Facility Name: **Prayon, Inc.**
City: Augusta
County: Richmond
AIRS #: 04-13-245-00012

Application #: TV-23026
Date Application Received: December 19, 2014
Permit No: 2819-245-0012-V-05-0

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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 here in 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 **Prayon, Inc.** 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: Prayon, Inc.

2. Parent/Holding Company Name

Prayon S.A.

3. Previous and/or Other Name(s)

Monsanto Company
Monsanto Industrial Chemicals Company
Solutia, Inc.
Astaris, L.L.C.

4. Facility Location

The Prayon facility is located at 1610 Marvin Griffin Road, Augusta, Georgia 30906.

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

The facility is located in an attainment area.

B. Site Determination

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

C. Existing Permits

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

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

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
2819-245-0012-V-04-0	July 1, 2010	Title V Permit Renewal
2819-245-0012-V-04-1	March 16, 2011	For the construction and operation of new packing equipment and dust collectors in the calcium plant loading packaging area.

D. Process Description

1. SIC Codes(s)

2819-Industrial Inorganic Chemicals, Not Elsewhere Classified

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 Prayon facility manufactures calcium phosphate salts, and sodium/potassium salts.

3. Overall Facility Process Description

Calcium Phosphate Plant

Calcium phosphate salts are produced by an acid-base reaction using phosphoric acid and calcium hydroxide. The process begins with the unloading and milling of quicklime. The lime is then hydrated to form calcium hydroxide, and is screened to remove impurities. The calcium hydroxide slurry is combined with phosphoric acid in a batch neutralization/crystallization process. A centrifuge is used to separate the liquor from the crystals. Centrifuge liquor and lime screen runoff are recycled back into the process. The crystals are processed through a rotary kiln mill for drying and sizing. The dried product is either blended and packaged, or sent to the calciner to make soft calcium pyrophosphate (SCPP). The final products are packaged into bags, drums, or bulk bags. The facility also has the capability of shipping bulk by rail. The operators are responsible for monitoring the process from an environmental standpoint as well as a process standpoint.

Prayon has not operated the following equipment since the first half of 2011: Lime Kiln Mill No. 1 (Source Codes: 5219, 5221, 5222, and 5227) and associated baghouses S303 and S304. Prayon has no current plans for operation to resume.

Sodium/Potassium Phosphates Plant

The Sodium/Potassium Plant is comprised of four (4) areas: the Mix Area, Drying and Calcining (D&C), Sizing and Packaging. Sodium and potassium phosphate salts are produced by an acid-base reaction between phosphoric acid and potassium hydroxide, sodium hydroxide or sodium carbonate in a semi-batch process. The orthophosphate feed liquor produced is then fed to the D&C loop, where the final reaction takes place. The

D&C loop consists of an external recycle calciner loop. The liquor is sprayed into a "seed" bed of product in the dryer. The material is then cycled between the calciner and the dryer-driving off excess water and converting the product to the desired final product. After calcining, the material is cooled and conveyed to the appropriate system for milling into granular or powder form. The plant produces both granular and powder forms of most of the products which can also be blended. The products are packaged in 50-pound bags or larger bulk bags. The plant also has the ability to ship several products via truck or rail.

The Transloading process (Source Code: 4076) and associated baghouse (S213) have been idled and this equipment has not operated since the first half of 2007. There are no current plans for operation to resume.

Prayon had operated the Powder Bulk Loading Dust Collector (S208) as part of the Powder Bulk Loading process (Source Codes: 4233). Prayon will no longer load bulk powder at the location of this dust collector. Prayon will use the dust collector (S208) with operation of the transfer screws to the packaging area.

Phosphoric Acid Plant

Prayon has demolished the Phosphoric Acid Plant. This equipment has been out of service since March 1998. The demolition has removed Air Pollution Control Devices S101 and S102 along with the associated production equipment (Source Codes: 1510, 1513, 1514, 2510, 2513, and 2514).

4. Overall Process Flow Diagram

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

E. Regulatory Status

1. PSD/NSR

Prayon is classified as a *chemical process plant* under 40 CFR 52.21(b)(1)(i) and therefore the PSD/NSR major source applicability threshold is 100 tons per year for *regulated NSR pollutants*. The facility is considered an existing *major source* per the PSD regulation because potential emissions of PM_{10} and $PM_{2.5}$ exceed 100 tons per year.

