Facility Name: **Thiele Kaolin Company, Sandersville Plant**
City: Sandersville
County: Washington
AIRS #: 04-13-30300006

Application #: TV-16972
Date Application Received: June 23, 2006
Permit No: 3295-303-0006-V-02-0

Program	Review Engineers	Review Managers
SSPP	Hamid Yavari	James Capp
ISMP	Daniel McCain	DeAnna Oser
SSCP	Ahmad Dromgoole	Douglas Waldron
Toxics	N/A	N/A

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. 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 primary purpose of this permit is to consolidate and identify existing state and federal air requirements applicable to **Thiele Kaolin Company, 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:Thiele Kaolin Company, Sandersville Plant

2. Parent/Holding Company Name: Thiele Kaolin Company

3. Previous and/or Other Name(s): None

4. Facility Location

520 Kaolin Road
Sandersville, Georgia 31082 (Washington County)

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

The facility is located in an attainment area.

6. Class I Area Impacts

The facility is not located within 200 km of a Class I area.

B. Site Determination

There are no applicable issues with regard to the site determination. There are no other facilities which could be considered contiguous or adjacent and under common control.

C. Existing Permits

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

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

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
3295-303-0006-V-01-0	December 27, 2001	Initial Title V Permit
3295-303-0006-V-01-1	July 13, 2005	Permit was amended to resolve the facility's objection to the initial Title V Permit so that the appeal was dropped.

D. Process Description

1. SIC Codes(s)

3295

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

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

2. Description of Product(s)

The facility processes kaolin.

3. Overall Facility Process Description

Kaolin slurry at about 30% solids is pumped about 14 miles from the mines sites to the Sandersville Plant. The slurry, upon reaching the plant, is stored in large tanks. From these tanks the clay is pumped to various processes consisting of magnetic separators, attrition mills, centrifuges, and addition of leaching chemicals. The main chemicals added are sulfuric acid and sodium hypochlorite. The slurry is stored in various large storage tanks between these processes.

The next process stage is dewatering by rotary drum vacuum filters. At this stage water is removed, raising the slurry solids content to about 60% solids. The slurry is also dispersed and pH raised to about neutral with soda ash. The only air pollution control equipment to this point is a bin vent on the soda ash bin, which is filled (about every two weeks) by air conveying from a delivery truck.

From the vacuum filters the slurry is pumped to storage tanks prior to processing it for shipments. Three primary processes process the clay for shipment: spray drying, calcining, and raising solids content to approximately 70%.

There are four spray dryer systems at this plant: No. 2 Spray Dryer (SD02), No. 3 Spray Dryer (SD03), No. 4 Spray Dryer (SD04), and No. 5 Spray Dryer (SD05). Each of these systems produces a dry hydrous kaolin product. Each consists of a spray dryer with a natural gas furnace, which uses fuel oil only during natural gas curtailments. Each has a large multi-module fabric baghouse to control air emissions and recover product.

No. 1 Spray Dryer (SD01) is the same as those listed above except it dries kaolin for further processing by the calciners. Its product can only be air conveyed to either the 100A or 100B (calciner) silos.

Each of these systems and its auxiliary equipment is shown in detail in the enclosed process diagrams.

There are five silos for temporary storage of dry kaolin before shipping. There are two bagging systems (one for 50 and 100 pound bags and one for 1-ton bags) for both the hydrous and anhydrous (calcined) clays. Dry kaolin is shipped from the plant either in bulk or in bags by either rail or truck transportation.

There are fugitive dust collection systems for railcar loading points.

There are two makedown systems for producing 70% solids kaolin slurry form hydrous (spray dried) kaolin. From these system the slurry is either pumped directly into tanker trucks or rail tankcars or into temporary tanks for later loading into these conveyances. There is also a makedown system for the calciner complex.

There are two calciner systems (SD08 and SD09) with tandem spray dryers (SD06 and SD07), which use heat from calciner emissions to dry clay, which will be calcined. Associated with the calciner systems are six concrete silos and two groups of grinding mills for pre-calcined kaolin and two groups of grinding mills for post-calcined clay.

The plant also has two 1,100 kW electrical generators, each of which is used about 40 hours per year to take advantage of lower available electrical rates.

