Facility Name: **KaMin LLC – Edgar Plant**
City: McIntyre
County: Wilkinson
AIRS #: 04-13-319-00034

Application #: TV-658880 and 28529
Date Application Received: August 2, 2022
Permit No: 3295-319-0034-V-01-0

Program	Review Engineers	Review Managers
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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: KaMin LLC – Edgar Plant

2. Parent/Holding Company Name

KaMin LLC

3. Previous and/or Other Name(s)

The facility was part of BASF – Edgar Plant until its sale to KaMin on September 30, 2022. The previous names of the facility were BASF Catalysts LLC - Edgar Plant; Engelhard Corporation - Edgar Plant; BASF Corporation – Edgar Plant.

4. Facility Location

1277 Dedrick Road, McIntyre, Georgia 31054

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

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

B. Site Determination

The KaMin LLC – Edgar Plant is located on contiguous or adjacent property with the KaMin LLC – Toddville Plant (AIRS No. 04-13-319-00013). The Edgar and Toddville plants are considered one site for purposes of PSD/NSR and Title V. Each separate facility holds its own Title V permit and will be accountable, for compliance purposes, for the individual emissions units operated at each facility.

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.

The facility used to be part of BASF Corporation – Edgar Plant with AIRS No. 319-00009. The facilities existing permit has the AIRS No. for the BASF Corp. – Edgar Plant. After the name and ownership change for part of the BASF Corporation – Edgar Plant, the new facility will have a new name, owner and AIRS No. 319-00034.

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
None	-	-

Note: KaMin LLC – Edgar Plant sources will not be part of the latest permit amendment for BASF Corporation – Edgar Plant (Amendment No. 3295-319-0009-V-05-0)

D. Process Description

1. SIC Codes(s)

   3295 – Minerals and Earths, Ground or Otherwise Treated

2. Description of Product(s)

   The facility processes Kaolin and produces disperse slurry, dewatered slurry and calcined pulverized clay.

3. Overall Facility Process Description

   KaMin operates mining locations in Washington County and Dixie locations. The Edgar Plant is comprised of various kaolin clay processing operations. These processes include drying, milling, calcining, intermediate and final product conveying and storage, bagging, and bulk loading. The crude clay is mined out of the ground and hauled by trucks to blungers. The clay is dispersed and then de-gritted to remove residue. The dispersed slurry is then pumped six or more miles to the Toddville/Daveyville Plants and then to the Edgar Plant after wet processing.

   The clay slurry is received from the mines and kept separate by the type of clay. During the wet processing stage, the clay must be centrifuged, delaminated, ozonated, floated, magnetically separated, and/or bleached. The clay is rotary vacuum filtered to dewater the slurry. The #5 Filter Dryer is used to preheat the slurry to the vacuum filtration process at the Edgar Plant. The dewatered slurry is dispersed for flowability and pumped to Edgar Plant where it is spray dried. The dryers burn natural gas with #2 fuel oil as a backup. The spray dryer dries the clay to less than 1% moisture. The dried clay is conveyed from spray dryers to silos or bins pneumatically or by conveyor belts in the Edgar Plant.

   Once dried, most of the kaolin is pulverized to grind the clays to a certain particle size distribution. Calciners may be used to drive off the water of hydration from the pulverized spray-dried kaolin. The calcined clay is then pulverized and sent to be bagged, bulk loaded, or made down to slurry.

   The Edgar Plant bags and ships the final product using 50 or 55-pound bags, one-ton bags, or bulk loads into railcars or trucks. The filled bags are stacked on pallets to prepare them for shipment. The bulk loading facilities load railcars or trucks with the final product for shipment

4. Overall Process Flow Diagram

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

E. Regulatory Status

1. PSD/NSR

The existing BASF – Edgar Permit (3295-319-0009-V-04-0) had the potential to emit more than 250 tons per year of sulfur dioxide, nitrogen oxides, particulate matter, PM_{10}, and $PM_{2.5}$. As a major source under PSD rule, certain existing process units/emission sources at this facility went through a PSD permitting/review prior to the issuance of the initial Title V permit. Consequently, certain emissions from these sources ($PM/PM_{10}/PM_{2.5}$, NO_x, SO_2, and visible) are subject to emission specific BACT emission standards and corresponding compliance methods, testing, monitoring, recordkeeping, and reporting requirements.

