

Facility Name: **J. M. Huber Corporation – Sandersville Plant**
 City: Sandersville
 County: Washington
 AIRS #: 04-13-303- 0035

Application #: TV- 12789
 Date Application Received: January 22, 2001
 Date Application Deemed
 Administratively Complete: March 8, 2001
 Date of Draft Permit: July 12, 2001
 Permit No: 3295-303-0035-V-01-0

| Program | Review Engineers | Review Managers |
|-----------------|-------------------------|------------------------|
| SSPP/ASU | Jing Wang | James Current |
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| ISMP | James Kelly | Larry Webber |
| Toxics | --- | --- |

Introduction

This narrative is being provided to assist the reader in understanding the content of the attached draft Part 70 operating permit. Complex issues and unusual items are explained herein simpler terms and/or greater detail than is sometimes possible in the actual permit. This 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 Amendments of 1990. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Chapter I of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The primary purpose of this permit is to consolidate and identify existing state and federal air requirements applicable to J. M. Huber Corporation – Sandersville Plant and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. It initially describes the facility receiving the permit, the applicable requirements and their significance, and the methods for determining compliance with those applicable requirements. This 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: J. M. Huber Corporation – Sandersville Plant

2. Parent/Holding Company Name

J. M. Huber Corporation

3. Previous and/or Other Name(s)

The facility was originally permitted (No. 3295-150-4270-0) under the name of Anglo-American Clays Corporation on November 24, 1975. On January 17, 1992, an amendment was issued to Air Quality Permit No. 3295-150-4270-0 changing the facility designation to ECC International, Sandersville Plant No. 1.

On March 22, 2000, the Division received a facsimile from ECC International, Sandersville Plant 1 that the facility name has changed to IMERYYS, Sandersville Calcine Plant and the parent company was now IMERYYS Pigment, Incorporated. Soon thereafter, the Department of Justice required IMERYYS to sell some of the company's assets as part of an antitrust case. J. M. Huber Corporation purchased the Hydrous operation, Apron Dryer and Calciner #5 system from IMERYYS.

4. Facility Location

530 Beck Blvd., Sandersville, GA 31082 (Washington County)

5. Attainment or Non-attainment Area Location

The facility is not located in a non-attainment area.

6. Class I Area Impacts

The facility is not located within 100 km of a Class I area.

B. Site Determination

J. M. Huber, Thiele Kaolin, Burgess Pigment and IMERYYS Calcine plant operate within a close proximity of one another in the Sandersville are and each facility contributes to the PSD (Prevention of Significant Deterioration) increment. Because of the close proximity and magnitude of each source, J. M. Huber, Thiele Kaolin, Burgess Pigment, and IMERYYS Calcine Plant are required to submit a comprehensive PM₁₀ increment assessment to determine compliance in the event of any significant emissions increase. However, each is a separate Title V source.

C. Existing Permits

Table 1: List of Current Permits as Amended

| Permit Number and/or Purpose of Issuance | Date of Issuance and Date of Amendments (if any) | Comments | |
|---|--|----------|----|
| | | Yes | No |
| 3295-150-4270-0 | November 24, 1975 | ✓ | |
| 3295-150-4270(14 th Amendment) | February 25, 1988 | ✓ | |
| 3295-150-4270(15 th Amendment) | June 3, 1988 | | ✓ |
| 3295-150-4270(16 th Amendment) | August 4, 1989 | | ✓ |
| 3295-150-4270(17 th Amendment) | September 25, 1989 | ✓ | |
| 3295-150-4270(18 th Amendment) | January 25, 1990 | | ✓ |
| 3295-150-4270(19 th Amendment) | December 14, 1990 | | ✓ |
| 3295-150-4270(20 th Amendment) | August 30, 1991 | ✓ | |
| 3295-150-4270(21 th Amendment) | October 25, 1991 | | ✓ |
| 3295-150-4270 | January 17, 1992 | ✓ | |
| 3295-150-4270 | March 17, 1992 | | ✓ |
| 3295-150-4270 | July 8, 1992 | | ✓ |
| 3295-150-4270 | December 17, 1993 | | ✓ |
| 3295-150-4270 | January 30, 1995 | | ✓ |
| 3295-150-4270 | March 20, 1997 | | ✓ |
| 3295-150-4270 | March 24, 1997 | ✓ | |
| 3295-150-4270 | June 11, 1998 | ✓ | |
| 3295-150-4270 | February 18, 1998 | | ✓ |
| 3295-150-4270 | March 24, 1999 | | ✓ |
| 3295 – 303 – 0035 – E – 01 – 0 | May 31, 2000 | ✓ | |

Table 2: Comments on Specific Permits

| Permit Number | Comments |
|---|---|
| 3295-150-4270-0 | Our records indicate that this permit was issued to Anglo-American Clays Corporation. |
| 3295-150-4270(14 th Amendment) | Our records indicate that this permit was amendment amended due to the construction and operation of a 16.75 MMBTU/Hr Cleaver Brooks Boiler and a 14.65 MMBTU/Hr Cleaver Brooks Boiler. |
| 3295-150-4270(17 th Amendment) | Our records indicate that this permit was amended for major expansion and also for PSD final determination, which included BACT determination and Modeling/Monitoring requirements. |
| 3295-150-4270(20 th Amendment) | Our records indicate that this permit was amended to Anglo-American Clays Corporation, but the facility name had changed to ECC International Sandersville Plant No. 1. |
| 3295-150-4270 issued on January 17, 1992 | Our records indicate that this permit was amended for the facility designation was changed from Anglo-American Clays Corporation to ECC International, Sandersville Plant No.1. |
| 3295-150-4270 issued on March 24, 1997 | Our records indicate that this permit was amended for the facility shall comply with the PSD increment for PM ₁₀ in accordance with the 40 CFR Part 52.21 <i>Prevention of Significant Deterioration of Air Quality</i> . In Condition 140, it showed that the increment consuming sources should not exceed the specific limits, which were based on PM ₁₀ Increment Modeling received on February 27, 1997. |
| 3295-150-4270 issued on June 11, 1998 | Our records indicate that this permit was amended for the modification and also for the facility shall comply with the PSD increment for PM ₁₀ in accordance with the 40 CFR Part 52.21 <i>Prevention of Significant Deterioration of Air Quality</i> . In the rewritten Condition 140, it showed that the increment consuming sources should not exceed the specific limits, which were based on PM ₁₀ Increment Modeling received on April 6, 1997. |
| 3295 – 303 – 0035 – E – 01 – 0 | Our records indicate that this permit was issued to J. M. Huber Corporation, since J. M. Huber became the owner and operator of the part of the EEC International Sandersville Plant No. 1, which was owned by IMERYYS Pigment, Incorporated now. |

D. Process Description

1. SIC Code(s)

SIC Codes - 3295, 1455

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.

2. Description of Product(s)

The facility manufactures the kaolin product.