- Emissions of PM_{10} from the Calcium Plant Kiln Mill – Line No. 2 (Source Codes 6271, 6273, and 6276) have been limited to no more than 1.71 pounds per hour.

- Emissions of PM_{10} from the Calcium Plant Loading and Package area (Source Codes 6550 and 6552) have been limited to no more than 1.71 pounds per hour.

2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	Yes	Yes		
PM_{10}	Yes	Yes		
$PM_{2.5}$	Yes	Yes		
SO_2	Yes			Yes
VOC	Yes			Yes
NO_x	Yes			Yes
CO	Yes			Yes
TRS	Yes			Yes
H_2S	Yes			Yes
Individual HAP	Yes			Yes
Total HAPs	Yes			Yes
Total GHGs	Yes			Yes

3. MACT Standards

Prayon operates as an area source for hazardous air pollutants (HAPs). Prayon operates a boiler rated at 37.7 MMBtu/hr (Source Code: S210) and installed in April 1984. The boiler is capable of accommodating natural gas and propane. The boiler no longer has fuel oil capability. A new permit condition will be included which limits the boiler to operate as a *gas-fired boiler* per the definition in 40 CFR 63 Subpart JJJJJJ [40 CFR 63.11237].

Prayon requests authorization to operate a *temporary boiler* as a short-term activity. Such a boiler is not subject to the requirements of 40 CFR 63 Subpart JJJJJJ as long as the *temporary boiler* and its operation meets the Boiler GACT definition of *temporary boiler* found in 40 CFR 63.11237].

No MACT standard applies to this facility.

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	No
Program Code 8 – Part 61 NESHAP	No
Program Code 9 - NSPS	No

Program Code	Applicable (y/n)
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 is operating in compliance with all applicable rules and regulations.

D. Operational Flexibility

None applicable.

E. Permit Conditions

None applicable.

III. Regulated Equipment Requirements

A. Brief Process Description

Please refer to section I.D.3 of this narrative.

B. Equipment List for the Process

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
CALCIUM PHOSPHATE PLANT					
Lime Mill					
5108 5109	Lime Hammer Mill Lime Mill Bin	40 CFR 64 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.03(2)(c)	3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S302	Baghouse
Calcining					
5403 5405 5406	DCPD Discharge Conveyor Calciner Calciner Heater	40 CFR 64 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.03(2)(c) 391-3-1-.02(2)(g)	3.2.2, 3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S305	Baghouse
Blending					
5433 5436 5439 6545	Surge Bin Blender Blend Bin Blend Bin	40 CFR 64 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.03(2)(c)	3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S306	Baghouse
Bulk Loading					
5422 5423 5424 5425 5505 5507 5702 5703	Imp Mill Hopper Imp Mill Feeder Imp Mill Imp Mill Cyclone Bulk Loading Elevator Bulk Silo Silo Loading Spout Product Loading Spout	40 CFR 64 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.03(2)(c)	3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S307	Baghouse
Kiln Mill – Line No. 2					
6271 6275 6276	No. 2 Kiln Mill No. 2 Mill Heater No. 2 Mill Cyclone	40 CFR 64 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.03(2)(c) 391-3-1-.02(2)(g)	3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S308	Baghouse
Loading and Packaging					
6550 6552 6577 6578	Packing Bin Bagger Cut in Hopper Vac. Conveyor	40 CFR 64 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.03(2)(c)	3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S309A	Sinter Plate Dust Collector
6575	Calcium Supersacker	40 CFR 64 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.03(2)(c)	3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S309B	Cartridge Dust Collector
SODIUM/POTASSIUM (NaK) PHOSPHATE PLANT					
Reactor and Adjust Tanks					
4107 4109A 4109B	Mix Area Reactor Adjust Tank A Adjust Tank B	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.4.1, 3.4.2	None	None
Drying					
4130 4141	Rotary Dryer Dryer Rotoclone	40 CFR 64 391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S202	Rotoclone Wet Scrubber