Since there is no new construction involved in this application, a full PSD review is not necessary at this time. As stated in 40 CFR 52.21, a complete PSD application/review is only required for the construction of any new major stationary source or the major modification of any existing major stationary source.

Transferring equipment through an ownership change will not result in new constructions or change in operations. Pursuant to 40 CFR 52.21(b)(2)(iii)(g), a change in ownership at a stationary source is not considered a physical change or change in method of operations. Therefore, a complete PSD review is not necessary. Therefore, the PSD/NSR review that the existing transferred sources underwent still holds good and the BACT emission limits for these sources that were established in the last PSD/NSR review of these transferred sources will be incorporated in the facilities new initial Title V permit.

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	✓	✓		
PM_{10}	✓	✓		
$PM_{2.5}$	✓	✓		
SO_2	✓	✓		
VOC	✓			✓
NO_x	✓	✓		
CO	✓	✓		
Individual HAP	✓			✓
Total HAPs	✓			✓

3. MACT Standards

None of the sources at the Edgar facility were ever subject to any MACT standards. They will not be subject to any new MACT standards following the change in ownership of the subject sources to KaMin LLC Edgar Plant.

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	y
Program Code 8 – Part 61 NESHAP	n
Program Code 9 - NSPS	y
Program Code M – Part 63 NESHAP	n
Program Code V – Title V	y

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

None applicable.

B. Applicable Rules and Regulations

Condition 2.2.1 states that for all the equipment that is subject to 40 CFR, Part 60, Standards of Performance for New Stationary Sources the Permittee shall comply with all the provisions of Subpart A – "General Provisions."

C. Compliance Status

The facility did not indicate that it was out of compliance with any applicable rules and regulations in this application.

D. Permit Conditions

Condition 2.2.1 states that for all the equipment which is subject to 40 CFR, Part 60, Standards of Performance for New Stationary Sources the Permittee shall comply with all the provisions of Subpart A – "General Provisions."

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
Dryers				
Plant 5 Dryer				
4	#5 Filter Dryer	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	4C	Baghouse
5	#5 Bucket Elevator	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b)	4C	Baghouse
173	5-SL-1 Silo	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b)	173C	Baghouse
172	5-SL-2 Silo	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b)	172C	Baghouse
178	1A1 Silo	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b)	178C	Baghouse
179	1A2 Silo	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b)	179C	Baghouse
196	# 5 Bulk Loading	391-3-1-.02(2)(p)1 391-3-1-.03(9) 391-3-1-.02(2)(b)	196C	Baghouse
Fluid Bed Dryer				
247	Fluid Bed Dryer Feed Bin	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	247C	Baghouse
248	Fluid Bed Dryer	NSPS UUU 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21 391-3-1-.02(2)(g)	248C	Baghouse
250	Fluid Bed Dryer Storage Bin #1	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	250C	Baghouse
249	Fluid Bed Dryer Bulk Loading	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	249C	Baghouse
EP4 Conveying				
100	EP4 Silo	NSPS OOO 391-3-1-.02(2)(p)1	100C	Baghouse
101	EP4 Fuller Kinyon Receiver	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b)	101C	Baghouse
11F Calciner				
120	11F Spray Dryer	NSPS UUU 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21 391-3-1-.02(2)(g)	120C	Baghouse
114	11F Spray Dryer Product Receiver	NSPS OOO 391-3-1-.02(2)(p)1	114C	Baghouse
115	PS-1 Silo	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	115C	Baghouse
246	PS1 Bulk Truck Loading	NSPS OOO 391-3-1-.02(2)(p)1	246C	Baghouse
116	11F PFB-1 Feed Bin Vacuum Receiver	391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	116C	Baghouse
112	11F Calciner Feed Pulverizer #1	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	112C	Baghouse

