Facility Name: **BASF Corporation – Savannah Operations**
City: Savannah
County: Chatham
AIRS #: 04-13-051-00023

Application #: TV-646267
Date Application Received: May 5, 2022
Permit No: 3295-051-0023-V-05-0

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Introduction

This narrative is being provided to assist the reader in understanding the content of referenced operating permit. Complex issues and unusual items are explained here in simpler terms and/or greater detail than is sometimes possible in the actual permit. The permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

I. Facility Description

A. Facility Identification

1. Facility Name: BASF Corporation – Savannah Operations

2. Parent/Holding Company Name

   BASF Corporation

3. Previous and/or Other Name(s)

   Engelhard Corporation – Savannah
   BASF Catalysts LLC - Savannah Operations

4. Facility Location

   1800 East President Street
   Savannah GA 31404, Chatham County

5. Attainment, Non-attainment Area Location, or Contributing Area

   The facility is located in an area designated as attainment for all pollutants.

B. Site Determination

There are no other facilities which could possibly be contiguous or adjacent and under common control.

C. Existing Permits

Table 1 below lists all current Title V permits, all amendments, 502(b)(10) changes, and off-permit changes, issued to the facility, based on a comparative review of form A.6, Current Permits, of the Title V application and the "Permit" file(s) on the facility found in the Air Branch office.

Table 1: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
3295-051-0023-V-04-0	07/12/2017	Title V permit renewal
Off-Permit Change	12/05/2017	Draft emissions from Mix Tank 10G to baghouse CMS3
Off-Permit Change	12/12/2017	Add vacuum truck for transporting product between railcars, truck containers
Off-Permit Change	09/30/2021	Replace Filter type bin vents with new units

D. Process Description

1. SIC Codes(s)

   3295

   The SIC Code(s) identified above were assigned by EPD's Air Protection Branch for purposes pursuant to the Georgia Air Quality Act and related administrative purposes only and are not intended to be used for any other purpose. Assignment of SIC Codes by EPD's Air Protection Branch for these purposes does not prohibit the facility from using these or different SIC Codes for other regulatory and non-regulatory purposes.

   Should the reference(s) to SIC Code(s) in any narratives or narrative addendum previously issued for the Title V permit for this facility conflict with the revised language herein, the language herein shall control; provided, however, language in previously issued narratives that does not expressly reference SIC Code(s) shall not be affected.

2. Description of Product(s)

   Kaolin and Alumina based Fluid Cracking Catalyst, Microspheres.

3. Overall Facility Process Description

The facility manufactures three products: Alumina, Fluid Cracking Catalysts, and Microspheres. The operations at this facility can be divided into based on these three products. For the sake of this narrative, each product line will be considered a process. The equipment list is also broken down into product line.

"Alumina"
Raw materials are mixed together and crystallized. The alumina is washed on belt filters and then spray dried into the final product, which is pneumatically conveyed to storage silos. The product is loaded out of the silos into railcars, trucks or bagged into supersacks for delivery to downstream catalysts manufacturing facilities.

"Fluid Cracking Catalyst"
Raw materials are mixed in tanks and then crystallized in reactors. The catalyst then goes through a base exchange process on belt filters, rotary driers and calciners. The finished catalyst is pneumatically conveyed to storage hoppers. The product is loaded from the hoppers into either railcars, trucks or bagged into supersacks for delivery to oil refineries.

"Microspheres"
Kaolin slurry is mixed with other raw materials, spray dried, calcined and sifted. Finished microspheres are pneumatically conveyed to storage hoppers. The product is loaded from the storage hoppers into railcars or trucks for delivery to downstream catalyst manufacturing facilities or used on site to manufacture catalyst.

In addition, this plant has four 20 MMBtu/hr natural gas fired boilers that supply process heat and steam.

4. Overall Process Flow Diagram

The facility provided a process flow diagram in their Title V permit application.

E. Regulatory Status

1. PSD/NSR

This facility is considered a minor source under PSD regulations. Potential emissions of all criteria pollutants are either less than or limited to less than the PSD major source threshold of 250 tons per year.