3. Overall Facility Process Description

J. M. Huber Corporation – Sandersville Plant produces two lines of kaolin based mineral products. Hydrous-all of the final product property development is done in an aqueous slurry form, and Calcined – the structure of the mineral is fundamentally changed at high heat. It follows the same basic process of mining, blunging, processing and packing.

Mining involves the activities from prospecting to delivery at the blunger sites. Initial kaolin ore quality is appraised on the basis of intensive lab testing of widely spaced (400 foot centers) drill cores. If the deposit shows promise, it is re-drilled and tested on smaller borehole spacing (typically 100-200 foot centers). This information is then used to create an overburden removal plan. Overburden is the material lying on top of the usable deposit. It is often quoted in terms of a ratio of how many vertical feet of material must be removed to get one vertical foot of clay. The overburden is stored/used for reclamation of exhausted mines. Once the clay is exposed, it is re-drilled on closely spacing (50 foot centers) for mine planning purposes. Mining is the physical extraction of the crude clay from its natural state (typically via backhoe or dragline) and delivery to a blunger (typically by large dump truck). Blungers can be located either in the pit or at the plants.

Blunging is the first and most critical step in the product development process. Proper feed preparation determines much of the subsequent process efficiencies. Crude kaolin in its natural state is a solid material having nominal water and residue contents of 20% and 10% respectfully. At a micro level the clay is composed of discrete stacks, plates, and blocks. The purpose of blunging is to liberate the usable clay from the undesired residue and produce dispersed slurry for further processing. The delivered crude is crushed to a small size and fed to a high energy/intensity mixer. Additional water is added to reach the desired solids. A dispersant is also added to keep the individual clay particles in suspension. The separation of the crude into proper dispersed slurry of individual particles is critical to the proper operation of

subsequent processes. The residue is separated from the desirable clay through gravity settling and/or flow/pressure assisted G-force processes. Dispersed, de-gritted slip is delivered to the following process via pipelines.

The next step in the process is impurity removal and particle size/shape development. These processes are typically impurity specific, are not required for all products, and are not required in any particular order; however, they are usually conducted in a sequence to deliver maximum cost effectiveness. These processes are typically targeted to remove low amounts of titanium-based impurities. The titanium compound is >collected= with various organic compounds and separated from the desired kaolin by using gravity. Classification uses high g-force centrifuges to control the particle size of the final products. Typical control points are at the size of 2.0 and 0.25 microns. The rejected oversize material is processed in high intensity sand-assisted grinders to liberate the plates/stacks for use in specific products and applications. Ozone is used to remove trace iron impurities. High gradient magnetic separation is used to reduce trace iron impurities. The final step is typically a reductive >bleaching= to convert residual iron to a colorless form. This step is typically carried out in conjunction with an acid flocculation/vacuum filtration step. The filtration is needed to remove salts added in prior process steps and it is a cost effective way to increase the solids prior to drying.

At this point, the Hydrous and Calcine flow sheets diverge. Hydrous clay is typically spray dried and/or evaporated for final product packaging. Calcined clays are spray dried, pulverized, and fed to the calciner. The calciner imparts unique performance properties through the high temperature alteration of the kaolin crystalline structure. Calcine product is re-pulverized to break up soft agglomerates and stored in silos.

Kaolin is sold to various customers/markets in many forms. High solids clay slurries are produced by evaporative concentration of filter products. An alternative route is to back mix spray dried/calcined clay with water to reach the desired solids. Specific additives are used to prevent solids from settling and bacteria growth. Slurry can be delivered via rail or truck. Both products are also offered in dry bulk (rail and truck), dry big bags (500-1,000 kilograms), and dry small bags (40-50 pounds).

4. Overall Process Flow Diagram

The process flow diagrams are included.

E. Regulatory Status

1. PSD/NSR

J. M. Huber Corporation – Sandersville Plant is a major source under PSD/NSR regulations for Particulate Matter (PM) and Particulate Matter less than 10 microns (PM₁₀). The facility is subject to the PSD increment for PM₁₀ (Particulate Matter less than or equal to 10 micrometer aerodynamic diameter) in accordance with 40 CFR Part 52.21 *Prevention of Significant Deterioration of Air Quality*.

2. Title V Major Source Status by Pollutant

Table 3: 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 | ✓ | | |
| SO ₂ | Yes | | | ✓ |
| VOC | Yes | | | ✓ |
| NO _x | Yes | ✓ | | |
| CO | Yes | | | ✓ |
| TRS | --- | | | |
| H ₂ S | --- | | | |
| Individual HAP | --- | | | |
| Total HAPs | --- | | | |

3. MACT Standards

This facility is not subject to MACT Standards.

4. Program Applicability

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

Regulatory Analysis**II. Facility Wide Requirements**

A. Emission and Operating Caps:

None.

B. Applicable Rules and Regulations

- Rules and Regulations Assessment – Generic conditions, not specifically related to this facility.
- Emission and Operating Standards – None.

C. Compliance Status

Not Applicable.

D. Operational Flexibility

Not Applicable.

E. Permit Conditions

None.

III. Regulated Equipment Requirements

A. Brief Process Description

The facility processes kaolin product.

B. Equipment List for the Process

Table 1

| Emission Units | | Specific Limitation(s)/Requirements | | Air Pollution Control Devices | |
|----------------|----------------------|--|--|-------------------------------|-------------|
| ID No.(s) | Description | Applicable Requirement(s) / Standard(s) | Corresponding Permit Condition(s) | ID No.(s) | Description |
| <i>Boilers</i> | | | | | |
| B1 | Package Boiler No. 1 | 391-3-1-.02(2)(b)1 391-3-1-.02(2)(g) 391-3-1-.02(2)(d)1 40 CFR Part 52.21 | 3.3.3, 3.4.2, 3.4.4, 3.5.3, 5.2.6, 6.1.7, 6.2.4, 6.2.8 | N/A | None |
| B2 | Package Boiler No. 2 | 391-3-1-.02(2)(b)1 391-3-1-.02(2)(g) 391-3-1-.02(2)(d)1 40 CFR Part 52.21 | 3.3.3, 3.4.2, 3.4.4, 3.5.3, 5.2.6, 6.1.7, 6.2.4, 6.2.8 | N/A | None |
| B3 | Boiler No. 3 | 391-3-1-.02(2)(g) 391-3-1-.02(2)(d)2, 3 Subpart Dc 40 CFR Part 52.21 | 3.3.3, 3.3.4, 3.4.3, 3.4.4, 3.5.3, 5.2.2, 5.2.3, 5.2.6, 6.1.7, 6.2.3, 6.2.4, 6.2.8 | N/A | None |
| B4 | Boiler No. 4 | 391-3-1-.02(2)(g) 391-3-1-.02(2)(d)2, 3 40 CFR Part 52.21 | 3.3.3, 3.4.3, 3.4.4, 3.5.3, 5.2.6, 6.1.7, 6.2.4, 6.2.8 | N/A | None |