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
419	11F Calciner Feed Pulverizer #2	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	112C	Baghouse
420	11F Calciner Feed Pulverizer #3	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	112C	Baghouse
421	11F Calciner Feed Pulverizer #4	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part	112C	Baghouse
422	11F Calciner Feed Pulverizer #5	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part	112C	Baghouse
423	11F Calciner Feed Pulverizer #6	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part	112C	Baghouse
424	11F Calciner Feed Pulverizer #7	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part	112C	Baghouse
425	11F Calciner Feed Pulverizer #8	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part	112C	Baghouse
426	11F Calciner Feed Pulverizer #9	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part	112C	Baghouse
427	11F Calciner Feed Pulverizer #10	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part	112C	Baghouse
452	11F Calciner Feed Pulverizer #11	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part	112C	Baghouse
110	11F Calciner	NSPS UUU 391-3-1-.02(2)(p)1 40 CFR 52 part	110C	Scrubber
111	11F Calciner Cooler/Collector	391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	111C	Baghouse
117	11F PFB-2 Feed Bin	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	117C	Baghouse
254	11F Calciner PFB-2 Vacuum Receiver	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b)	254C	Baghouse
113	11F Calciner Product Pulverizer #1	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	113C	Baghouse
428	11F Calciner Product Pulverizer #2	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	113C	Baghouse
429	11F Calciner Product Pulverizer #3	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	113C	Baghouse
430	11F Calciner Product Pulverizer #4	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	113C	Baghouse
431	11F Calciner Product Pulverizer #5	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	113C	Baghouse
432	11F Calciner Product Pulverizer #6	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	113C	Baghouse

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
433	11F Calciner Product Pulverizer #7	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	113C	Baghouse
434	11F Calciner Product Pulverizer #8	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	113C	Baghouse
119	PS-5 Silo	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	119C	Baghouse
118	PS-3 Silo	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	118C	Baghouse
255	11F Calciner PS-3 Vacuum Receiver	NSPS OOO 391-3-1-.02(2)(p)1	255C	Baghouse
11G Calciner				
140	11G Spray Dryer	NSPS UUU 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21 391-3-1-.02(2)(g)	140C	Baghouse
138	11G Spray Dryer Product Receiver	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	138C	Baghouse
134	11G Calciner PFB-1 Bin	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	134C	Baghouse
132	11G Calciner Feed Pulverizer #1	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	132C	Baghouse
130	11G Calciner	NSPS UUU 391-3-1-.02(2)(p)1 40 CFR 52 part	130C	Scrubber
435	11G Calciner Feed Pulverizer #2	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	132C	Baghouse
436	11G Calciner Feed Pulverizer #3	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	132C	Baghouse
437	11G Calciner Feed Pulverizer #4	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	132C	Baghouse
438	11G Calciner Feed Pulverizer #5	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	132C	Baghouse
439	11G Calciner Feed Pulverizer #6	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	132C	Baghouse
440	11G Calciner Feed Pulverizer #7	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	132C	Baghouse
438	11G Calciner Feed Pulverizer #5	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	132C	Baghouse
439	11G Calciner Feed Pulverizer #6	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	132C	Baghouse
440	11G Calciner Feed Pulverizer #7	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	132C	Baghouse

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
438	11G Calciner Feed Pulverizer #5	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	132C	Baghouse
439	11G Calciner Feed Pulverizer #6	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	132C	Baghouse
440	11G Calciner Feed Pulverizer	NSPS OOO 391-3-1-.02(2)(p)1	132C	Baghouse
438	11G Calciner Feed Pulverizer #5	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	132C	Baghouse
135	11G Calciner PFB-2 Vacuum Receiver	391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	135C	Baghouse
133	11G Calciner Product Pulverizer #1	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	133C	Baghouse
445	11G Calciner Product Pulverizer #2	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	133C	Baghouse
446	11G Calciner Product Pulverizer #3	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	133C	Baghouse
447	11G Calciner Product Pulverizer #4	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	133C	Baghouse
448	11G Calciner Product Pulverizer #5	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	133C	Baghouse
449	11G Calciner Product Pulverizer #6	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	133C	Baghouse
450	11G Calciner Product Pulverizer #7	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	133C	Baghouse
451	11G Calciner Product Pulverizer #8	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	133C	Baghouse
136	PS-4 Silo	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	136C	Baghouse
130	11G Calciner	NSPS UUU 391-3-1-.02(2)(p)1 40 CFR 52 part	130C	scrubber
137	PS-4 Silo Bulk Loading	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	137C	Baghouse
256	11G Calciner BB-2 Bin	NSPS OOO 391-3-1-.02(2)(p)1	256C	Baghouse
143	11G Calciner BB-2 Big Bagger	NSPS OOO 391-3-1-.02(2)(p)1	143C	Baghouse
141	11G Calciner BB-1 Bin	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	141C	Baghouse
142	11G Calciner BB-1 Big Bagger	NSPS OOO 391-3-1-.02(2)(p)1 40 CFR 52 part 52.21	142C	Baghouse

*Generally applicable requirements contained in this permit may also apply to emission units listed above. The lists of applicable requirements/standards are intended as a compliance tool and may not be definitive.