4. Overall Process Flow Diagram

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

E. Regulatory Status

1. PSD/NSR

Thiele Kaolin Company, Sandersville Plant is a major source under PSD/NSR regulations for Particulate Matter (PM), Particulate Matter less than 10 microns (PM_{10}), and Nitrogen Oxides (NOX). Thiele Kaolin is subject to PM_{10} limits set to assure significant deterioration does not occur accordance to 40 CFR Part 52.21 Prevention of Significant Deterioration of Air Quality.

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}	✓	✓		
SO_2	✓			✓
VOC	✓			✓
NO_x	✓	✓		
CO	✓			✓
TRS	✓			✓
H_2S	✓			✓
Individual HAP	✓			✓
Total HAPs	✓			✓

3. MACT Standards

The facility is not subject to any MACT standards.

4. Program Applicability (AIRS Program Codes)

Table 3 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 applicable.

B. Applicable Rules and Regulations

None applicable.

C. Compliance Status

The facility did not indicate that they were/are out of compliance with any equipment-specific applicable rules and regulations in this application.

D. Operational Flexibility

None applicable.

E. Permit Conditions

None.

III. Regulated Equipment Requirements

A. Brief Process Description

The facility processes kaolin.

B. Equipment List for the Process

Table 4: Emission Units

Emission Units		Specific Limitation(s)/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirement(s) / Standard(s)	Corresponding Permit Condition(s)	ID No.(s)	Description
BOILERS					
SP08	Old Boiler	391-3-1-.02(2)(b) 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	3.4.2, 3.4.4, 3.4.5, 5.2.6, 6.2.7, 6.2.8	---	None
SP09	New Boiler	391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	3.2.5, 3.4.3, 3.4.4, 3.4.5, 5.2.6, 6.1.7, 6.2.3, 6.2.5, 6.2.7, 6.2.8	---	None
SPRAY DRYERS					
SD01	Spray Dryer No. 1	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)2 391-3-1-.02(2)(g)	3.2.8, 3.2.10, 3.4.1, 3.4.2, 3.4.5, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 5.2.9, 5.2.10, 6.1.7, 6.2.7, 6.2.8,	SB01	Baghouse
SD02	Spray Dryer No. 2	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)2 391-3-1-.02(2)(g)	3.2.10, 3.4.1, 3.4.2, 3.4.5, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 5.2.9, 5.2.10, 6.1.7, 6.2.7, 6.2.8	SB02	Baghouse
SD03	Spray Dryer No. 3	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)2 391-3-1-.02(2)(g)	3.2.10, 3.4.1, 3.4.2, 3.4.5, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 5.2.9, 5.2.10, 6.1.7, 6.2.7, 6.2.8	SB03	Baghouse
SD04	Spray Dryer No. 4	391-3-1-.02(2)(p)1 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR Part 52.21	3.2.2, 3.2.4, 3.3.3, 3.4.1, 3.4.2, 3.4.5, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 5.2.9, 5.2.10, 6.1.7, 6.2.3, 6.2.4, 6.2.8	SB04	Baghouse
SD05 SC17	Spray Dryer No. 5 Railcar Loading at Spray Dryer No. 5	391-3-1-.02(2)(p)1 391-3-1-.02(2)(g) NSPS UUU NSPS OOO 40 CFR Part 52.21	2.2.1, 3.2.1, 3.2.2, 3.2.6, 3.2.7, 3.3.1, 3.3.2, 3.3.3, 3.4.1, 3.4.5, , 5.2.1, 5.2.4, 5.2.6, 5.2.9, 5.2.10, 6.1.7, 6.2.3, 6.2.5, 6.2.7, 6.2.8	SB05	Baghouse
SD06	Spray Dryer No. 6	391-3-1-.02(2)(p)1 391-3-1-.02(2)(g) NSPS UUU	2.2.1, 3.2.2, 3.2.9, 3.3.2, 3.4.1, 3.4.5, , 5.2.1, 5.2.4, 5.2.9, 5.2.10, 6.1.7	SW01 SB06	Heat Recovery Scrubber Baghouse