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
Calcining					
4134 4140 4144S 4144N 4144M	Rotary Calciner Calciner Heater South Cyclone North Cyclone Middle Cyclone	40 CFR 64 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	3.2.2, 3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S203	Rotoclone Wet Scrubber
Granular Mill					
4302 4303 4306	Granular Mill Separator Screens	40 CFR 64 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.03(2)(c)	3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S204	Baghouse Dust Collector
Powder Mill					
4202	Powder Mill	40 CFR 64 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.03(2)(c)	3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S205	Baghouse Dust Collector
Blending					
4213	Blender	40 CFR 64 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.03(2)(c)	3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S206	Baghouse Dust Collector
Packaging					
7222	Supersacker	40 CFR 64 391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S207A	Sinter Plant Dust Collector
7237	NaK Plant Bagger	40 CFR 64 391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S207B	Sinter Plate Dust Collector
7204 7207 7211 7215	Granular Conveyor Blender Discharge Collecting Screw NW Silo Discharge	40 CFR 64 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.03(2)(c)	3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S208	Baghouse
4355 4507	Rework Silo Transporter	40 CFR 64 391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S214	Filter Cartridge
4233	Powder Bulk Loading	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.03(2)(c)	3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 6.1.7	S208	Baghouse
Granular Bulk Loading					
4235	Granular Bulk Loading	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.03(2)(c)	3.4.1, 3.4.2, 3.5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, 6.1.7	S209	Baghouse
OTHER					
S210	Keeler Boiler	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 391-3-1-.03(2)(c)	3.2.1, 3.4.3, 3.4.4, 6.1.7	None	None

C. Equipment & Rule Applicability

502(b)(10) Change: 2819-245-0012-V-04-1 (March 16, 2011)

This amendment was for the construction and operation of new packing equipment and dust collectors in the Calcium Plant Loading Packaging Area which consists of the following: Replace existing Bagger A (Source Code: 6552), replace bagger dust collector (Source Code: 6555), replace existing cut-in-chute with a new chute (Source Code: 6577) and a vacuum conveyor/separator (Source Code: 6578), and the addition of a dust collection system to existing

supersacker (Source Code: 6574). Remove a packing cyclone from the NaK packaging system which is no longer needed.

Off-Permit Change May 19, 2014
Prayon is planning the installation of a new exhaust fan equipment for the existing Adjust Tanks (Source Codes: 4109A and 4109B, NaK Plant). The Adjust Tanks currently share one fan. The physical change will consist of adding a second fan so that each tank will have its own fan.

Off-Permit Change November 2014
This off-permit change pertains to the engineered storage and pneumatic transfer system for the NaK Phosphates Plant. This project will be completed in two phases. Prayon anticipates that Phase I will consist of the installation of a 2000 CF silo on load cells that will be used in Phase I to fill Supersacks. The supersack filling machine will be provided by Prayon. The silo vent will include a filter to prevent dusting to atmosphere during filling operation. Phase II will consist of installation of pneumatic transfer system capable of reliably delivering 15,000 pounds per hour for continuous operation 4 to 8 hours at a time, typically 2 to 3 times a week. The pneumatic transfer system will need to retain the ability to load supersacks as a backup to the pneumatic system.

This off-permit change covers Unit ID Nos. 7204, 7207, 7211, 7215, 4355, and 4507.

Georgia Rule 391-3-1-.02(2)(e) – Particulate Emission from Manufacturing Processes:
Equipment in operation, or under construction contract, on or before July 2, 1968 = Existing Equipment: Portions of the Na/K Phosphates Plant are classified as existing equipment for this state rule. The allowable particulate matter emission rate is expressed by $E = 4.1P^{0.67}$ where E is the particulate matter emission rate in pounds per hour and P is the "dry" process input weight rate in tons per hour.

Equipment in operation, or under construction contract, after June 2, 1968 = New Equipment: Portions of the Na/K Phosphates Plant and the entire Calcium Phosphate Plant are classified as new equipment for this state rule. The allowable particulate matter emission rate is expressed by one of two process input weight rate formulas depending on the process input weight rate.

Georgia Rule 391-3-1-.02(2)(b) – Visible Emissions: The provisions of this state rule apply to affected emission units at the Plant which are subject, in this case, to Georgia Rule 391-3-1-.02(2)(e). Georgia Rule (b) limits the opacity to less than or equal to forty (40) percent.

Georgia Rule 391-3-1-.02(2)(d) – Fuel-Burning Equipment: This state rule applies to indirect-fired pieces of fuel-burning equipment and in this case applies to the Keeler Boiler (Source Code: S210) constructed in 1984. Georgia Rule (d) limits the emissions of fly ash and/or other particulate matter based on the maximum heat input. The Keeler Boiler has a maximum heat input of 37 MMBtu/hr.