Condition 2.1.1 limits the amount of formic acid used in the plant to 2,500,000 pounds per 12 consecutive months. Formic acid (a 16% solution) used in Spray Dryer D1A breaks down to form CO at a ratio of 1.64:1. This annual usage limit was established to limit CO emitted from the formic acid breakdown. The potential CO emitted from fuel combustion plus the CO resulting from the limited formic acid usage totals less than 250 tons per year. The facility's permit has a PSD avoidance limit for CO in the form of limits on formic acid usage.

NOx emissions from this plant consist of those from fuel combustion and those from the decomposition of nitrates added to certain production processes. Condition 2.1.2 has a PSD avoidance limit of 250 tons per year for NOx emissions.

Condition 3.2.1 limits particulate matter (PM) from all sources not otherwise specified to 0.02 gr/dscf. This condition is a holdover from when the plant was assumed to be subject to 40 CFR 60 Subpart OOO. The previous owner (Engelhard) appealed that because no grinding of a nonmetallic mineral occurs. It was determined that NSPS Subpart OOO does not apply to this facility. The Permittee accepted the PM emission limit of 0.02 gr/dscf. This limit also helps limit the PM potential emissions from the plant to less than 250 tpy for PSD avoidance.

2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	yes	✓		
PM_{10}	yes	✓		
$PM_{2.5}$	yes	✓		
SO_2	yes			✓
VOC	yes			✓
NO_x	yes	✓		
CO	yes	✓		
TRS	n/a			

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
H_2S	n/a			
Individual HAP	yes			✓
Total HAPs	yes			✓

3. MACT Standards

This facility is an area source for HAP emissions. There are no MACT standards regulating any of the kaolin processing units in this facility. The four existing boilers are only capable of burning gaseous fuels, i.e., natural gas and propane, and therefore, as "gas-fired" boilers, they are not subject to any requirements under 40 CFR 63 Subpart JJJJJJ - "National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources." One of the two stationary emergency spark ignition engines fueled by propane is subject to 40 CFR 63 Subpart ZZZZ - "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines," and shall comply with the applicable requirements in Condition 8.27.3 of this permit.

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	No
Program Code 8 – Part 61 NESHAP	No
Program Code 9 - NSPS	Yes
Program Code M – Part 63 NESHAP	Yes
Program Code V – Title V	Yes

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

The current Title V permit, Permit No. 3295-051-0023-V-04-0 limits the amount of formic acid used in the plant to 2,500,000 pounds for any twelve-consecutive month period for PSD avoidance. This permit also contains a PSD avoidance limit of 250 tons per year for the NOx emissions. These limits are carried over into this renewal Title V Permit.

B. Applicable Rules and Regulations

Not applicable.

C. Compliance Status

The facility has not indicated any non-compliance issues.

D. Permit Conditions

Conditions 2.1.1 and 2.1.2 were both carried over from the current permit. Condition 2.1.1 limits the amount of formic acid used in the plant to 2,500,000 pounds per 12 consecutive months for PSD avoidance. Condition 2.1.2 contains a PSD avoidance limit of 250 tons per year for NOx emissions.

III. Regulated Equipment Requirements

A. Equipment List for the Process

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
D1A	Spray Dryer 35 MMBtu/hr	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) PSD Avoidance	CD1A	Baghouse with COMS
D3	Rotary Dryer 20 MMBtu/hr	40 CFR 60 Subpart UUU 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	CD03	Baghouse with COMS
D6	Rotary Calciner 35 MMBtu/hr Non heat recovery mode	40 CFR 60 Subpart UUU 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	CD6A or CD1B CD6B	Scrubber or (spray dryer D1B baghouse with COMS, in heat recovery mode) Product collector
D1B	Spray Dryer 35 MMBtu/hr	40 CFR 60 Subpart UUU 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	CD1B	D1B Baghouse with COMS
D7	Rotary Calciner 20 MMBtu/hr	40 CFR 60 Subpart UUU 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	CD8A CD8B CD8C	Baghouse Venturi scrubber NH3 Absorber
D8	Spray Dryer 20 MMBtu/hr	40 CFR 60 Subpart UUU 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	CD8A CD8B CD8C	Baghouse Venturi scrubber NH3 Absorber
D9	Alumina Dryer 35 MMBtu/hr	40 CFR 60 Subpart UUU 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	CD09	Baghouse with COMS
D10	Rotary Calciner 20 MMBtu/hr	40 CFR 60 Subpart UUU 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	CD03	Baghouse with COMS
H7	Storage Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH07	Baghouse
H8	Storage Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH08	Baghouse
H9	Storage Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH09	Baghouse
H10	Storage Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH10	Baghouse
H11A	Storage Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH11A	Baghouse
H11B	Storage Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH11B	Baghouse