Emission Units		Specific Limitation(s)/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirement(s) / Standard(s)	Corresponding Permit Condition(s)	ID No.(s)	Description
SD07	Spray Dryer No. 7	391-3-1-.02(2)(p)1 391-3-1-.02(2)(g) NSPS UUU	2.2.1, 3.2.2, 3.2.9, 3.3.2, 3.4.1, 3.4.5, , 5.2.1, 5.2.4, 5.2.9, 5.2.10, 6.1.7	SW02 SB07	Heat Recovery Scrubber Baghouse
CALCINERS					
SD08	Calciner No. 1	391-3-1-.02(2)(p)1 391-3-1-.02(2)(g) NSPS UUU 40 CFR Part 52.21	2.2.1, 3.2.3, 3.2.6, 3.2.7, 3.3.2, 3.3.3, 3.4.1, 3.4.5, 5.2.4, 5.2.6, 5.2.7, 5.2.8, 5.2.9, 5.2.10, 6.1.7, 6.2.3, 6.2.5, 6.2.7, 6.2.8	SW01 SB06 Or SW02 SW01	Heat Recovery Scrubber Baghouse Or Venturi Scrubber Heat Recovery Scrubber
SD09	Calciner No. 2	391-3-1-.02(2)(p)1 391-3-1-.02(2)(g) NSPS UUU 40 CFR Part 52.21	2.2.1, 3.2.3, 3.2.9, 3.3.2, 3.3.3, 3.4.1, 3.4.5, 5.2.4, 5.2.7, 5.2.8, 5.2.9, 5.2.10, 6.1.7	SW03 SB07 Or SW04 SW03	Heat Recovery Scrubber Baghouse Or Venturi Scrubber Heat Recovery Scrubber
BAGGERS, RECEIVERS, SILOS, AND BUCKET ELEVATORS					
SC01	Bucket Elevator at Spray Dryer No. 2	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1	3.4.1, 3.4.2	SB08	Baghouse
SC02	Bucket Elevator at Spray Dryer No. 3	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1	3.4.1, 3.4.2	SB45	Baghouse
SC03	Bucket Elevator at Spray Dryer No. 4	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1, 3.2.1	SB10	Baghouse
SP06	50 lb. Bagger at #1 Calciner	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1, 3.2.1	SB48	Baghouse
SP07	One ton Bagger at Calciner Warehouse	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.2.1, 3.3.1, 3.4.1	SB50	Baghouse
SC04	Bucket Elevator at Spray Dryer No. 4 Track Loading	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1	3.4.1, 3.4.2	SB11	Baghouse
SC05	50 lb. Bagger Scavenger	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1	3.4.1, 3.4.2	SB12	Baghouse
SS02	Silo 100B for Spray Dryer Products	391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21	2.2.1, 3.2.1, 3.3.1, 3.3.3, 3.4.1	SB31	Bin vent
SC06	Pneumatic Conveyor to Product Conveyor/Receiver on Silo 200B	391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21	2.2.1, 3.2.1, 3.3.1, 3.3.3, 3.4.1	SB13	Baghouse
SC07	Pneumatic Conveyor to Product Conveyor/Receiver on No. 1 calciner	391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21	2.2.1, 3.2.1, 3.3.1, 3.3.3, 3.4.1	SB14	Baghouse
SC08	Pneumatic Conveyor to Product Conveyor/Receiver on silo 300B	391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21	2.2.1, 3.2.1, 3.3.1, 3.3.3, 3.4.1	SB15	Baghouse
~~PC5~~	~~Calciner No. 1 Reject Bin~~	~~391-3-1-.02(2)(p)1~~ ~~NSPS OOO~~ ~~40 CFR Part 52.21~~	~~2.2.1, 3.2.1, 3.3.1, 3.3.3, 3.4.1~~	~~CR5~~	~~Baghouse~~
SC09	Pneumatic Conveyor to Product Conveyor/Receiver on Silo 400B	391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21	2.2.1, 3.2.1, 3.3.1, 3.3.3, 3.4.1	SB17	Baghouse

