine the sum of metal HAP emissions from all metal HAP process vents within a CMPU subject to 40 CFR 63 Subpart VVVVVV, except you are not required to determine the annual emissions if you control the metal HAP process vents within a CMPU in accordance with Table 4 of Subpart VVVVVV or if you determine your total metal HAP usage in the process unit is less than 400 lb/yr. To determine the mass emission rate you may use process knowledge, engineering assessment, or test data. You must keep records of the emissions calculations. (40 CFR 63.11495(f)(1))
- iv. If your current estimate is that total uncontrolled metal HAP emissions from a CMPU subject to this subpart are less than 400 lb/yr, then you must keep records of either the number of batches operated per month (batch vents) or the process operating hours (continuous vents). Also, you must reevaluate your total emissions before you make any process or operational change that affects emissions of metal HAP. If projected

emissions increase to 400 lb/yr or more, then you must be in compliance with one of the options for metal HAP process vents in Table 4 of Subpart VVVVVV upon initiating operation under the new operating conditions. You must keep records of all recalculated emissions determinations. (40 CFR 63.11495(f)(2))

- v. For an existing source subject to the HAP metals emission limits specified in Table 4 of Subpart VVVVVV, the owner or operator must prepare a monitoring plan containing the information in the following paragraphs. The plan must be maintained on-site and be available on request. You must operate and maintain the control device according to a site-specific monitoring plan at all times. You must keep records of monitoring results to demonstrate continuous compliance. (40 CFR 63.11495(f)(3)(i))
 - 1) A description of the device;
 - 2) Results of a performance test or engineering assessment conducted in accordance with § 63.11495(f)(3)(ii) verifying the performance of the device for reducing HAP metals or particulate matter (PM) to the levels required by this subpart;
 - 3) Operation and maintenance plan for the control device (including a preventative maintenance schedule consistent with the manufacturer's instructions for routine and long-term maintenance) and continuous monitoring system (CMS).
 - 4) A list of operating parameters that will be monitored to maintain continuous compliance with the applicable emissions limits; and
 - 5) Operating parameter limits based on either monitoring data collected during the performance test or established in the engineering assessment.
- vi. *Recordkeeping.* The owner or operator must maintain files of all information required by this subpart for at least 5 years following the date of each occurrence according to the requirements in §63.10(b)(1). If you are subject, you must comply with the recordkeeping and reporting requirements of §63.10(b)(2)(iii) and (vi) through (xiv), and the following applicable requirements for each CMPU subject to 40 CFR 63 Subpart VVVVVV. (40 CFR 63.11501(c)(1))
 - 1) Records of management practice inspections, repairs, and reasons for any delay of repair, as specified in §63.11495(a)(5). (§63.11501(c)(1)(i))
 - 2) Records of small heat exchange system inspections, demonstrations of indications of leaks that do not constitute leaks, repairs, and reasons for any delay in repair as specified in §63.11495(b). (§63.11501(c)(1)(ii))
 - 3) Records of metal HAP emission calculations as specified in §63.11496(f)(1) and (2). If total uncontrolled metal HAP process

vent emissions from a CMPU subject to this subpart are estimated to be less than 400 lb/yr, also keep records of either the number of batches per month or operating hours, as specified in §63.11496(f)(2). (§63.11501(c)(1)(v))

- 4) Records of the date, time, and duration of each malfunction of operation of process equipment, control devices, recovery devices, or continuous monitoring systems used to comply with this subpart that causes a failure to meet a standard. The record must include a list of the affected sources or equipment, an estimate of the volume of each regulated pollutant emitted over the standard, and a description of the method used to estimate the emissions. (§63.11501(c)(1)(vii))
- 5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.11495(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. (§63.11501(c)(1)(viii))

g. TAC

- i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to MSDS/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* at the time of the change.
- iii. The owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of DC-101-S03-123, FIL-101-S03-001, ED-101-NOX-003, ED-101-NOX-006, V-101-NOX-001, DC-101-NOX-120, and FIL-101-NOX-120 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.
- iv. For each control device, the owner or operator shall monitor and record the performance indicator range at least once during each operating day to ensure it is maintained within the operating ranges as shown in the table below:

Control ID	Operating Range
DC-101-S03-123	Pressure Drop: 0.5 – 6.5” w.c.
DC-101-NOX-120	Pressure Drop: 0.5 – 6.0” w.c.
FIL-101-NOX-120	Pressure Drop: 0.1 – 6.5” w.c.
ED-101-NOX-003	Pressure Drop: 40 – 130 PSI
V-101-NOX-001	Pressure Drop: 2 – 10” w.c. Top Water Flow Rate ≥ 5 gpm

	Middle Water Flow Rate \geq 5 gpm Bottom Water Flow Rate \geq 5 gpm
ED-101-NOX-006	Pressure Drop: 40 – 130 PSI
FIL-101-S03-001	Pressure Drop: 0.05 – 6.0” w.c.