B. Equipment & Rule Applicability

As a major source under PSD/NSR rule, certain existing process units/emission sources at this facility went through a PSD/NSR permitting/review prior to the issuance of the initial Title V permit. Consequently, certain emissions from these sources (PM/PM_{10}, NO_x, SO_2 and visible) are subject to emission specific BACT emission standards and corresponding compliance methods, and testing, monitoring, record keeping and reporting requirements. The facility is complying with these emission limits via the use of baghouses, low sulfur fuel oils and better combustion techniques accordingly.

40 CFR, Part 60, Subpart OOO - "Standards of Performance for Nonmetallic Mineral Processing Plants" applies to certain emission sources/process units. This NSPS standard applies to any crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station constructed, reconstructed, or modified after August 31, 1983. Depending on the nature of the emissions, controls, and/or process unit/source, Subpart OOO as amended on April 28, 2009 has various fugitive and stack emission limits for sources constructed, modified or reconstructed after August 31, 1983 but before April 22, 2008, and for sources constructed, modified or reconstructed after April 22, 2008. Such emission limits can be found in Tables 1, 2 and/or 3 to Subpart OOO, and have been incorporated into Condition 3.3.1. The facility is complying with the applicable emission limits via the use of baghouses.

40 CFR Part 60 Subpart UUU - "Calciners and Dryers in Mineral Industries" applies to dryers and calciners which were 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 percent opacity. PM and visible emissions from calciners, and calciners and dryers installed in series are limited to 0.04 gr/dscf and 10 percent 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. These limits are incorporated into Condition 3.3.2. The facility is complying with the applicable emission limits via the use of baghouses on Fluid Bed Dryer, 11F Spray Dryer, and 11G Spray Dryer.

Georgia Rule 391-3-1-.02(2)(p) - "Particulate Emissions from Kaolin and Fuller's Earth Processes" regulates the PM emissions from listed kaolin processing units as identified in Table 3.1. The applicable emission limits under Rule (p) are determined by the process input weight rate and the construction or modification date of each piece of affected equipment, as specified by Condition 3.4.1.

Georgia Rule 391-3-1-.02(2)(b) - "Visible Emissions" applies to all sources at this facility except those subject to other more restrictive or specific rules. Rule (b) limits the visible emissions to no greater than 40% opacity.

Georgia Rule 391-3-1-.02(2)(g) - "Sulfur Dioxide" applies to all the fossil fuel burning sources at this facility, including dryers, kilns and boilers. Each listed piece of equipment in Table 3.1 subject to this requirement is identified under the column named. Rule (g) limits the sulfur content of fuel firing affected fuel burning sources below 100 million BTUs of heat input per hour to no more than 2.5% by weight.

For fuel burning sources having a heat input of 100 million BTUs per hour or greater, the fuel sulfur content limit under Rule (g) is no more than 3% sulfur by weight. Since the fuel burning sources at this facility are fired exclusively with natural gas and propane, the likelihood of non-compliance with these standards is minimal.

C. Permit Conditions

Condition 3.2.1 limits PM emissions from 11G and 11F Calciner sources and a few bins/silos in the table in this condition to 0.015 grains/dscf. This is a PSD limit.

Condition 3.2.2 limits stack PM emissions from #3 and #5 bagging and bulk loading sources to 0.02 grains/dscf. This is a PSD limit as well.

Condition 3.2.3 limits stack PM emissions from 11F Spray Dryer (Source Code 120) and 11G Spray Dryer (Source Code 140) to 0.025 grains/dscf. This is a PSD limit.

Condition 3.2.4 limits stack PM emissions from 11F and 11G Calciner to 0.04 grains/dscf. This is also a PSD limit to comply with pertinent PSD regulations.

Condition 3.2.5 has the lb/hr PM_{10} emission limit for the Fluid bed dryer and 11F and 11G spray dryer. These limits are also PSD limits. These limits allow each source to comply with pertinent PSD/NSR regulation. These identified sources went through a previous PSD review and as a result of the PSD review the PM emissions are limited.