Emission Units		Specific Limitation(s)/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirement(s) / Standard(s)	Corresponding Permit Condition(s)	ID No.(s)	Description
SS03	Silo 100A	391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21	2.2.1, 3.2.1, 3.3.1, 3.3.3, 3.4.1	SB32	Bin vent
SC11	Pneumatic Conveyor to Product Conveyor/Receiver on Silo 200A	391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21	2.2.1, 3.2.1, 3.3.1, 3.3.3, 3.4.1	SB18	Baghouse
SC12	Pneumatic Conveyor to Product Conveyor/Receiver on Calciner No. 2	391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21	2.2.1, 3.2.1, 3.3.1, 3.3.3, 3.4.1	SB19	Baghouse
SC13	Pneumatic Conveyor to Product Conveyor/Receiver on Silo 300A	391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21	2.2.1, 3.2.1, 3.3.1, 3.3.3, 3.4.1	SB20	Baghouse
SC14	Pneumatic Conveyor to Product Conveyor/Receiver on Silo 400A	391-3-1-.02(2)(p)1 NSPS OOO 40 CFR Part 52.21	2.2.1, 3.2.1, 3.3.1, 3.3.3, 3.4.1	SB22	Baghouse
SC18	Railcar Loading at Calciner Nos. 1 and 2	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.2.1, 3.3.1, 3.4.1, 5.2.2, 5.2.3,	SB25	Baghouse
SLURRY SYSTEM					
~~SM3~~	~~Calciner slurry makedown surge bin~~	~~391-3-1-.02(2)(p)1 NSPS OOO~~	~~2.2.1, 3.2.1, 3.3.1, 3.4.1~~	~~MC3~~	~~Baghouse~~
SC15	Slurry system silo 400A weigh belt	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.2.1, 3.3.1, 3.4.1, 5.2.2, 5.2.3	SB23	Baghouse
SC16	Slurry system silo 400B weigh belt	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.2.1, 3.3.1, 3.4.1, 5.2.2, 5.2.3	SB24	Baghouse
MILLS					
SM01	Calciner No. 1 premills (5)	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.2.1, 3.3.1, 3.4.1, 5.2.2, 5.2.3, 5.2.9, 5.2.10	SB13	Baghouse
SM02	Calciner No. 1 postmills (8)	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.2.1, 3.3.1, 3.4.1, 5.2.2, 5.2.3,	SB17	Baghouse
SM03	Calciner No. 2 premills (3)	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.2.1, 3.3.1, 3.4.1, 5.2.2, 5.2.3, 5.2.9, 5.2.10	SB18	Baghouse
SM04	Calciner No. 2 postmills (8)	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.2.1, 3.3.1, 3.4.1, 5.2.2, 5.2.3, 5.2.9, 5.2.10	SB22	Baghouse
SILOS, CONVEYORS, BUCKET ELEVATORS AND BAGGERS					
SS13	Silo No. 1	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)2	3.4.1, 3.4.2	SB40	Bin vent
SS14	Silo No. 2	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)2	3.4.1, 3.4.2	SB41	Bin vent
SS15	Silo No. 3	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)2	3.4.1, 3.4.2	SB42	Bin vent
SS16	Silo No. 4	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)2	3.4.1, 3.4.2	SB43	Bin vent
SS17	Silo No. 5	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)2	3.4.1, 3.4.2	SB45	Baghouse
SM05	Atarex Grinder/Mixer	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1,	SW05	Venturi Scrubber
SP10	Stamlyer Feeder/Slicer (Crusher)	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1, 5.2.5	--	None