| Emission Units | | Specific Limitation(s)/Requirements | | Air Pollution Control Devices | |
|-------------------------------|---|---|---|-------------------------------|--------------------------------------|
| ID No.(s) | Description | Applicable Requirement(s) / Standard(s) | Corresponding Permit Condition(s) | ID No.(s) | Description |
| B5 | Boiler No. 5 | 391-3-1-.02(2)(g) 391-3-1-.02(2)(d)2, 3 40 CFR Part 52.21 | 3.3.3, 3.4.3, 3.4.4, 3.5.3, 5.2.6, 6.1.7, 6.2.4, 6.2.8 | N/A | None |
| <i>Premills and Postmills</i> | | | | | |
| M26 | Pulverizing Bauer Premill Nos. 26, 27, 28 (Calciner No. 5) | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21 | 3.3.1, 3.3.3, 3.4.1.3.4.2, 3.5.1, 3.5.2, 4.2.1, 5.2.3, 5.2.4, 5.3.1, 6.2.1, 6.2.2 | M26C | Baghouse |
| M29 | Pulverizing Bauer Postmill Nos. 29, 31, 32, 33, 34 (Calciner No. 5) | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21 | 3.3.1, 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 5.2.3, 5.2.4, 5.3.1, 6.2.1, 6.2.2 | M29C | Baghouse |
| H5 | Calciner No. 5 Horizontal Mill | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21 | 3.3.1, 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 5.2.3, 5.2.4, 5.3.1, 6.2.1, 6.2.2, 6.2.8 | H5C | Baghouse |
| <i>Dryers</i> | | | | | |
| SD1 | Spray Dryer No. 1 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 3.5.3, 5.2.3, 5.2.5, 5.3.1, 6.1.7, 6.2.4, 6.2.8 | SD1C | Baghouse/ Heat Recovery scrubbers |
| SD2 | Spray Dryer No. 2 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 3.5.3, 5.2.3, 5.2.5, 5.3.1, 6.1.7, 6.2.4, 6.2.8 | SD2C | Baghouse/ Heat Recovery scrubbers |
| SD5 | Spray Dryer No. 5 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 391-3-1-.02(2)(p)1 NSPS UUU 40 CFR Part 52.21 | 3.3.2, 3.3.3, 3.4.1, 3.4.2, 3.4.4, 3.5.1, 3.5.2, 3.5.3, 4.2.1, 5.2.1, 5.2.5, 5.3.1, 6.1.7, 6.2.1, 6.2.2, 6.2.4, 6.2.8 | SD5C | Baghouse |
| AD1 | Apron Dryer | 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.4.1, 3.4.2, 3.4.4, 3.5.3, 5.2.3, 5.2.6, 5.3.1, 6.1.7, 6.2.4, 6.2.8 | N/A | None |
| <i>Calciners</i> | | | | | |
| C5 | Calciner No. 5 | 391-3-1-.02(2)(g) 391-3-1-.02(2)(p)1 NSPS UUU 40 CFR Part 52.21 | 3.3.2, 3.3.3, 3.4.1, 3.5.3, 4.2.1, 5.2.2, 6.1.7, 6.2.1, 6.2.2, 6.2.4, 6.2.8 | C5C | Wet Scrubber |
| <i>Bagging Operations</i> | | | | | |
| BB2 | Hydrous Big Bagger 30 Ton Hopper | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2 | BB2C | Baghouse |
| BB3 | Hydrous Big Bagger Fugitive | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.4.1, 3.5.1, 3.5.2 | BB3C | Baghouse |
| BB5 | Bin for Calciner No. 5 Bagger | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 | 3.4.1, 3.4.2, 3.5.1, 3.5.2 | BB5C | Baghouse |

| Emission Units | | Specific Limitation(s)/Requirements | | Air Pollution Control Devices | |
|--|-------------------------------------|--|--|-------------------------------|-------------|
| ID No.(s) | Description | Applicable Requirement(s) / Standard(s) | Corresponding Permit Condition(s) | ID No.(s) | Description |
| <i>Conveyors and Conveying Systems</i> | | | | | |
| BC1 | Belt Conveyor No. 1 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 NSPS OOO | 3.3.1, 3.4.1, 3.4.2, 4.2.1, 5.2.6, 5.3.1, 6.2.1, 6.2.2 | N/A | None |
| BC2 | Belt Conveyor No. 2 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 NSPS OOO | 3.3.1, 3.4.13.4.2, 4.2.1, 5.2.6, 5.3.1, 6.2.1, 6.2.2 | N/A | None |
| BC4 | Belt Conveyor No. 4 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 NSPS OOO | 3.3.1, 3.4.13.4.2, 4.2.1, 5.2.6, 5.3.1, 6.2.1, 6.2.2 | N/A | None |
| BC5 | Belt Conveyor No. 5 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 NSPS OOO | 3.3.1, 3.4.13.4.2, 4.2.1, 5.2.6, 5.3.1, 6.2.1, 6.2.2 | N/A | None |
| BC6 | Alphalux 91 Belt Conveyor | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21 | 3.3.1, 3.4.13.4.2, 4.2.1, 5.2.6, 5.3.1, 6.2.1, 6.2.2 | N/A | None |
| P6 | Alphalux 91 Storage Bin | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21 | 3.3.1, 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2 | R1C | Baghouse |
| K5 | Calcliner No. 5 Cooler/Conveyor | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21 | 3.3.1, 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 5.2.3, 5.2.4, 5.3.1, 6.2.1, 6.2.2 | K5C | Baghouse |
| <i>Loading Operations</i> | | | | | |
| AD2 | Railcar Loading from Apron Dryer | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.3.5, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 5.2.3, 5.2.4, 5.3.1 | AD2C | Baghouse |
| R1 | Spray Dryer No. 1 Railcar Load out | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 | 3.4.1, 3.4.2, 3.5.1, 3.5.2 | R1C | Baghouse |
| R2 | Spray Dryer No. 2 Railcar Load out | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 | 3.4.1, 3.4.2, 3.5.1, 3.5.2 | R2C | Baghouse |
| R52 | Bulk Loading From Silo 52 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 | 3.4.1, 3.4.2, 3.5.1, 3.5.2 | R52C | Baghouse |
| R53 | Bulk Loading From Silo 53 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 | 3.4.1, 3.4.2, 3.5.1, 3.5.2, 5.2.3, 5.2.4, 5.3.1 | N/A | None |
| R54 | Bulk Loading From Silo 54 -57 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2 | R54C | Baghouse |
| <i>Slurry Collection</i> | | | | | |
| SC1 | Spray Dryer No. 1 Slurry Collection | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21 | 3.3.1, 3.3.3, 3.4.1, 3.5.1, 3.5.2, 4.2.1, 5.2.3, 5.2.4, 5.3.1, 6.2.1, 6.2.2 | SC1C | Baghouse |