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
H12	Storage Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH12	Baghouse
H13	Storage Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH13	Baghouse
H14	Storage Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH14	Baghouse
H15	Storage Silo	391-3-1-.02(2)(e), 391-3-1-.02(2)(b), PSD Avoidance	CH15	Baghouse
H16	Storage Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH16	Baghouse
H17	Storage Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH17	Baghouse
H18	Storage Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH18	Baghouse
H19	Storage Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH19	Baghouse
H20	Storage Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH20	Baghouse
H31	Silo A	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH31	Baghouse
H32	Silo B	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH32	Baghouse
H33	Silo C	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH33	Baghouse
H34	Silo D	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CH34	Baghouse
T5	MT-4034 Mix Tank	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CT05	Baghouse
T8	MT-6325 Mix Tank	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CD8A CD8B CD8C	Baghouse Venturi scrubber NH3 Absorber
L1	Catalyst Blender/Loadout Spout	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CL01	Baghouse
L2	Microsphere Screw Conveyor Loadout	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CL02	Baghouse
L3	Fluid Cracking Catalyst Bagging System	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CL03	Baghouse

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
L4	Alumina Bagging System	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CL04	Baghouse
L7	Catalyst Screw Conveyor Loadout	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CL07	Baghouse
L8	Alumina Bagging System	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CL04	Baghouse
L9	Alumina Bagging System	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CL09	Baghouse
MIS2	H-1479, 1480 Surge Hoppers	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CMS2	Baghouse
MIS3	GM1420 Georgia Marble (GM) Sifter	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CMS3	Baghouse
MIS5	Logistics Vacuum Receiver	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) PSD Avoidance	CMS5	Baghouse
B1	Boiler 1 20 MMBtu/hr	391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	None	None
B2	Boiler 2 20 MMBtu/hr	391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	None	None
B3	Boiler 3 20 MMBtu/hr	391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	None	None
B4	Boiler 4 20 MMBtu/hr	40 CFR 52.21 Avoidance 40 CFR 60 Subpart Dc 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	None	None
D11	GEA Spray Dryer System - Niro SD-630 with NP70 Direct Gas Fired heater rated at 26 MMBtu/Hr.	40 CFR 60 Subpart UUU 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	CD11	Baghouse with COMS

The equipment list has been updated to remove references to the rotary dryer D2 and the associated baghouse CD02, which have been removed from operation.

B. Equipment & Rule Applicability

Equipment and Rule Applicability for this renewal permit is based on the requirements for the emission units as permitted in existing Permit No. 3295-051-0023-V-04-0.

Emission and Operating Caps:

The Permittee accepted a limit of 0.02 gr/dscf for PM emissions for the affected sources. This limit in Condition 3.2.1 also helps to limit the PM potential emissions from the whole plant to less than 250 tpy for PSD avoidance.

This condition is a holdover from when it was assumed this source was subject to 40 CFR Part 60 Subpart OOO. At that time, the company accepted the emission limits on all items for simplicity and to reduce the PM potential to emit, thus avoiding PSD.

Condition 3.2.2 limits ammonia emissions from the D3/D10 stack and from D7/D8 stack to ensure that the Georgia EPD's toxic impact assessment guidelines for ammonia will not be violated. The sources of the ammonia emissions are nitrates and ammonia-based compounds used in the processes involved. Ammonia is not a regulated pollutant, and therefore no other regulations apply.