Emission Units		Specific Limitation(s)/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirement(s) / Standard(s)	Corresponding Permit Condition(s)	ID No.(s)	Description
SS10	Avent Mine Silo 1	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1	SB37	Bin Vent
SS11	Avent Mine Silo 2	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1	SB38	Bin Vent
SC26	Big Bagging Feed Screw #1	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1	2.2.1, 3.4.1	SB26 SB27	Bin Vent Baghouse
SC27	Bagging Bucket Elevator	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1	SB26 SB27	Bin Vent Baghouse
SS06	Existing Big Bagging Bin	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1	SB26 SB27	Bin Vent Baghouse
SP03	#1 Big Bagger – 200 lbs	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1	SB26	Baghouse
SP04	#2 Big Bagger – 200 lbs	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1	SB26	Baghouse
SS07	M1-3 50# Big Bagging Bin – 100 Tons	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1	SB35	Bin Vent
SP05	Impeller Packers 1-4	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1	SB29	Baghouse
SC19	Big Bag Reclaim Unit	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1	SB26	Baghouse
SC20	Big Bag Reclaim Screw Conveyor	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1	2.2.1, 3.4.1	SB26 SB27	Bin Vent Baghouse
SC21	Wire Mesh Conveyor	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1, 5.2.2, 5.2.3	SB28 SB29	Baghouse
SC22	Conveying Belt System	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1, 5.2.2, 5.2.3	SB28 SB29	Baghouse
SS08	Takeaway Reclaim Hopper	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1, 5.2.2, 5.2.3	SB28 SB29	Baghouse
SC23	Takeaway Reclaim Screw Conveyor	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1	2.2.1, 3.3.1, 3.4.1, 5.2.2, 5.2.3	SB28 SB29	Baghouse
SC24	Little Bag Reclaim Unit	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1, 5.2.2, 5.2.3	SB28 SB29	Baghouse
SC25	Big Bagging Feed Screw Conveyor #2	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1	2.2.1, 3.3.1, 3.4.1	SB26 SB27	Bin Vent Baghouse
SS05	Slurry System #1 Markdowm Bin	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1	2.2.1, 3.4.1	SB34	Bin Vent
SS09	#3 Interstitial Silo	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1	SB36	Bin Vent
SS12	Soda Ash Silo	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1	2.2.1, 3.4.1	SB39	Baghouse
SS18	Reject Bin CA 1,2 #2 Intersty	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.3.3, 3.4.1	SB49	Baghouse
SS19	Steel Bin No. 2	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1	2.2.1, 3.4.1	SB51	Bin Vent
SS20	Steel Bin No. 1	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1	SB52	Bin Vent
SP01	50 lb. Bagger Bin Receiver in Spray Dryer Warehouse	391-3-1-.02(2)(p)1 NSPS OOO	2.2.1, 3.3.1, 3.4.1	SB46	Baghouse
SP02	Big Bagger Bin Receiver in Spray Dryer Warehouse	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)1	2.2.1, 3.4.1	SB47	Baghouse

Generally Applicable Requirements listed in Section 8 of the Permit may apply to emission units listed above.

C. Equipment & Rule Applicability

Emission and Operating Caps:

None.

Rules and Regulations Assessment:

Rule Applicability specified in Permit No. 3295-303-0006-V-02-0 is discussed in the initial Title V permit narrative. Please refer to this narrative.

D. Compliance Status

The facility did not indicate that they were/are out of compliance with any equipment-specific applicable rules and regulations in this application.

E. Operational Flexibility

None applicable.

F. Permit Conditions

The following table lists the conditions that appear in Sections 3.2, 3.3, 3.4, and 3.5 of the renewal permit. Many conditions have been carried over from the previous permit/amendment(s).

Table 5: Sections 3.2, 3.3, 3.4, and 3.5

Renewal Condition	Original Condition		Notes
	Number	Permit	
3.2.1	3.5.3	Initial	These conditions have been moved from Section 3.5 of the initial permit to Section 3.2 for the renewal permit.
3.2.2	3.5.4	Initial	
3.2.3	3.5.5	Initial	
3.2.4	3.5.6	Initial	
3.2.5	3.5.7	Initial	
3.2.6	3.5.8	Initial	
3.2.7	3.5.9	Initial	
3.2.8	3.5.10	Initial	
3.2.9	3.5.11	Initial	
3.2.10	3.5.12	Initial	
3.3.1	3.3.1	Initial	N/A
3.3.2	3.3.2	Initial	N/A
3.3.3	3.3.3	Initial	N/A
3.4.1	3.4.1	Initial	Condition 3.4.2 of initial permit has been merged with Condition 3.4.1 for the renewal permit
	3.4.2	Initial	
3.4.2	3.4.3	Initial	These conditions have been renumbered after condition 3.4.2 of initial permit was merged with Condition 3.4.1 for the renewal permit.
3.4.3	3.4.4	Initial	
3.4.4	3.4.5	Initial	
3.4.5	3.4.6	Initial	
3.5.1	3.5.1	Initial	N/a
3.5.2	3.5.2	Initial	N/a

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 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

None applicable.