Condition 3.2.6 limits NOx emission to 16 lbs/hr from the spray dryer and Calciner 11F kiln, when the kiln exhausts through the spray dryer. This is a PSD limit. This limit allows these sources to comply with the pertinent PSD/NSR regulation. These sources have undergone a previous PSD review, and as a result of the PSD review the NO_x emissions are limited.

Condition 3.2.7 limits NOx emission to 18.3 lbs/hr from the spray dryer and Calciner 11G kiln, when the kiln exhausts through the spray dryer. This is a PSD limit. This limit allows these sources to comply with pertinent PSD/NSR regulation after the sources went through a PSD review.

Condition 3.2.8 limits the total uncontrolled emissions of sulfur dioxide from the Fluid Bed Dryer (Source Code 248) to 10.8 tons/year over any 12-consecutive month period. This is a PSD limit for Fluid Bed Dryer. This limit allows these sources to comply with pertinent PSD/NSR regulation after the sources went through a PSD review. This limit assures compliance with these PSD limits, sufficient record keeping requirements have been established to determine the SO_2 emissions. Each month, a 12-consecutive month total is required to be calculated for the fluid bed dryer No. 248. Any 12-consecutive month total of the SO_2 emissions greater than the allowable is required to be reported as an exceedance.

Condition 3.2.9 requires fuel oil fired, in all fuel burning equipment and calciners, to be No. 1 and No. 2 fuel oil. This is also a PSD limit. Conditions 3.2.9, and 3.2.11 together limit the combined SO_2 emissions from the identified sources (10.80 TPY for the Fluid Bed Dryer) over a 12-consecutive month period. To assure compliance with this PSD limit, sufficient record keeping requirements have been established to determine the SO_2 emissions.

Condition 3.2.10 limits VE from 11F Calciner Cooler/Collector (Source Code 111), 11F PFB-1 Feed Bin Vacuum Receiver (Source Code 116) and 11G Calciner PFB-2 Vacuum Receiver (Source Code 135) to 7% opacity per Method 9 (6 minute average). This is a PSD limit.

Condition 3.2.11 restricts Calciner 11F (Source Code 110), Spray Dryer 11F (Source Code 120), Calciner 11G (Source Code 130), and Spray Dryer 11G (Source Code 140) to firing natural gas only or other non-sulfur containing fuel. This is a PSD limit.

Condition 3.3.1 subjects each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station to NSPS Subpart OOO emission limits.

Condition 3.3.2 for equipment subject to NSPS Subpart UUU to comply with PM and Opacity emission limits in this subpart.

Condition 3.4.1 has the Georgia Rule (p) PM emission limits apply to equipment used in Kaolin and Fullers earth processing. This is a process weight rule similar to Georgia Rule (e).

Condition 3.4.2 is the 40% opacity limit of Georgia Rule (b) that apply to all Kaolin processing equipment.

Condition 3.4.3 is the fuel sulfur content limit of Georgia Rule (g).

Conditions 3.5.1 and 3.5.2 ensure the proper operation of the baghouses that control PM emissions.

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

Conditions 4.2.1 lists test requirements for equipment subject to NSPS.

Condition 4.2.2 has annual NO_x testing that would provide a reasonable assurance the hourly NO_x emission limits on the calciners imposed by Conditions 3.2.6 and 3.2.7 are being maintained.

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

Baghouses are used to control of PM emissions of most of the sources at this facility and are subject to the PM and Visible emissions (opacity) limitations under applicable PSD/NSR rules, Georgia Rules (p), (b), and/or 40 CFR Part 60 Subpart OOO. The processes which are substantial sources of PM emissions are controlled by the larger baghouses and are subject to the monitoring requirements of Condition 5.2.4. To reasonably assure compliance with applicable PM limitations, Condition 5.2.4 requires a daily Visible Emissions (VE) check during each day of operation of the emissions units controlled by the baghouses. Corrective actions are required for visible emissions or for visible emissions which exceed a specified opacity action level.

A Preventive Maintenance Program is required on these baghouses. The program requires weekly monitoring of baghouse pressure drop and the performance of operation and maintenance checks on the baghouses. All VE and Preventative Maintenance Program information is retained by the Permittee and submitted to the Division upon request. Excursions, to be reported semiannually, are specified. Additionally, certain sources have emissions limitations for PM_{10} for purposes of Prevention of Significant Deterioration (PSD) and Fee reduction purposes. These PM_{10} limitations were based upon the limitations for PM emissions and the monitoring described previously is adequate for assuring compliance with the PM_{10} limitations.