All the boilers at this facility are only capable of burning natural gas and propane. Therefore, they are considered "gas-fired" boilers and not subject to 40 CFR 63 Subpart JJJJJJ.

Rules and Regulations Assessment:

Georgia Rule (e) - "Particulate Emission from Manufacturing Processes" applies to all processes that are not covered by a more specific rule or regulation. The standard is based on process input weigh rate and determined using equation $E = 4.1P^{0.67}$. This rule applies to all sources except for those subject to 40 CFR 60 Subpart UUU - "Standards of Performance for Calciners and Dryers in Mineral Industries" and those subject to Rule (d) for fuel burning. In most cases, the PM emission limit of 0.02 gr/dscf in Condition 3.2.1 is stricter than that of Rule (e), but Rule (e) still applies. Condition 3.2.1 is a holdover from when it was assumed this source was subject to 40 CFR 60 Subpart OOO. At that time, the facility accepted the limits in Condition 3.2.1 on all items for simplicity and to reduce the PM potential to emit, thus avoiding PSD. Most sources with PM emissions utilize baghouses to comply with the applicable emission limits in Rule (e) and Condition 3.2.1. Rule (e) is incorporated as Condition 3.4.1 which was carried over from the current permit.

Georgia Rule (b) - "Visible Emissions" applies to all sources when no more stringent regulation applies. Visible emissions are limited by this rule to less than 40% opacity. The company has accepted an opacity limit of 10% for almost all the sources at the facility, but technically, Rule (b) still applies, and its limit is incorporated into the permit as Condition 3.4.2 carried over from the current permit.

Georgia Rule (d) - "Fuel Burning Equipment" applies to all the boilers. This rule does not affect the dryers or calciners because Rule (d) specifically applies only to indirect heat sources such as boilers, water heaters and indirect heating furnaces. Three of four boilers in use at this facility were built prior to 1986 and rated at 20 MMBtu/hr each, and only fired with natural gas and propane. The pertinent Rule (d) PM emission limit (P) for these boilers is calculated as: $P = 0.5(10/R)^{0.5}$, where P is allowable in lbs. of PM/MMBtu, and R is input in MMBtu/hr. Visible emission limit of Rule (d) for these boilers is 20% opacity, except for one 6-minute period per hour of not more than 27% opacity. Since these boilers are fired exclusively with natural gas and propane, the likelihood of non-compliance with these standards is minimal. 40 CFR 60 Subpart Dc - "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units" does not apply to these three boilers because they were built before 1989, the applicable/compliance date for Subpart Dc. The applicable emission limits under Rule (d) are incorporated into Condition 3.4.3, a carryover from the current permit.

One of the four 20 MMBtu/hr boilers at this facility was built after 1989, and therefore is subject to NSPS Subpart Dc in addition to Rule (d). Because this boiler is small and exclusively burns natural gas and propane, it is only subject to the recordkeeping and reporting requirements of NSPS Subpart Dc that requires the Permittee to maintain monthly fuel usage records.

Georgia Rule (g) - "Sulfur Dioxide" applies to any fuel burning source at this facility. Rule (g) limits the sulfur content of any fuel used to fire such fuel burning sources to 2.5% by weight. Sources affected are the dryers, calciners, and boilers. Since all of these sources burn exclusively natural gas or propane whose sulfur contents are substantially less than 2.5%, the likelihood of violation of this rule is minimal.

40 CFR 60 Subpart UUU - "Calciners and Dryers in Mineral Industries" applies to dryers and calciners constructed or reconstructed after April 23, 1986. This NSPS standard limits the PM and visible emissions from dryers to 0.025 gr/dscf, and 10% opacity. PM and visible emissions from calciners, and calciners and dryers installed in series are limited to 0.04 gr/dscf and 10% opacity. Monitoring required under this NSPS standard includes a COMS for any baghouse-controlled unit, and pressure drop, water flow and water pressure monitors for those using scrubbers to control emissions. Dryer/Calciner combinations D7/D8, D3/D10, and calciner D6 are subject to the 0.04 gr/dscf PM emission limit. Dryers D1B, D9 and D11 are subject to the 0.025 gr/dscf PM emission limit. These limits are carried over into Condition 3.3.1.