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

1. Individual Equipment:

The following table lists the conditions that appear in Section 5.2 of the renewal permit. Many conditions have been carried over from the previous permit/amendment(s).

Table 6: Section 5.2

Renewal Condition	Original Condition		Notes
	Number	Permit	
5.2.1	5.2.1	Amend.1	N/A
5.2.2	5.2.2	Amend.1	N/A
5.2.3	5.2.3	Amend. 1	N/A
5.2.4	5.2.4	Amend. 1	N/A
5.2.5	5.2.5	Amend. 1	N/A
5.2.6	5.2.6	Amend. 1	N/A
5.2.7	5.2.9	Initial	Condition Nos. 5.2.9 and 5.2.10 have been renumbered after Condition Nos. 5.2.7 and 5.2.8 moved to Sections 6.2 and 6.1 for the renewal permit.
5.2.8	5.2.10	Amend 1	
5.2.9 5.2.10 5.2.11	--	New	These conditions have been added to the renewal permit and require the facility to comply with the provision of 40 CFR 64. Please refer to the Compliance Assurance Monitoring section of this narrative for further information.

2. Equipment Groups (all subject to the same monitoring requirements):

None applicable.

C. Compliance Assurance Monitoring (CAM)

Thiele kaolin Company – Sandersville Plant operates several units that are considered *pollutant specific emission units* (PSEUs) per 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 information for CAM units at the facility is summarized below.

Emission Unit(s)	Control Device(s)	Pollutant	Potential Emissions (tpy)		Large PSEU(s)?
			Uncontrolled	Controlled	
Calciner 1 (SD08)	Baghouse	PM	>100	20.62	No
Calciner 2 (SD09)	Baghouse	PM	>100	24.98	No
Spray Dryer No. 1 (SD01)	Baghouse	PM	>100	47.30	No
Spray Dryer No. 2 (SD02)	Baghouse	PM	>100	1.34	No
Spray Dryer No. 3 (SD03)	Baghouse	PM	>100	1.34	No
Spray Dryer No. 4 (SD04)	Baghouse	PM	>100	36.66	No
Spray Dryer No. 5 (SD05)	Baghouse	PM	>100	34.98	No
Spray Dryer No. 6 (SD06)	Baghouse	PM	>100	5.10	No
Spray Dryer No. 7 (SD07)	Baghouse	PM	>100	11.11	No
Calciner 1 Premills (SM01)	Baghouse	PM	>100	16.50	No
Calciner 2 Premills (SM03)	Baghouse	PM	>100	13.14	No
Calciner 1 Premills (SM04)	Baghouse	PM	>100	24.03	No

The facility attached an electronic CAM plan to their electronic TV renewal application (No. 16972). The facility proposed to monitor visible emissions, pressure drop and inlet gas temperature to ensure continuous compliance with Georgia Air Quality Rules (p) and (b), 40 CFR 60 Subpart OOO, 40 CFR 60 Subpart UUU and PSD increment limits. EPD agrees with the terms specified in their CAM plan and transfers/modifies the performance criteria for each of the baghouses into Condition Nos. 5.2.10 and 5.2.11 of the proposed renewed Permit. In addition, EPD adds scrubber pressure drop and liquid flow rate checks as additional CAM indicators should the permittee choose to exhaust Calciners No. 1 and 2 through Venturi Scrubbers SW02 and SW04 instead of Spray Dryers No. 6 and No. 7 to control particulate matter emissions.

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.

The following table lists the conditions that appear in Section 6.1 of the renewal permit. Many conditions have been carried over from the previous permit/amendments. Information concerning conditions from the initial permit and the permit amendment is discussed in the narrative for Air Quality Permit Nos. 3295-303-0006-V-01-0 and 3295-303-0006-V-01-1.