- v. For any period of operating outside the established performance indicator range for a control device, 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 measures implemented to prevent reoccurrence.
- vi. Upon notification to the District and District approval, the owner or operator may modify the pressure drop operating range for control devices DC-101-S03-123, DC- 101-NOX-120, ED-101-NOX-003, V-101-NOX-001, ED-101-NOX-006 or FIL-101-S03-001 based on plant operating trends. The operating trends that necessitated a change shall be kept for the life of the control device.
- vii. If there is any time that DD-101-S24-003, FD-101-S24-001, HT-101-NOX-003, VS-101-S24-001, PD-101-S24-001, DD-101-S254-004, FD-101-S25-001, HT-101-NOX-004, VS-101-S25-002, or PD-101-S25-001 are in operation and the associated TAC control devices are not in operation, then the owner or operator shall keep a record of the following for each bypass event:
 - 1) Date;
 - 2) Start time and stop time;
 - 3) Identification of the control device and process equipment;
 - 4) TAC emissions during the bypass in lb/hr and lb/averaging period;
 - 5) Summary of the cause or reason for each bypass event;
 - 6) Corrective action taken to minimize the extent or duration of the bypass event; and
 - 7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

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. 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 st through June 30 th	August 29 th
July 1 st through December 31 st	March 1 st

a. **PM/PM₁₀/PM_{2.5}**

- i. The owner or operator shall report the plant-wide consecutive 12-month emissions of PM/PM₁₀/PM_{2.5} for each month in the reporting period.
- ii. The owner or operator shall report the following information regarding PM/PM₁₀/PM_{2.5} bypasses in the semi-annual compliance reports:
 - 1) Number of times the PM/PM₁₀/PM_{2.5} vent stream bypasses the control device and is vented to the atmosphere uncontrolled;
 - 2) Duration of each bypass to the atmosphere;
 - 3) Calculated pound per hour PM/PM₁₀/PM_{2.5} emissions for each bypass; or
 - 4) A negative declaration if no bypasses occurred.

b. **Opacity**

- i. Any deviation from the requirement to perform or record the required monthly visible emissions surveys or Method 9 tests.
- ii. The number, date, and time where visible emissions were observed and the results of the Method 9 test performed.
- iii. Identification of all periods of exceeding the opacity standard.
- iv. Description of any corrective action taken for each exceedance.

c. **NO_x**

- i. The owner or operator shall report the plant-wide consecutive 12-month emissions of NO_x for each month in the reporting period.
- ii. The owner or operator shall report the following information regarding NO_x bypasses in the semi-annual compliance reports:
 - 1) Number of times the NO_x vent stream bypasses the control device and is vented to the atmosphere uncontrolled;
 - 2) Duration of each bypass to the atmosphere;
 - 3) Calculated NO_x emissions (ppm) for each bypass; or

- 4) A negative declaration if no bypasses occurred.
- d. **SO₂**
The owner or operator shall report the plant-wide consecutive 12-month emissions of SO₂ for each month in the reporting period.
- e. **CO**
The owner or operator shall report the plant-wide consecutive 12-month emissions of CO for each month in the reporting period.
- f. **HAP**
- i. The owner or operator shall report the plant-wide consecutive 12-month emissions of each single HAP and total HAP for each month in the reporting period. HAP compounds shall be reported in terms of the HAP compound.
- ii. *Semiannual Compliance Reports.* The owner or operator must submit semiannual compliance reports that contain the information specified in the following paragraphs, as applicable. Reports are required only for semiannual periods during which you experienced any of the events described in § 63.11501(d)(1) through (8). (40 CFR 63.11501(d))
- 1) *Deviations.* You must clearly identify any deviation from the requirements of this subpart. (§63.11501(d)(1))
 - 2) *Delay of leak repair.* You must provide the following information for each delay of leak repair beyond 15 days for any process equipment, storage tank, surge control vessel, bottoms receiver, and each delay of leak repair beyond 45 days for any heat exchange system with a cooling water flow rate less than 8,000 gal/min: information on the date the leak was identified, the reason for the delay in repair, and the date the leak was repaired. (§63.11501(d)(3))
 - 3) *Process change.* You must report each process change that affects a compliance determination and submit a new certification of compliance with the applicable requirements in accordance with the procedures specified in §63.11501(b). (§63.11501(d)(4))
 - 4) *Overlapping rule requirements.* Report any changes in the overlapping provisions with which you comply. (§63.11501(d)(6))
 - 5) *Malfunctions.* If a malfunction occurred during the reporting period, the report must include the number of instances of malfunctions that caused emissions in excess of a standard. For each malfunction that caused emissions in excess of a standard, the report must include a list of the affected sources or equipment, an estimate of the volume of each regulated pollutant emitted over the standard, and a description of the method used to estimate the emissions. The report must also include a description of actions you took during a malfunction of an affected source to minimize