Dust collectors, bin vents and filter receivers controlling emissions from individual bins, bucket elevators, belt and pneumatic conveyances, vacuum receivers and bagging operations are exempted from detailed monitoring provisions due to little likelihood of significant Particulate Matter emissions.

The Fluid Bed Dryer, 11F Spray Dryer, and 11G Spray Dryer are all subject to 40 CFR 60 Subpart UUU for limitations of particulate matter (PM) and visible emissions (opacity). The Fluid Bed Dryer, 11F Spray Dryer, and 11G Spray Dryer are also subject to PSD limits. Particulate matter emissions are controlled by baghouses. Subpart UUU requires a Spray Dryer equipped with a dry control device, such as a baghouse, install a Continuous Opacity Monitoring System (COMS). The COMS was determined to be sufficiently monitored to assure compliance with the PM and opacity limitations and no other monitoring is required. Exceedances are also defined in Subpart UUU.

Calciner lines 11F and 11G are subject to NO_x emission limitations under pertinent PSD/NSR rules during periods of operation while each calciner is exhausting through its respective spray dryer. To reasonably assure that the NO_x emissions limitations are not exceeded, periodic monitoring is required. Monitoring consists of measurements of nitrogen oxides and oxygen concentrations using a portable analyzer (Conditional Test Method 30). Measurements are required on an annual basis as stated in permit condition 4.2.2. An equation is included to calculate emissions in units of NO_x ppm corrected to 16% oxygen. Action levels are specified for each calciner line and an excursion is specified as any measurement that exceeds the applicable action level. The action levels are also in units of NO_x ppm at 16% oxygen and are based on NO_x emissions test data for each line and the emissions allowable limitations. The performance test for the 11G calciner line indicated a NOx emission rate of 16.22 lb/hr and a NOx concentration of 50.33 ppm. The oxygen concentration during the testing was 16%. The emission limitation for this line is 18.3 lb/hr . Using the performance test results, the emission limitation equates to a concentration of 56.61 ppm at 16 % O_2.

Similarly, the test results for the 11F calciner line indicated a NOx emission rate of 9.11 lb/hr and a NO_x concentration of 32 ppm. The oxygen concentration during the testing was also 16%. The emission limit for this line is 16 lb/hr. Using the performance test results, the lb/hr emission limitation equates to a NOx concentration of 54.62 ppm at 16% O_2. Rounded of the action level for 11G calciner line is 57 ppm NO_x at 16% O2 and 55 ppm NO_x at 16% O_2 for the 11F calciner line.

All the fuel burning sources (dryers, calciners) are subject to Georgia Rule (g) for SO_2 emissions. All the sources burn natural gas and burn fuel oil as backup. Natural gas and propane are processed fuels (cleaned) which have negligible amounts of sulfur; therefore, no monitoring is required. The permit limits the fuel oil fired in all fuel burning equipment to No. 1 or No. 2 fuel oil which is limited to a sulfur content of 0.5 percent by weight. This limitation is more stringent than the Georgia Rule (g) sulfur limit and will be monitored by fuel supplier certifications, which the Permittee is required to obtain from the fuel oil supplier. Also, for PSD purposes, the permit limits the emissions of sulfur dioxide during any 12-consecutive month period from the Fluid Bed Dryer to 10.8 tpy. The permit specifies monthly calculation procedures to assure compliance with the sulfur dioxide emissions limitation.

The baghouses 120C, 140C, and 248C all receive gases from combustion sources; therefore they are required to monitor (not record) temperature continuously and to record all incidents when the temperature exceeds a temperature based on the maximum temperature that the bags can withstand.

The calciners 11F and 11G are subject to PM emission limits for either PSD, Rule (p), 40 CFR Part 60, Subpart UUU or all three (where the more stringent PSD limit applies). PM emissions from these calciners are controlled by venturi scrubbers 110C and 130C. Pressure drop across the scrubbers and scrubber flow rates are required to be continuous monitored and recorded. The permit requires that ranges for representative of proper operation for pressure drop and flow rate be determined and submitted for approval to reasonably assure the operation of scrubbers 110C and 130C in compliance with the applicable limits. Exceedances and excursions, to be reported semiannually, are specified.