C. Permit Conditions

The current permit conditions have been carried over into this renewal permit without any changes.

Condition 3.2.1 is a holdover from when it was assumed this source was subject to 40 CFR 60 Subpart OOO. The company accepted the emission limits on all items for simplicity and to reduce the PM potential to emit, thus avoiding PSD.

Condition 3.2.2 limits the ammonia emissions from the D3/D10 and D7/D8 stack to ensure that the Georgia toxic guidelines for ammonia would not be violated. The sources of the ammonia emissions are nitrates and ammonia-based compounds used in the processes involved. Ammonia is not a regulated pollutant; therefore, no other regulations apply.

Condition 3.2.3 lists fuel to be combusted in Boiler No. 4, which is subject to NSPS Subpart Dc. The fuel limitation allows the boiler to be subject only to the fuel usage recordkeeping and reporting requirements, avoiding any specific emission rate limits.

Condition 3.3.1 establishes the applicability and requirements of 40 CFR 60 Subpart UUU.

Condition 3.3.2 contains the applicable general requirements for NSPS sources under 40 CFR 60 Subpart A. This condition also contains the applicable operating requirements for Boiler No. 4 subject to NSPS Subpart Dc.

Conditions 3.4.1 through 3.4.4 establish the applicable emission limitations of Georgia Rules (e), (b), (d) and (g).

Condition 3.5.1 establishes the work practice requirements to reduce nitrates in Zeolite and reduce NOx emissions from the facility.

IV. Testing Requirements (with Associated Record Keeping and Reporting)

A. General Testing Requirements

The permit includes a requirement that the Permittee conduct performance testing on any specified emission unit when directed by the Division. Additionally, a written notification of any performance test(s) is required 30 days (or sixty (60) days for tests required by 40 CFR Part 63) prior to the date of the test(s) and a test plan is required to be submitted with the test notification. Test methods and procedures for determining compliance with applicable emission limitations are listed and test results are required to be submitted to the Division within 60 days of completion of the testing.

B. Specific Testing Requirements

Condition 4.2.1 was carried over from the current permit. This permit allows certain changes to be made to the facility without permit revision. These changes may include installing new equipment and replacing existing equipment which would be consider as NSPS construction and modification under 40 CFR Part 60. If such changes are made, this condition requires the initial performance test to be performed on the modified sources in accordance with 40 CFR 60.8 and the applicable NSPS standards. This permit does not contain any other conditions to require specific testing for any source.

V. Monitoring Requirements

A. General Monitoring Requirements

Condition 5.1.1 requires that all continuous monitoring systems required by the Division be operated continuously except during monitoring system breakdowns and repairs. Monitoring system response during quality assurance activities is required to be measured and recorded. Maintenance or repair is required to be conducted in an expeditious manner.

B. Specific Monitoring Requirements

Monitoring requirements for this renewal permit are based on the requirements for the emission units as currently permitted in Permit No. 3295-051-0023-V-04-0. The only change to these conditions is removing references to rotary dryer D2 and the associated baghouse CD02 in Conditions 5.2.8 and 5.2.9. This equipment has been removed from service.

Spray Dryer D1B, Rotary Dryer D3, Calciner D6 in heat recovery mode, Calciner D7, Spray Dryer D8, Alumina Dryer D9, Spray Dryer D11 and Calciner D10 are subject to 40 CFR 60 Subpart UUU for limitations of PM and visible emissions. PM emissions from each of these sources are controlled by a baghouse. NSPS Subpart UUU requires a dryer or calciner equipped with a dry control device, such as a baghouse, to install a Continuous Opacity Monitoring System (COMS). The COMS has been determined to be sufficient monitoring to assure compliance with the PM and opacity limitations and no other monitoring is required. Exceedances of such emission limitations are defined in NSPS Subpart UUU.