| Emission Units | | Specific Limitation(s)/Requirements | | Air Pollution Control Devices | |
|---------------------------------|-------------------------------|--|--------------------------------------|-------------------------------|-------------|
| ID No.(s) | Description | Applicable Requirement(s) / Standard(s) | Corresponding Permit Condition(s) | ID No.(s) | Description |
| <i>Small Bagging Operations</i> | | | | | |
| SB3 | Hydrous Small Bagger Fugitive | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 | 3.4.1, 3.4.2, 3.5.1, 3.5.2 | SB3C | Baghouse |
| SB4 | Hydrous Small Bagger Hopper | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 | 3.4.1, 3.5.1, 3.5.2 | SB4C | Baghouse |
| <i>Silos</i> | | | | | |
| V1 | Silo No. 1 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V1C | Bin Vent |
| V2 | Silo No. 2 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V2C | Bin Vent |
| V3 | Silo No. 3 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V3C | Bin Vent |
| V4 | Silo No. 4 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 | 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V4C | Bin Vent |
| V5 | Silo No. 5 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 | 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V5C | Bin Vent |
| V6 | Silo No. 6 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 | 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V6C | Bin Vent |
| V7 | Silo No. 7 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 | 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V7C | Bin Vent |
| V8 | Silo No.8 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 | 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V8C | Bin Vent |
| V9 | Silo No.9 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 | 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V9C | Bin Vent |
| V10 | Silo No. 10 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 | 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V10C | Bin Vent |
| V51 | Silo No. 51 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V51C | Bin Vent |
| V52 | Silo No. 52 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V52C | Bin Vent |
| V53 | Silo No. 53 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V53C | Bin Vent |
| V54 | Silo No. 54 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V54C | Bin Vent |
| V55 | Silo No. 55 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V55C | Bin Vent |

| Emission Units | | Specific Limitation(s)/Requirements | | Air Pollution Control Devices | |
|----------------|-------------|--|--------------------------------------|-------------------------------|-------------|
| ID No.(s) | Description | Applicable Requirement(s) / Standard(s) | Corresponding Permit Condition(s) | ID No.(s) | Description |
| V56 | Silo No. 56 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V56C | Bin Vent |
| V57 | Silo No. 57 | 391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1 40 CFR Part 52.21 | 3.3.3, 3.4.1, 3.4.2, 3.5.1, 3.5.2 | V57C | Bin Vent |

* Generally applicable requirements contained in this permit may also apply to emission units listed above.

C. Equipment & Rule Applicability

Emission and Operating Caps –

None.

Applicable Rules and Regulations –

- 40 CFR, Part 60, Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" is listed in the permit as Condition 3.3.1. Each listed piece of equipment in Table 3.1 subject to this requirement has 3.3.1 in the column, ACorresponding Permit Condition. This requirement 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. Emission requirements associated with this rule include no visible fugitive emissions greater than 10 percent opacity. Stack emissions shall not contain particulate matter in excess of 0.05 g/dscm (0.02 grains/dscf) and exhibit greater than 7 percent opacity.
- 40 CFR, Part 60, Subpart UUU, "Standards of Performance for Calciners and Dryers in Mineral Industries" is listed in the permit as Condition 3.3.2. Each listed piece of equipment in Table 3.1 subject to this requirement has 3.3.2 in the column, ACorresponding Permit Condition. This includes **Calciner No. 5 (C5)**. In order for 40 CFR, Part 60, Subpart UUU to be applicable, the emission sources shall have been constructed, reconstructed, or modified after April 23, 1986.

Emission requirements associated with this rule include any gases, which contain particulate matter in excess of 0.092 grams/dscm (0.04 grains/dscf) for calciners and calciners and dryers installed in series. For dryers, which stand alone, the emissions shall not contain particulate matter in excess of 0.057 grams/dscm (0.025 grains/dscf). For both series and parallel operations, the opacity is limited not to exceed 10 percent opacity.

- 40 CFR, Part 52.21 *Prevention of Significant Deterioration of Air Quality*. J. M. Huber – Sandersville Plant is a PSD (Prevention of Significant Deterioration) major source for particulate matter (PM) and particulate matter less than 10 micrometers (PM₁₀). Thiele Kaolin, Burgess Pigment, J. M. Huber, and IMERY=S Calcine Plant operate within a close

proximity of each other in the Sandersville area and each facility contributes to the PSD increment. Because of the close proximity and magnitude of each source, Thiele Kaolin, Burgess Pigment, J. M. Huber, and IMERY=S Calcine Plant are required to submit a comprehensive PM₁₀ increment assessment to determine compliance in the event of any significant emissions increase. Several pieces of equipment must have stack emission limits and the increment consuming sources in the table listed below may not exceed the specified limit. Any source in J. M. Huber – Sandersville Plant subject to this requirement will be identified under ACorresponding Permit Condition≅ as Condition 3.3.3.

Table 1

| Title V Stack Code No. | Source ID | Increment Consuming Sources | PM₁₀ Emission Limit (lb/hr) |
|-------------------------------|------------------|--|---|
| AD1S | AD1 | Apron Dryer | 5.436 |
| AD2S | AD2 | Apron Dryer Bulk Loading | 0.255 |
| B1S | B1 | Boiler No. 1 | 0.478 |
| B2S | B2 | Boiler No. 2 | 0.478 |
| B3S | B3 | Boiler No. 3 | 0.478 |
| B4S | B4 | Boiler No. 4 | 0.210 |
| B5S | B5 | Boiler No. 5 | 0.240 |
| BB2S | BB2 | Big Bagger 30 Ton Hopper Bin Vent | 0.157 |
| BB3S | BB3 | Hydrous Big Bagger Fugitive Collector | 0.100 |
| C5S | C5 | Calciner No. 5 Scrubber | 2.380 |
| SD1S | SD1 | Spray Dryer No. 1 w/Heat Recovery | 3.937 |
| SD2S | SD2 | Spray Dryer No. 2 w/Heat Recovery | 3.937 |
| H5S | H5 | Calciner No. 5, Horizontal Mill Conveyor | 0.099 |
| K5S | K5 | Calciner No. 5 Cooler | 3.538 |
| M26S | M26 | Calciner No. 5, Premills 26-28 | 0.47 |
| M29S | M29 | Calciner No. 5, Premills 29-34 | 0.77 |
| P6S | P6 | Alphalux 91 Salt Silo | 0.204 |
| R54S | R54 | Silos 54-57 Railcar Loading Station | 0.171 |
| SD5S | SD5 | Spray Dryer No.5 | 4.700 |
| V1S | V1 | Silo No. 1 Bin Vent | 0.102 |
| V2S | V2 | Silo No. 2 Bin Vent | 0.102 |
| V3S | V3 | Silo No. 3 Bin Vent | 0.102 |
| V51S | V51 | Silo No. 51 Bin Vent | 0.124 |

| Title V Stack Code No. | Source ID | Increment Consuming Sources | PM ₁₀ Emission Limit (lb/hr) |
|------------------------|-----------|-----------------------------|---|
| V52S | V52 | Silo No. 52 Bin Vent | 0.012 |
| V53S | V53 | Silo No. 53 Bin Vent | 0.012 |
| V54S | V54 | Silo No. 54 Bin Vent | 0.013 |
| V55S | V55 | Silo No. 55 Bin Vent | 0.013 |
| V56S | V56 | Silo No. 56 Bin Vent | 0.013 |
| V57S | V57 | Silo No. 57 Bin Vent | 0.013 |

A list of increment consuming sources subject to limits which will ensure compliance with the PSD increment. The limits are based on PM₁₀ Increment Modeling received on April 06, 1997.