Table 7: Section 6.1

Renewal Condition	Original Condition		Notes
	Number	Permit	
6.1.1 6.1.2 6.1.3 6.1.4 6.1.5 6.1.6	6.1.1 6.1.2 6.1.3 5.3.1 5.3.2 5.3.3	Initial	These conditions are general template conditions that describe record keeping and reporting requirements. The conditions have appeared in the initial Title V permit and have been updated as necessary for the renewal. Initial Title V permit listed conditions for General Record Keeping and Reporting Requirements in section 5.3 (Condition Nos. 5.3.1, 5.3.2 and 5.3.3). These conditions have been moved to section 6.1 and renumbered as conditions 6.1.4, 6.1.5 and 6.1.6 for the renewal.
6.1.7	5.2.9	Initial Amend. 1	This condition was listed in section 5.2 of the initial permit; it was modified with some changes in sections b and c when permit was amended. The condition has been moved to Section 6.1 and renumbered as Condition 6.1.7 for the renewal.

B. Specific Record Keeping and Reporting Requirements

The following table lists the conditions that appear in Section 6.2 of the renewal permit. Many conditions have been carried over from the previous permit/amendments. Information concerning conditions from the initial permit is discussed in the narrative for Air Quality Permit No. 3295-303-0006-V-01-0 and 3295-303-0006-V-01-1.

Table 8: Section 6.2

Renewal Condition	Original Condition		Notes
	Number	Permit	
6.2.1	6.2.1	Initial	N/A
6.2.2	6.2.2	Initial	N/A
6.2.3	6.2.3	Initial	N/A
6.2.4	6.2.4	Initial	N/A
6.2.5	5.2.7	Initial Amend. 1	The condition was listed as Condition No. 5.2.7 in the initial Title V permit. It was modified for amendment 1 to remove Boiler No. 1 (B1). The condition has been moved to Section 6.2 and renumbered as Condition 6.2.5 for the renewal.
6.2.6	5.3.4	Initial	The condition was listed as Condition No. 5.3.4 in the initial Title V permit. The condition has been moved to Section 6.2 and renumbered as Condition 6.2.6 for the renewal.

Renewal Condition	Original Condition		Notes
	Number	Permit	
6.2.7	5.3.5	Initial Amend. 1	The condition was listed as Condition No. 5.3.5 in the initial Title V permit. It was modified for amendment 1 to remove Boiler No. 1 (B1) and change the reporting requirements from quarterly to semiannual. The condition has been moved to Section 6.2 and renumbered as Condition 6.2.7 for the renewal
6.2.8	5.3.6	Initial Amend. 1	The condition was listed as Condition No. 5.3.6 in the initial Title V permit. It was modified for amendment 1 to change the reporting requirements from quarterly to semiannual. The condition has been moved to Section 6.2 and renumbered as Condition 6.2.8 for the renewal.

VII. Specific Requirements

A. Operational Flexibility.

Condition 7.1.2 is updated to eliminate the cumulative modification threshold citation of 5 tons per year since the rule has been updated to allow 10 tons per year and this citation was otherwise misleading because it did not mention the other pollutants

B. Alternative Requirements - Not Applicable.

C. Insignificant Activities

Refer to http://airpermit.dnr.state.ga.us/GATV/default.asp for the Online Title V Application.

Refer to the following forms in the Title V permit application:

- Form D.1 (Insignificant Activities Checklist)
- Form D.2 (Generic Emissions Groups)
- Form D.3 (Generic Fuel Burning Equipment)
- Form D.6 (Insignificant Activities Based on Emission Levels of the Title V permit application)

D. Temporary Sources - Not Applicable.

E. Short-Term Activities

Refer to form D.5- “Short-Term Activities” of the Title V permit application.

F. Compliance Schedule/Progress Reports - Not Applicable.

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 - Not Applicable.

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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

EPD issued draft Title V Permit 3295-303-0006-V-02-0 for Thiele Kaolin Company, Sandersville Plant on March 5, 2007. The public notice for this permit was published in The Sandersville Progress on March 28, 2007. The public comment period expired on April 27, 2007. The Division did not receive comments from the public, company, or EPA.

Changes made to the permit by the Division

Reference to Calciner 1 Reject Bin and Calciner Slurry Markdown Surge Bin (Emission Unit ID Nos. PC5 and SM3) are removed from the equipment list. PC5 is same as SS18 and SM3 was never installed.