Georgia Rule (d) also limits the visible emissions the opacity of which is equal to or greater than twenty (20) percent except for one six minute period per hour of not more than twenty(27) percent opacity.

Note: Calciner heaters with Source Codes 4140 and 5406 and the No. 2 mill heater with Source Code 6275 are direct-fired units. Therefore, these units are not subject to Georgia Rule (d). Existing Permit No. 2819-245-0012-V-04-0 inadvertently subjects heater with Source Code 4140 to Georgia Rule (d). This requirement is not carried over to the Title V renewal permit.

Georgia Rule 391-3-1-.02(2)(g) – Sulfur Dioxide: The following table specifies the fuel-burning sources at the facility:

Emission Unit ID No.	Description	Installation Year	Allowed Fuel Types
5406	Ca Plant Calciner Heater (3 MMBtu/hr) Direct Fired	1975	Per Application: Natural gas Propane Fuel type restrictions included as draft Permit Condition 3.2.2.
6275	Ca Plant No. 2 Mill Heater (6 MMBtu/hr) Direct Fired	1997	Per Application: Natural gas Propane
S210	Keeler Boiler (37.7 MMBtu/hr) Indirect Fired No longer capable of accommodating fuel oil combustion.	1984	Per Permit: Natural gas Propane Fuel type restrictions included as draft Permit Condition 3.2.2. ~~No. 1 Fuel Oil~~ ~~No. 2 Fuel Oil~~ ~~Max. fuel sulfur content less than 0.5 weight percent.~~

Emission Unit ID No.	Description	Installation Year	Allowed Fuel Types
4140	NaK Plant Calciner Heater (650 MMBtu/hr) No longer capable of accommodating fuel oil combustion.	1985	Per Permit: Natural gas Propane Fuel type restrictions included as draft Permit Condition 3.2.2. ~~No. 1 Fuel Oil~~ ~~No. 2 Fuel Oil~~ ~~Max. fuel sulfur content less than 0.5 weight percent.~~

The fuel-burning sources at the facility are prohibited from burning any fuels other than natural gas or propane as New Permit Condition 3.2.2 which subsumes the requirements of Georgia Rule (g).

Georgia Rule 391-3-1-.03(2)(c):

**This legal authority is used as the citation in existing Permit Condition 3.2.2 which (1) restricts the fuel types to be combusted in the Na/K Calciner Heater and Keeler Boiler to natural gas, propane, and Nos. 1 or 2 fuel oil and (2) restricts the fuel sulfur content of fuel burned in the Na/K Calciner Heater and the Keeler Boiler to less than 0.5 weight percent. Draft Permit Condition 3.2.2 is revised to restrict fuel-burning sources to only combust natural gas or propane as described in the applicant's renewal application.

**Draft Permit Condition No. 3.5.1 cites this legal authority requiring Prayon to maintain an adequate supply of bag filters for the numerous baghouses used at the facility. This Permit Condition is carried over to the applicant's draft Title V renewal permit.

Existing PSD Avoidance PM_{10} Emission Limits for Baghouses S308 and S309: Georgia EPD reviewed the basis of these limits as part of its review. The PM_{10} emission limits of 1.71 lb/hr for each baghouse was incorporated into Permit Amendment No. 2819-121-9416 issued October 27, 1994. The narrative supporting this permit amendment states:

> *The particulate emissions are regulated by Georgia Rule 391-3-1-.02(2)(e)(i); however, this rule should not be used because PSD could be violated. The significant emission rate for PM_{10} is 15 tpy, the facility needs a permit condition which limits the tons per hour of PM_{10}. The following calculation shows how the permit limits were established:*

PM_{10} (tpy)= (15 tons/yr)(yr/8760)*(2000 lb/ton)*(1/2 baghouses) = 1.71 lb/hr for BH308 and BH309, each.*

- The resulting numerical limits are quite conservative for baghouses which were stated to have 99+ control efficiency. The facility estimated controlled PM emissions as 1.0 lb/hr (BH308) and 0.3 lb/hr(BH309). These mass emission rates equate to approximately 0.02 grains per acfm per baghouse, which seems reasonable for a baghouse with 99+ control efficiency.

- The approach is also conservative because it assumes that Georgia Rule (e) limits PM_{10} emissions. Georgia Rule (e) limits PM emissions. So this approach sets PM=PM_{10}.

- If PM=PM_{10}, I calculate the project PTE for PM_{10} emissions to be approximately 13 tons per year using Georgia Rule (e).