4. 40 CFR, Part 60, Subpart Dc, "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units" is listed in the permit as Condition 3.3.4. Each listed piece of equipment in Table 3.1 subject to this requirement has 3.3.4 in the column, ACorresponding Permit Condition≡. This includes **Boiler No. 3 (B3)**. In order for 40 CFR, Part 60, Subpart Dc to be applicable, the emission sources shall have been constructed, reconstructed, or modified after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts(MW) (100 million Btu per hour (Btu/hr)) or less, but greater than or equal to 2.9MW (10 million Btu/hr).
5. Georgia Rule 391-3-1-.02(2)(p), "Particulate Emissions from Kaolin and Fuller's Earth Processes," is listed in the permit as Condition 3.4.1. Each listed piece of equipment in Table 3.1 subject to this requirement has 3.4.1 in the column, ACorresponding Permit Condition≡. The following equations are used to calculate the allowable rates of emission from kaolin and fuller's earth process equipment constructed or put in operation. Particulate matter emissions cannot equal to or exceed the allowable rates specified in the below equations.
 - a. For equipment constructed or extensively modified after January 1, 1972, the following equations is used to determine allowable emission rates:
 - i. $E = 3.59 P^{0.62}$, for process input weight rate up to and including 30 tons per hour;
 - ii. $E = 17.31 P^{0.16}$, for process input weight rates in excess of 30 tons per hour.
 - b. For equipment constructed or put in operation on or before January 1, 1972, the following equations is used to determine allowable emission rates:
 - i. $E = 4.1 P^{0.67}$, for process input weight rate up to and including 30 tons per hour;

- ii. $E = 55 P^{0.11} - 40$, for process input weight rates in excess of 30 tons per hour.

In the above equations: E = allowable emission rate in pounds per hour; and
P = process input weight rate in tons per hour.

6. Georgia Rule 391-3-1-.02(2)(b)1 AVisible Emissions≡ is an applicable rule, which applies to all facilities and is listed in the permit as Condition 3.4.2. Each listed piece of equipment in Table 3.1 subject to this requirement has 3.4.2 in the column, ACorresponding Permit Condition≡. Visible emissions shall not equal or exceed forty (40) percent.
7. Georgia Rule 391-3-1-.02(2)(d) AFuel Burning Equipment≡ is an applicable rule, which applies to all facilities and is listed in the permit as Condition 3.4.3. Each listed piece of equipment in Table 3.1 subject to this requirement has 3.4.3 in the column, ACorresponding Permit Condition≡. Visible emissions shall not equal or exceed twenty (20) percent, except for one six-minute period per hour of not more than twenty-seven (27) percent opacity.
8. Georgia Air Quality Control Rule 391-3-1-.02(2)(d) “Fuel Burning Equipment” this is an applicable rule, which applies to all facilities which have fuel burning equipment. This requirement is listed in the permit as condition 3.4.4. Each listed piece of equipment in Table 3.1, subject to this requirement is identified under the column listed, “Corresponding Permit Condition”. The emission of particulate matter is limited to the following as derived from the following equations:

Boilers B1, and B2 (equipment rate is 12.6 MMBTU/hr, and installed pre-1972)

The PM emissions are limited by Georgia Air Quality Rule 391-3-.02(2)(d)1(ii) to a quantity determined by the following equations:

$$E = 0.7 \left(\frac{10}{R} \right)^{0.202}$$

Where: E= allowable weight of emissions of fly ash and/or other particulate matter in pounds per million BTU heat input; R= heat input of fuel – burning equipment in million BTU per hour.

Boilers B3, B4and B5 (equipment rates are16.75, 14.65 and 33.50 MMBTU/hr respectively, and installed post-1972)

The PM emissions are limited by Georgia Air Quality Rule 391-3-.02(2)(d)2(ii) to a quantity determined by the following equations:

$$E = 0.5 \left(\frac{10}{R} \right)^{0.5}$$

Where: E= allowable weight of emissions of fly ash and/or other particulate matter in pounds per million BTU heat input; R= heat input of fuel – burning equipment in million BTU per hour.

Therefore, using their maximum rated capacities, the following results limits the discharge into the atmosphere from the sources (B1, B2, B3 and B4) any gases, which shall not:

- a. Contain particulate matter in excess of 0.67 lbs/10⁶ BTU heat input from Package Boiler No. 1 or Package Boiler No. 2 (B1& B2);
 - b. Contain particulate matter in excess of 0.39 lbs/10⁶ BTU heat input from Boiler No. 3 (B3);
 - c. Contain particulate matter in excess of 0.41 lbs/10⁶ BTU heat input from Boiler No. 4 (B4);
 - d. Contain particulate matter in excess of 0.27 lbs/10⁶ BTU heat input from Boiler No. 5 (B5).
9. Georgia Rule 391-3-1-.02(2)(g) ASulphur Dioxide≡ is an applicable rule, which applies to all facilities and is listed in the permit as Condition 3.5.3. Each listed piece of equipment in Table 3.1 subject to this requirement has 3.5.3 in the column, ACorresponding Permit Condition≡. All fuel burning sources below 100 million BTU's of heat input per hour shall not burn fuel containing more than 2.5 percent sulfur, by weight.

D. Compliance Status

The application indicates that the facility is in compliance with all applicable rules and regulations.

E. Operational Flexibility

Not applicable.

F. Permit Conditions

Permit Condition 3.3.1 states the 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, is subject to 40 CFR, Part 60, Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants". Emission requirements associated with this rule include no visible fugitive emissions greater than 10 percent opacity. Stack emissions shall not contain particulate matter in excess of 0.05 g/dscm (0.02 grains/dscf) and exhibit greater than 7 percent opacity.

Permit Condition 3.3.2 states that any calciner or calciner and dryer installed in series constructed, reconstructed, or modified after April 23, 1986, is subject to 40 CFR, Part 60 Subpart UUU, “Standards of Performance for Calculiners and Dryers in Mineral Industries”. Emission requirements associated with this rule include any gases, which contain particulate matter in excess of 0.092 grams/dscm (0.04 grains/dscf) for claciners and calciners and dryers installed in series. For dryers, which stand alone, the emissions shall not contain particulate matter in excess of 0.057 grams/dscm (0.025 grains/dscf). For both series and parallel operations, the opacity is limited not to exceed 10 percent opacity.