The permit requires all uncontrolled sources, except those that specify no monitoring by this narrative, be checked daily for obvious mechanical failure and all uncontrolled sources be checked the presence of Visible Emissions. The permit includes requirements to take corrective action and keep records. If problems are revealed during the daily check, they must be reported in the semiannual report if not corrected within 24 hours. Note that there are no uncontrolled sources specified in Table 3.1. Uncontrolled sources may be added in accordance with Condition 7.2.1. Such sources may be subject also to Georgia Rules (b) and (p) and NSPS Subpart OOO.

Condition 5.2.1 requires Continuous Opacity Monitoring System (COMS) for monitoring opacities of Fluid bed Dryer and 11F and 11G Spray Dryers and monitoring of the pressure drop/loss and the scrubbant flow rate to the calciner scrubbers.

Condition 5.2.2 requires the Permittee to establish the pressure loss range across the scrubbers 110C and 130C.

Condition 5.2.3 requires the Permittee to establish the scrubbing liquid flow rate for representative operation of scrubbers 110C and130C.

Condition 5.2.4 requires daily VE checks from all baghouses listed in Table 3.1 of the permit except those baghouses whose opacity is monitored using a COMS.

Condition 5.2.5 requires a Preventive maintenance program (PMP) for baghouse listed in Condition 5.2.4.

Condition 5.2.6 requires continuous monitoring and recording of baghouse inlet temperatures that received exhaust from a dryer or calciner.

Condition 5.2.7 prescribes monitoring for all uncontrolled sources at the facility.

Condition 5.2.8 requires the Permittee to obtain and maintain the fuel oil supplier certification for each shipment of fuel oil received at the facility.

C. Compliance Assurance Monitoring (CAM)

KaMin LLC - Edgar Plant operates several units that are considered *pollutant specific emission units* (PSEUs) per 40 CFR Part 64 because they are: (1) subject to a pollutant emission standard for which there is a control device, and (2) the pre-controlled potential emissions for the pollutant is greater than the major source threshold.

The frequency of data collection under Part 64 depends on whether the controlled potential to emit exceeds the major source threshold (i.e., whether the PSEU is a large PSEU). A large PSEU required continuous monitoring while a PSEU that is not classified as large requires monitoring at least once per 24-hour period.

The facility included the CAM plan in their Title V permit application No. 28529. The facility has been monitoring visible emissions, pressure drop and inlet gas temperature for combustion sources controlled by baghouses and water flow rate and pressure drop for sources controlled by wet Scrubbers to ensure continuous compliance with Georgia Air Quality Rules (p), (b), 40 CFR 60 Subpart OOO and 40 CFR 60 Subpart UUU. EPD agrees with the terms specified in the CAM plan. The CAM conditions are Conditions 5.2.9, 5.2.10 and 5.2.11.

Condition 5.2.9 lists all emissions unit subject to Compliance Assurance Monitoring (CAM) per 40 CFR 64.

Condition 5.2.10 is the CAM condition lists the three indicators such as VE, Baghouse inspection and Baghouse temperature (for those that receive hot exhaust gases) for the CAM.

Condition 5.2.11 lists the CAM indicators for the scrubbers 110C and 130C associated with Calciners 11F and 11G that includes scrubber flow rate and scrubber pressure drop.

Condition 5.2.12 requires that Permittee to notify EPD of any changes to the scrubber flow rate range and the scrubber pressure drop range within 30 days of the change.

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 semiannual basis.

B. Specific Record Keeping and Reporting Requirements

Condition 6.2.1 is the recordkeeping and reporting requirements of sources subject to NSPS.

Condition 6.2.2 is the detailed recordkeeping and reporting requirements of sources subject to NSPS Subpart OOO.

Condition 6.2.3 requires recordkeeping of all fugitive dust mitigation measures adopted by the Permittee.

Condition 6.2.4 is the semi-annual reporting requirements for all sources that have combusted fuel oil.

Condition 6.2.5 requires reporting to the 12 month rolling total SO_2 emissions each month during the semi-annual reporting period for the fluid bed dryer.

VII. Specific Requirements

A. Operational Flexibility

None

B. Alternative Requirements

None

C. Insignificant Activities

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

D. Temporary Sources

None

E. Short-Term Activities

None

F. Compliance Schedule/Progress Reports

None

G. Emissions Trading

Not applicable

H. Acid Rain Requirements

Not applicable

I. Stratospheric Ozone Protection Requirements

Not applicable

J. Pollution Prevention

Not applicable

K. Specific Conditions

None

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.//