Also subject to 40 CFR 60 Subpart UUU is Calciner D6 operating in non-heat recovery mode. The source is controlled by a combination of baghouse and wet scrubber. Pressure drop across the scrubber and scrubbant flowrate are required to be continuously monitored and recorded to comply with NSPS Subpart UUU. This Permit specifies ranges representative of proper operation for pressure drop and flowrate to reasonably assure the operation of the calciner in compliance with the NSPS limits. Exceedances are specified, and shall be reported semiannually.

Calciner D7 and Spray Dryer D8 are subject to the ammonia emissions limitation of Condition 3.2.2b. Ammonia emissions are generated when material is being calcined and are controlled by absorber CD8C. To assure that the absorber is operating properly, the scrubbant flowrate and pH are required to be monitored continuously. These parameters are indicative of absorber performance. Any excursions outside appropriate values are required to be reported.

Condition 5.2.1 contains the COMS monitoring requirements for affected sources/processing units.

Condition 5.2.2 contains the monitoring requirements for ammonia scrubbers.

For other substantial PM emissions sources with larger baghouses for PM emissions control but without COMS, they are subject to the monitoring requirements of Condition 5.2.3. Condition 5.2.3 reasonably assures compliance with applicable PM and visible emissions limitations of Georgia Rules (b) and (e) specified in Condition 3.4.1, and the PSD avoidance PM emission limit in Condition 3.2.1. Condition 5.2.3 requires the Permittee to perform a Visible Emissions (VE) check

for each day of operation of the emissions units controlled by these baghouses. Corrective actions are required for visible emissions equal or exceed 5% opacity for baghouses subject to NSPS or an avoidance limit, and equal or exceed 10% for all other baghouses. Dust collectors, bin vents and filter receivers controlling emissions from individual bins, wet screening operations, bucket elevators, belt and pneumatic conveyances, and bagging operations are exempted from detailed monitoring provisions in Condition 5.2.3 due to little likelihood of significant PM emissions.

All the large baghouses subject to the monitoring requirements in Condition 5.2.3 are also subject to the Preventive Maintenance Program prepared for these baghouses, as specified in Condition 5.2.4. The program requires weekly monitoring of baghouse pressure drop and the performance of operation and maintenance checks on the baghouses involved, including baghouse CD8A. All VE and Preventative Maintenance Program information is retained by the Permittee and submitted to the Division upon request. Excursions as specified are to be reported semiannually.

Condition 5.2.5 implements the Preventive Maintenance Program (PMP) under 40 CFR Part 64. This condition ensures the proper function of the baghouses and the compliance with the applicable emission limits involved.

Baghouses CD1A, CD1B, CD03, CD05, CD6B, CD07, CD8A, CD09 and CD11, which receive gases from combustion sources, are required to monitor temperature continuously and to record all incidents when the temperature exceeds a temperature based on the maximum temperature that the bags can withstand. These monitoring requirements are contained in Condition 5.2.6.

PM emission sources not served by PM control equipment are required to be inspected each day of operation for visible emissions and/or malfunction which might cause emissions. The permit includes requirements for corrective action and recordkeeping. If problems are revealed during the daily check and not corrected within 24 hours, they must be reported in the semiannual report. These monitoring requirements are incorporated into Condition 5.2.7.

C. Compliance Assurance Monitoring (CAM)

Conditions 5.2.8 through 5.2.11 incorporate applicable CAM requirements for sources subject to CAM rules. The current permit conditions have been carried over into this renewal permit with minor revisions. Rotary Dryer D2 was removed from Conditions 5.2.8 and 5.2.9. This equipment has been removed from service.

In general, CAM applies to emission units meeting the following criteria:

- The emission unit is subject to an emission limit or standard (including NSPS, NESHAP, and SIP rules) for an air pollutant regulated by Part 70.
- Compliance with the applicable limit or standard is achieved through the use of add-on control equipment.
- The emission unit has pre-controlled potential emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the Part 70 major source level for that pollutant (in tons per year).