Permit Condition 3.3.3 limits the stack limitations of some sources in the facility, because of the close proximity and magnitude of each source, Thiele Kaolin, Burgess Pigment, IMERYYS (p.k.a. ECC), and J. M. Huber are required to submit a comprehensive PM₁₀ increment assessment to determine compliance in the event of any significant emissions increase. The previous PSD increment assessment revealed the highest second-high 24-hour concentration was 29.98 mg/m³ and does not exceed the particulate matter (30.0 mg/m³) threshold. To maintain compliance with the particulate matter (30.0 mg/m³) threshold, J. M. Huber Corporation may need to take additional stack emissions limits not required either by any current state or federal regulation. Table 1 shows the limitation of PM₁₀ emission limits expressed in pounds per hour (lb/hr) of all related sources in J. M. Huber – Sandersville Plant.

Permit Condition 3.3.4 states that the Permittee shall comply with all provisions of 40 CFR, Part 60, Subpart Dc, “Standards of Performance for Small Industrial-Commercial Institutional Steam Generating Units,” for Boiler No. 3 (Source Code B3).

Permit Condition 3.3.5 requires the Permittee to limit the stack emission of Railcar Loading System from Apron Dryer to 0.025 g/dscm(0.010 grains/dscf).

Permit Condition 3.4.1 states the Georgia Rule (p) equations used to calculate the allowable rates of emission from kaolin and fuller’s earth process equipment constructed or operated. Particulate matter emissions can not equal to or exceed the allowable rates specified in the stated equations.

Permit Condition 3.4.2 states that any gases discharged from any air contaminant source shall not exceed 40% opacity, as required by Georgia Air Quality Rule 391-3-1-.02(2)(b)1.

Permit Condition 3.4.3 states that any gases discharged from Boiler No. 3 through No. 5 shall not exceed 20% opacity, except for one six- minute period per hour of not more than 27% opacity, as required by Georgia Air Quality Rule(d).

Permit Condition 3.4.4 limits the any PM discharged from Boiler No. 1 through No. 5, according to Georgia Air Quality Rule 391-3-1-.02(2)(d).

Permit Condition 3.5.1 requires that the Permittee shall operate all baghouses at all times.

Permit Conditions 3.5.2 requires that the Permittee shall maintain an adequate inventory of replacement filter bags for all baghouses.

Permit Condition 3.5.3 prohibits the Permittee from firing any fuel other than natural gas, No.2 fuel oil and propane, and limits the sulfur content of the No.2 fuel oil not to exceed 0.5 weight percent, and limits the consumption of No.2 fuel oil not to exceed 2,700,000 gallons during any 12 consecutive month period. The following calculations show that the facility – wide SO₂ and NO_x Potential to Emit are below 250 tons per year (tpy).

Facility-Wide SO₂ Potential to Emit (PTE) and Facility-Wide NO_x PTE

The following table shows the information related to the calculations.

| ID Number | Unit Description | Installation Date | Rated Capacity (MMBTU/Yr) | Fuel Type | | |
|-----------|------------------|-------------------|---------------------------|----------------|------------|---------|
| | | | | No. 2 Fuel Oil | Nature Gas | Propane |
| B1 | Boiler #1 | 1968 | 12.6 | x | x | x |
| B2 | Boiler #2 | 1971 | 12.6 | x | x | x |
| B3 | Boiler #3 | Post 6/9/1989 | 16.75 | x | x | x |
| B4 | Boiler #4 | 1987 | 14.65 | x | x | x |
| B5 | Boiler #5 | 1987 | 33.5 | x | x | x |
| SD1 | Spray Dryer #1 | 1968 | 40 | x | x | x |
| SD2 | Spray Dryer #2 | 1972 | 40 | x | x | x |
| SD5 | Spray Dryer #5 | 1988 | 100 | x | x | x |
| C5 | Calciner #5 | 1988 | 36 | x | x | x |
| AD1 | Apron Dryer 1 | 1982 | 17.5 | | x | x |

A. Facility-Wide SO₂ PTE

The sum of the Capacity of Boiler#1 through C5 firing No. 2 Fuel oil= 12.6 * 2 + 16.75+ 14.65+ 33.5+ 40*2+ 100+ 36 = 306.1 MM Btu/hr.

The total capacity of all units listed in the above table firing Nature Gas = 306.1+17.5 = 323.6 MMBtu/Hr.

Heating Value of No. 2 Fuel Oil = 141,000 Btu/gal

Heating Value of Natural Gas = 1,000 Btu/ft³ = 0.001 MMBtu/ft³

SO₂ Emission Factor (AP-42, No. 2 Fuel Oil) = 142*S Lbs/1,000 Gal

S = Maximum Sulfur Content = 0.5 %

SO₂ Emission Factor (AP-42, Natural Gas) = 0.6 LB/MMCF

No. 2 Fuel Oil Annual Usage Limit = 2,700,000 Gal/Yr

SO₂ PTE

= (142*0.5 lbs/1,000 gal)*(2,700,000 gal/yr) * 1ton /2,000lbs + [(323.6 MM Btu/hr)/ (0.001 MM Btu/1ft³)]*(8,760 hrs/yr)*(0.6 lb/10⁶ ft³)]*(1 ton/2,000 lbs)

= 95.85 tpy+ 0.85 tpy = 96.7 tpy

Facility-Wide SO₂ PTE = 96.7 tpy

B. Facility-Wide NO_x PTE

The sum of the Capacity of Boiler#1 through C5 firing No. 2 Fuel oil= 12.6 * 2 + 16.75+ 14.65+ 33.5+ 40*2+ 100+ 36 = 306.1 MM Btu/hr.

The total capacity of all units listed in the above table firing Nature Gas = $306.1 + 17.5 = 323.6$ MMBtu/Hr.

Heating Value of No. 2 Fuel Oil = 141,000 Btu/gal

Heating Value of Natural Gas = $1,000 \text{ Btu/ft}^3 = 0.001 \text{ MMBtu/ft}^3$

NO_x Emission Factor (AP-42, No. 2 Fuel Oil) = 20 Lbs/1,000 Gal

NO_x Emission Factor (AP-42, Natural Gas) = 140LB/MMCF

No. 2 Fuel Oil Annual Usage Limit = 2,700,000 Gal/Yr

NO_x PTE

$= (20 \text{ lbs/1,000 gal}) * (2,700,000 \text{ gal/yr}) * 1 \text{ ton /2,000lbs} + [(323.6 \text{ MM Btu/hr}) / (0.001 \text{ MM Btu/1ft}^3)] * (8,760 \text{ hrs/yr}) * (140 \text{ lb/10}^6 \text{ ft}^3)] * (1 \text{ ton/2,000 lbs})$

$= 27 \text{ tpy} + 198.33 \text{ tpy} = 225.33 \text{ tpy}$

Facility-Wide NO_x PTE = 225.33 tpy

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

The Permit Condition 4.1.1 specifies that a performance test may be required at anytime upon request by EPD to determine compliance with the Permit. Condition 4.1.2 requires a thirty-day written notice and a test plan prior to any testing and the test methods for measuring emissions are listed in Condition 4.1.3.