  PM_{10} (tpy) = (8760 hrs/yr)(1 ton/2000 lb)[$(4.1(600 \text{ lb/hr}/2000)^{0.67})$ + $4.1(250 \text{ lb/hr}/2000)^{0.67}$)]
  PM_{10} (tpy) = 13 tpy < 15 tpy.

I recommend removal of the PM_{10} emission limits of 1.71 lb/hr per baghouse 308 and 309 for the upcoming Title V renewal permit because there is and was no regulatory basis for these emission limits.

Non-Applicable Regulation(s)

40 CFR 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources: Georgia EPD reviewed the applicable of this federal regulation for the boiler, calciners, and process heaters. The operation of the boiler (Source Code: S210) does not trigger applicability to this rule because the boiler is permitted to be operated as a *gas-fired boiler* as defined in the rule. In addition, the calciner heaters and mill heater are not subject to this regulation because they are direct-fired emission units.

D. Compliance Status

The facility has indicated compliance with all applicable rules and regulations.

E. Operational Flexibility

None applicable.

F. Permit Conditions

New Condition No.	Existing Condition No.	Discussion
3.2.1		Requires the operation of the Keeler Boiler to meet the definition of *gas-fired boiler* in 40 CFR 63 Subpart JJJJJJ.
3.2.2	3.2.2	Changed – To prohibit the burning of any fuels other than natural gas or propane in fuel-burning sources at the facility.
N/A	3.2.2	Not included in the draft renewal permit.
3.4.1	3.4.1	No change – Specifies the requirement of Georgia Rule (b).

New Condition No.	Existing Condition No.	Discussion
3.4.2	3.4.2	No change – Specifies the requirement of Georgia Rule (g).
3.4.3	3.4.3	No change – Specifies the emission limit of Georgia Rule (d) for the Keeler Boiler.
3.4.4	3.4.4	No change – Specifies the opacity limit of Georgia Rule (d) for the Keeler Boiler.
3.5.1	3.5.1	No change – Requires Permittee to maintain and adequate number of bag filters for the numerous baghouses used at the facility.

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

A. General Testing Requirements

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

B. Specific Testing Requirements

1. Individual Equipment

None applicable.

2. Equipment Groups (all subject to the same test 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:
No new monitoring requirements apply to emissions units at the facility.

Summary of existing monitoring requirements:
The facility has emissions units subject to Georgia Rule 391-3-1-.02(2)(e) for particulate matter emissions; Georgia Rule 391-3-1-.02(2)(b) for visible emissions; Georgia Rule 391-3-1-.02(2)(d)

for particulate matter and visible emissions from fuel-burning equipment; and Georgia Rule 391-3-1-.02(2)(g) for fuel sulfur content limit which is subsumed by fuel types restricted.

The facility operates two Rotoclone Wet Scrubbers for the calcining operations in the NaK Phosphates Plant to provide a reasonable assurance of compliance with Georgia Rules (e) and (b). The existing monitoring requirements for these scrubbers is carried over to the draft Title V renewal permit and consists of monitoring the pressure drop across each scrubber at least once per operating shift, implement a *Preventative Maintenance Program (PMP)* plan for each scrubber, and perform a visible emissions check each day of operation.

The facility operates fifteen (15) baghouses and/or dust collectors to provide a reasonable assurance of compliance with Georgia Rules (e) and (b). The existing monitoring requirements for these baghouses is carried over to the draft Title V renewal permit and consists of monitoring the pressure drop across each baghouse at least once per operating shift, implement a *Preventative Maintenance Program (PMP)* plan for each baghouse, and perform a visible emissions check each day of operation.

The fuel-burning equipment at the facility consists of the Keeler Boiler (S210) which is restricted to only natural gas or propane combustion. Thus, the operation of this boiler should easily comply with the requirements of Georgia Rules 391-3-1-.02(2)(d) and 391-3-1-.02(2)(g).

A new permit condition is proposed for the Keeler Boiler (Source Code: S210) boiler to require its operation meet the definition of *gas-fired boiler* in accordance with the definition of that term in 40 CFR 63.11237 in order to avoid the requirements of 40 CFR 63 Subpart JJJJJJ.

C. Compliance Assurance Monitoring (CAM)

No new CAM requirements apply to emissions units at the facility.