Exemptions to the CAM rule include:

- Units subject to federal regulations issued after 1990. In situations where some portions of a facility operate control devices in order to comply with emission standards issued prior to 1990, only those portions of the facility must comply with the requirements of the CAM rule.

- Situations where continuous compliance monitoring is already specified in an operating permit. The CAM rule exempts the Permittee from additional monitoring requirements and directs the Permittee to use the continuous compliance monitoring data to fulfill the CAM rule monitoring and certification requirements. However, use of continuous emissions monitoring system (CEMS), continuous opacity monitoring system (COMS), or predictive emission monitoring system (PEMS) does not qualify as an exemption to the CAM rule. However, 40 CFR 64.3(d) states that use of a CEMS, COMS, or PEMS meets the requirements of CAM.

For this plant, the PM mission sources depending on add-on control devices to comply with NSPS Subpart UUU (which was issued before 1990) and SIP PM emission limits could be subject to the CAM rule if their pre-controlled potential PM emissions exceed 100 tpy.

The CAM indicators for Dryers D3, D10, D6 (when operated in heat recovery mode), D9, D1A and D1B served by baghouses equipped with COMS are opacity readings from associated COMS, as specified in Condition 5.2.11.

As served by baghouses without COMS, the CAM indicators for dryer D8 consist of baghouse VE check, baghouse inspection and baghouse temperature monitoring, as specified in Condition 5.2.9.

The CAM indicators for wet scrubbers D8, and D6 consist of pressure drop of the exhaust gas stream across the scrubber and the scrubber flow rate as specified in Condition 5.2.10.

Ammonia is not a federally regulated air pollutant based on EPA's definitions. Hence, the ammonia absorber (CD8C) is not subject to CAM.

VI. Record Keeping and Reporting Requirements

A. General Record Keeping and Reporting Requirements

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a quarterly and/or semiannual basis.

B. Specific Record Keeping and Reporting Requirements

Recordkeeping and reporting requirements for this renewal permit are based on the requirements for the emission units as currently permitted in Permit No. 3295-051-0023-V-04-0. The conditions have been carried over into this permit without any changes.

Condition 6.2.1 requires the Permittee to record monthly formic acid usage to ensure compliance with the annual formic acid usage cap in Condition 2.1.1.

Conditions 6.2.2 through 6.2.6 contain the recordkeeping, compliance demonstration/emission calculation and reporting requirements deemed necessary to ensure compliance with the NOx emission limit of 250 tpy as specified in Condition 2.1.2.

Condition 6.2.7 includes the applicable fuel record keeping requirement for Boiler No. 4 under NSPS Subpart Dc.

Condition 6.2.8 includes the applicable record keeping requirement for fugitive emission control activities taking place as required by Condition 8.22.1 of the Permit.

VII. Specific Requirements

A. Operational Flexibility

None applicable.

B. Alternative Requirements

None applicable.

C. Insignificant Activities

See Permit Application on GEOS website.
See Attachment B of the permit

D. Temporary Sources

None applicable.

E. Short-Term Activities

None applicable.

F. Compliance Schedule/Progress Reports

None applicable.

G. Emissions Trading

None applicable.

H. Acid Rain Requirements

None applicable.

I. Stratospheric Ozone Protection Requirements

None applicable.

J. Pollution Prevention

None applicable.

K. Specific Conditions

None applicable.

VIII. General Provisions

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to all Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply to all stationary sources of air pollution.

Template Condition 8.14.1 was updated in September 2011 to change the default submittal deadline for Annual Compliance Certifications to February 28.

Template Condition Section 8.27 was updated in August 2014 to include more detailed, clear requirements for emergency generator engines currently exempt from SIP permitting and considered insignificant sources in the Title V permit.

Template Condition Section 8.28 was updated in August 2014 to more clearly define the applicability of the Boiler MACT or GACT for major or minor sources of HAP.

Addendum to Narrative

The 30-day public review started on month day, year and ended on month day, year. Comments were/were not received by the Division.

//If comments were received, state the commenter, the date the comments were received in the above paragraph. All explanations of any changes should be addressed below.//