B. Specific Testing Requirements

The initial performance tests required by 40 CFR 60.8 and the current Air Quality Permit have been completed for all existing equipment. 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. If these changes are made, a condition is present to require the initial performance test be performed in accordance with 40 CFR 60.8 and the applicable subpart.

V. Monitoring Requirements (with Associated Record Keeping and Reporting)**A. General Monitoring Requirements**

Condition 5.1.1 requires that all monitors be operated continuously except during breakdowns and repairs. A repair or maintenance should be completed in an expeditious manner so downtime is minimized. All data should also be recorded during any calibration activity to help verify that the calibration was performed and completed properly.

B. Specific Monitoring Requirements

Spray Dryer No. 5 is subject to 40CFR60 Subpart UUU and Georgia Rule (b) and (p) for limitations of particulate matter (PM) and visible emissions (opacity), as well as a PM₁₀ limits for PSD increment purposes. Particulate matter emissions for the calciner are controlled by a baghouse. Subpart UUU requires that a Dryer or Calciner equipped with a dry control device, such as a baghouse, install a Continuous Opacity Monitoring System (COMS). The COMS was determined to be sufficient monitoring to assure compliance with the PM, PM₁₀ and opacity limitations and no other monitoring are required. Exceedances are as defined in Subpart UUU.

Calciner No. 5 uses a venture scrubber (C5C) to control emissions and is subject to the PM emission limits for both PSD and Rule (p), and 40 CFR Part 60, Subpart UUU. Pressure drop across the scrubber and scrubbant flow rates for the Calciner is required to be continuous monitored and recorded by the Subpart. Ranges for both the scrubbant flow and pressure drop across the scrubber are specified in the permit for the scrubber C5C. Exceedances, to be reported semiannually, are specified.

No. 3 Boiler (B3) is subject to 40 CFR, Part 60, Subpart Dc, “Standards of Performance for Small Industrial-Commercial Institutional Steam Generating Units”, and it is required that the Permittee shall comply with all provision of it.

Most sources at the facility have baghouses for control of Particulate Matter (PM) emissions and are subject to the PM and Visible emissions (opacity) limitations of Georgia Rules (p), (b), and/or 40 CFR Part 60 Subpart OOO. Many of these processes are substantial sources of PM emissions, which are controlled by the larger baghouses installed at the facility, and are subject to the monitoring requirements of Condition 5.2.3 and 5.2.4 to reasonably assure applicable emissions limitations are not exceeded by specifying a Visible Emissions (VE) check 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. This same monitoring protocol is also extended to the Apron Dryer, which has no emissions control. In addition, a Preventive Maintenance Program is required on these sources with 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, sources identified in condition 3.3.3 have emissions limitations for PM₁₀ for purposes of Prevention of Significant Deterioration (PSD). The monitoring described previously is adequate for assuring compliance with the PM₁₀ limitations. Excursions, to be reported semiannually, are specified.

Dust collectors, bin vents and filter receivers controlling emissions from individual bins, wet screening operations, bucket elevators, belt and pneumatic conveyances, concentrator cooling towers and bagging operations are subject to PM and opacity limitations of NSPS OOO, but are exempted from previously detailed monitoring provisions due to little likelihood of significant Particulate Matter emissions.

Baghouses SD1C, SD2C, and SD5C, which receive gases from combustion sources are subject to the PM and opacity limitations of NSPS UUU. They are required to monitor (not record) temperature continuously and to record all incidents when the temperature exceeds temperature based on the maximum temperature that the bags can withstand. The specified excursions are to be reported semiannually. This is to ensure integrity of the baghouse which controls PM and opacity emissions.

As required by Georgia Rule (b), sources of particulate matter emissions which have no air pollution control equipment (except the Apron Dryer) are required to be inspected each day of operation for visible emissions and/or malfunction which might cause 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. The specified excursions are to be reported semiannually.

All fuel-burning sources (boilers, dryers, the calciner, and the apron dryer) are subject to Georgia Rule (g) for sulfur dioxide emissions. Natural gas and propane are processed fuels (cleaned) which have negligible amounts of sulfur; therefore no monitoring is required when these fuels are burned. These sources also have the capacity to burn No. 2 Fuel Oil.

Condition 3.5.3 limits the sources to burning only natural gas, propane and No. 2 Fuel Oil. No. 2 fuel oil is limited to a sulfur content of 0.5 weight percent, which is much more stringent than the Rule (g) standard. Condition 6.2.4 requires that the facility shall verify that each shipment of fuel oil received is certified to be No. 2 fuel oil. Condition 3.5.3 also limits the 12-month total of fuel oil burned. Exceedences, to be reported semiannually are specified.

Boilers 1 through 5 (all uncontrolled) are subject to Georgia Rule (d) for opacity and particulate matter (PM) emissions. These sources are also subject to the PSD PM₁₀ emission limits specified in condition 3.3.3. These sources all burn natural gas, propane and No. 2 Fuel Oil. The likelihood of applicable particulate matter emissions limitations being exceeded is low for gaseous fuels, therefore no monitoring is required while these sources burn natural gas or propane. The AP-42 emission factors for both PM and PM₁₀ for these sources indicate very little likelihood that these emission limits will be exceeded, therefore no monitoring is necessary while burning fuel oil.

VI. Other Record Keeping and Reporting Requirements

A. General Record Keeping and Reporting Requirements

The Permit contains requirements for the maintenance of all records of a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from applicable requirements.

Condition 6.1.7 states that the Permittee shall report the exceedances and excursions contained in condition 6.1.7(b) and (c).

B. Specific Record Keeping and Reporting Requirements

In accordance with 40 CFR, Part 60, “Standard of Performance for New Stationary Sources (NSPS)”, the Permittee shall comply with the reporting and record keeping requirements of 40 CFR, Part 60, Subpart A and furnish the Division written notification.

As required by 40 CFR, Part 60, Subpart OOO, “Standard of Performance for Nonmetallic Mineral Processing Plants”, the Permittee shall comply with the detailed reporting and record keeping and shall submit the required information listed in Permit Condition 6.2.2 (a) and (b) about the existing Subpart OOO equipment being replaced and the replacement piece of equipment.

In accordance with 40 CFR, Part 60, “Standard of Performance for Small Industrial-Commercial-Industrial Steam Generating Units”, the Permit Condition 6.2.2(c) states that the natural gas and No. 2 fuel oil consumed by No. 3 Boiler (B3) shall be recorded monthly, which was approved by U.S. EPA Region 4 on August 14, 1996.