Summary of existing CAM requirements: The Prayon facility operates several pieces of equipment that are considered *pollutant specific emission units(PSEUs)* per Part 64 because the process equipment (1) is subject to an emission standard for which there is a Part 64 control device (namely particulate matter and a wet scrubber or baghouse/dust collector) and (2) the pre-controlled potential particulate matter emission rate is greater than 100 tpy. Thus, the process equipment is subject to 40 CFR 64 – Compliance Assurance Monitoring. The equipment subject to this regulation is as follows:

Sodium/Potassium Phosphates Plant			
Source Code	**Process**	**Control Device**	
4130, 4141	Drying	S202	Wet Scrubber
4140, 4134, 4144	Calcining	S203	Wet Scrubber
4302, 4303, 4306	Granular Mill	S204	Baghouse
4202	Powder Mill	S205	Baghouse
4213	Blending	S206	Baghouse
7222, 7225, 7228, 7230, 7231, 7235, 7237, 7238	Packaging	S207A S207B	Baghouse Baghouse

Source Code 4233 is no longer subject to CAM because pre-controlled PM emissions are now less than 100 tpy.

Calcium Phosphates Plant			
Source Code	**Process**	**Control Device**	
5108, 5109	Lime Mill	S302	Baghouse
5403, 5405, 5406	Calcining	S305	Baghouse
5433, 5436, 5439, 6545	Blending	S306	Baghouse
5422, 5423, 5424, 5425, 5505, 5507, 5702, 5703	Bulk loading	S307	Baghouse
6271, 6273, 6276	Kiln Mill – Line No. 2	S308	Baghouse
6550, 6552	Loading and Packaging	S309A	Baghouse
6574	Supersacker	S309B	Baghouse

The frequency of data collection under Part 64 depends on whether the controlled potential to emit exceeds 100 tons per year (i.e., whether the PSEU is a "large" PSEU). The controlled emissions from the Prayon process equipment is less than 100 tons per year, therefore the facility is required to collect data at least once per 24 hour period. The facility meets these requirements by measuring pressure drop for all control equipment once per shift (each shift is 12 hours), conducting visible emissions checks for each day of operation, and maintaining the equipment in accordance with a Division approved Preventative Maintenance Program.

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.

Template Conditions 6.1.3 and 6.1.4 were updated in September 2011 to allow ~60 days to submit periodic reports. Alternative reporting deadlines are allowed per 40 CFR 70.6, 40 CFR 60.19(f) and 40 CFR 63.10(a).

B. Specific Record Keeping and Reporting Requirements

New Condition No.	Existing Condition No.	Discussion
6.1.7.a	6.1.7.a	No change – no excess emissions are defined by regulation.
6.1.7.b.i	6.1.7.b.i	Changed – Any time of process operation during which the fuel burned in applicable sources is a fuel other than natural gas or propane..
N/A	6.1.7.b.ii	Deleted since fuel oil is no longer allowed to be burned at the facility.

New Condition No.	Existing Condition No.	Discussion
N/A	6.1.7.c.i	Deleted – as the facility has demolished the Phosphoric Acid Plant.
6.1.7.c.i	6.1.7.c.ii	No change – defines an excursion for the wet scrubbers.
6.1.7.c.ii	6.1.7.c.iii	No change – defines an excursion for the baghouses/dust collectors.
6.1.7.c.iii	6.1.7.c.iv	No change – defines an excursion as it relates to visible emissions.
6.1.7.c.iv	6.1.7.c.v	No change – defines an excursion as it relates to the *Preventative Maintenance Program.*
N/A	6.1.7.d.i	Deleted since fuel oil is no longer allowed to be burned at the facility.
6.2.1	6.2.1	Deleted since fuel oil is no longer allowed to be burned at the facility.

VII. Specific Requirements

A. Operational Flexibility

Not Applicable.

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

The facility rents a temporary boiler for one month out of every year. The heat input of the rental boiler usually ranges from 30 MMBtu/hr to 40 MMBtu/hr. Applicable standards include, depending on construction year, Georgia Rules 391-3-1-.02(2)(d), (g), and 40 CFR 60 Subpart Dc. A new requirement is included in Section 7.5 of the draft renewal permit for avoidance of 40 CFR 63 Subpart JJJJJJ (i.e., operate the temporary boiler as one that meets the definition of *temporary boiler* in 40 CFR 63.11237).

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. Stratospheric Ozone Protection Requirements

Not Applicable.

J. Pollution Prevention

Not Applicable.

K. 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.

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.