emissions in accordance with §63.11495(d), including actions taken to correct a malfunction. (§63.11501(d)(8))

g. **TAC**

- i. The owner or operator shall report any conditions that were inconsistent with those conditions analyzed in the most recent Environmental Acceptability Demonstration or a negative declaration stating that operations were within the conditions analyzed. This includes, but is not limited to, control device upset conditions.
- ii. For any conditions outside the analysis, the owner or operator shall re-analyze to determine whether these conditions comply with the STAR program. Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to re-analyze. (Regulation 5.21 sections 4.22 – 4.24)
- iii. The owner or operator shall submit the re-evaluated EA demonstration to the District within 6 months after a change of a raw material.
- iv. Identification of all periods of operating outside the established performance indicator range for a control device during a reporting period, including the information below:
 - 1) The date,
 - 2) The observed performance indicator value,
 - 3) Corrective action taken to minimize the extent of the excursion, and measures implemented to prevent reoccurrence,
 - 4) If there were no excursions during a reporting period, the compliance report must include a statement to that effect.
- v. The owner or operator shall report the following information regarding TAC bypasses in the semi-annual compliance reports:
 - 1) Number of times the TAC vent stream bypasses the control device and is vented to the atmosphere uncontrolled;
 - 2) Duration of each bypass to the atmosphere;
 - 3) Calculated pound per hour and pound per averaging period TAC emissions for each bypass; or
 - 4) A negative declaration if no bypasses occurred.

Attachment A - Default Emission Factors, Calculation Methodologies, & Stack Tests

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	Description	Emission Factor⁷
Natural Gas Combustion		AP-42 Table 1.4-1 and 3.2 lb Ammonia/MMft ³ from FIRE
EU 101-S24		
DD-101-S24-003	#6 Drum Dumper	1% Loss for PM (Assuming PM=PM ₁₀ =PM _{2.5}) HAP/TAC% of material throughput x PM Emissions
FD-101-S24-001	#6 Circle Feeder	1% Loss for PM (Assuming PM=PM ₁₀ =PM _{2.5}) HAP/TAC% of material throughput x PM Emissions
HT-101-NOX-003	#6 Calciner	1% Loss for PM (Assuming PM=PM ₁₀ =PM _{2.5}) % Loss based on amount of material throughput converted to CO % Loss based on amount of material emitted as Ammonia % Loss based on amount of material throughput converted to NOx HAP/TAC % of material throughput x PM Emissions
VS-101-S24-001	Screener	1% Loss for PM (Assuming PM=PM ₁₀ =PM _{2.5})
PD-101-S24-001	Product Drumming	HAP/TAC % of material throughput x PM Emissions
EU 101-S25		
DD-101-S25-004	#8 Drum Dumper	1% Loss for PM (Assuming PM=PM ₁₀ =PM _{2.5})
FD-101-S25-001	#8 Circle Feeder	HAP/TAC % of material throughput x PM Emissions
HT-101-NOX-004	#8 Calciner	1% Loss for PM (Assuming PM=PM ₁₀ =PM _{2.5}) % Loss based on amount of material throughput converted to CO % Loss based on amount of material emitted as Ammonia % Loss based on amount of material throughput converted to NOx HAP/TAC % of material throughput x PM Emissions
VS-101-S25-002	Screener	1% Loss for PM (Assuming PM=PM ₁₀ =PM _{2.5})
PD-101-S25-001	Product Drumming	HAP/TAC % of PM Emissions

⁷ 1% loss for PM is a District default assumption.