Permit Condition 6.2.3 requires that for the No. 3 Boiler (B3), the Permittee shall keep the monthly records suitable for inspection, and in the records, the volume of Nature Gas (in Cubic Feet) and the quantity of No. 2 Fuel Oil (in Gallons) shall be kept.

Permit Condition 6.2.4 requires that the Permittee shall keep the records suitable for inspection, and shall notify the Division in writing if the consumption of No.2 fuel oil exceeds one-twelfth of its rolling annual limit during any calendar month.

Permit Condition 6.2.5 states that the Permittee shall verify the fuel oil meets the No. 2 fuel oil specification described by ASTM D396. Fuel supplier certifications are required to assure compliance with fuel sulfur limitation.

Permit Condition 6.2.6 requires the Permittee shall maintain the record of all actions taken to suppress fugitive dust from roads, storage piles, or any other source of fugitive dust.

Permit Condition 6.2.7 requires the Permittee shall submit a written report of each semiannual period ending June 30 and December 31 to report the fuel consumption in any fuel burning source and fuel supplier certifications.

Permit Condition 6.2.8 requires the Permittee must record the amount of fuel oil fired in fuel oil burning sources.

Permit Condition 6.2.9 states that the Permittee shall report 12 months-rolling total of fuel oil consumption in the semiannual report.

VII. Specific Requirements

- A. Operational Flexibility
 - Not applicable.

- B. Alternative Requirements
 - Not applicable

- C. Insignificant Activities
 - refer to §4.10 of the Title V permit application.

- D. Temporary Sources
 - Not applicable.

- E. Short-Term Activities
 - Not applicable.

- F. Compliance Schedule/Progress Reports
 - Not applicable.

- G. Emissions Trading
 - Not applicable.

- H. Acid Rain Requirements
 - Not applicable.

- I. Prevention of Accidental Releases
 - Not applicable.

- J. Stratospheric Ozone Protection Requirements

- Not applicable.

K. Pollution Prevention

- Not applicable.

L. Specific Conditions

- Not 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.

Addendum to Narrative

Written comments were received from J. M. Huber – Sandersville Plant on December 17, 2001. The Public Notice for this Permit was published in the Sandersville Progress on December 19, 2001. The public comment period ended on January 17, 2002. No comments were received from EPA. The comments are summarized below followed by a discussion of the comments and any changes made to the permit as a result.

Below are EPD's responses to comments raised by J. M. Huber – Sandersville Plant.

1. The Facility wants to add the phase "while in operation" to the end of the Condition 3.5.1. So the Condition 3.5.1 is changed to "The Permittee shall operate all baghouses at all times associated with controlling particulate matter emissions from kaolin production, while in operation."

Division's Response: The Division agrees, and changes has made.

2. The Facility wants to add the phases "when there is Reasonable Cause" and "and not later than 60 days after the test" to the Condition 4.4.1. So the Condition 4.4.1 is changed to "The Permittee shall cause to be conducted a performance test at any specified emission point when there is reasonable cause and when so directed by the Environmental Protection Division ("Division"). The test results shall be submitted to the Division within 30 days of receiving test results and not later than 60 days after the test. Any tests shall be performed and conducted using methods and procedures that have been previously specified or approved by the Division."

Division's Response: Division disagrees. This is standard language in Part 70 operating permit templates and consistent with permits of this type. No changes will be made.

3. The Facility wants to strike phases "from Apron Dryer AD1" and "Baghouses controlling emissions from" from Condition 5.2.3. So the Condition 5.2.3 will look like as follows: The Permittee shall perform a check of visible emissions from all baghouses (including process baghouses) controlling emission from sources listed in Section 3.1 of this permit, ~~from Apron Dryer AD1~~, and from sources added or replaced in accordance with the provisions of condition 7.1.2. ~~Baghouses controlling emissions from~~ silos with dedicated bin vents, wet screening operations, bucket elevators, screw conveyors, bagging operation, pneumatic conveyors, and emissions units monitored in accordance with Condition 5.2.1 or 5.2.2 are exempt from this condition. The Permittee shall retain a record in a daily visible emissions (VE) log suitable for inspection or submittal. The check shall be conducted at least once for each day or portion of each day of operation and shall be conducted using the following procedure:

Division's Response: Division disagrees. This is standard language in Part 70 operating permit templates and consistent with permits of this type. No changes will be made.

4. The Facility wants to strike phase of "or equal to" from the Condition 5.2.3(b), so the Condition 5.2.3(b) will look like as follows: For each source determined to be emitting visible emissions, the Permittee shall determine whether the emissions equal or exceed the opacity action level for that source using the procedure specified in paragraph d of this condition, except that the person performing the determination shall have received additional training acceptable to the Division to recognize the appropriate opacity level and the determination shall cover a period of three minutes.

The opacity action level for baghouses subject to the emission limitations of the NSPS regulations is 5 percent, and for baghouses not subject to NSPS regulations is 10 percent. The results shall be recorded in the daily (VE) log. For sources that exhibit visible emissions of greater than ~~or equal to~~ the opacity action level, the Permittee shall comply with paragraph c of this condition.

Division's Response: Division disagrees. This is standard language in Part 70 operating permit templates and consistent with permits of this type. No changes will be made.

5. The Facility wants to verify 2.5 percent sulfur in the Condition 8.20.1(a) which already was written in the Draft Permit as follows: All fuel burning sources below 100 million BTU's of heat input per hour shall not burn fuel containing more than 2.5 percent sulfur, by weight.

Division's Response: Condition 8.20.1(a) already verified 2.5 percent sulfur, by weight, and no changes made.

6. The Facility wants to add the phase of "on public roads" to the Condition 8.22.1(d), so the Condition 8.22.1(d) will look like as follows: Covering, at all times when in motion in public roads, open bodied trucks, transporting materials likely to give rise to airborne dusts; and

Division's Response: Division disagrees. This is standard language in Part 70 operating permit templates and consistent with permits of this type. No changes will be made.

7. The Facility wants to add the words "public" and "spilled" to the Condition 8.22.1(e), so the Condition 8.22.1(e) will be changed to as follows: The prompt removal of earth or other material from paved public streets onto which earth or other material has been deposited.

Division's Response: Division disagrees. This is standard language in Part 70 operating permit templates and consistent with permits of this type. No changes will be made.

8. The Facility wants to delete or combine Condition 8.22.2 with Condition 8.18.1. Condition 8.22.2 -- The opacity from any fugitive dust source shall not equal or exceed 20 percent. Condition 8.18.1 -- Except as may be provided in other provisions of this Permit, the Permittee shall not cause, let, suffer, permit or allow emissions from any air contaminant source the opacity of which is equal to or greater than forty (40) percent.

Division's Response: Division disagrees. This is standard language in Part 70 operating permit templates and consistent with permits of this type. No changes will be made.