

TITLE V MINOR MODIFICATION (without construction) APPLICATION REVIEW

Facility Name: **PCS Nitrogen Fertilizer**

City: Augusta

County: Richmond

AIRS #: 04-13-245-00002

Application #: 17763

Date SIP Application Received: October 29, 2007

Date Title V Application Received:

Permit No: 2873-245-0002-V-02-2

Program	Review Engineers	Review Managers
SSPP	Belinda Wernau	David Matos
SSCP	Farhana Yasmin	Douglas Waldron
ISMP	Bob Scott	Richard Taylor
TOXICS	Art Stelson	Karen Hays

Introduction

This narrative is being provided to assist the reader in understanding the content of the referenced SIP permit to construct and draft/proposed operating permit amendment. Complex issues and unusual items are explained in simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Sections 391-3-1-.03(1) and 391-3-1-.03(10) of the Georgia Rules for Air Quality Control, (2) Part 70 of Chapter I of Title 40 of the Code of Federal Regulations, and (3) Title V of the Clean Air Act Amendments of 1990. The following narrative is designed to accompany the proposed permit and is presented in the same general order as the permit. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revisions made to the permit in response to comments received during the EPA review process will be described in an addendum to this narrative

I. Facility Description

A. Existing Permits

Table 1 below lists the current Title V permit, and all administrative amendments and minor and significant modifications and 502(b)(10) changes.

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
2873-245-0002-V-02-0	September 27, 2006	Current Title V operating permit.
2873-245-0002-V-02-1	March 26, 2007	The modification of the C-001 Nitric Acid Plant and the installation of a Selective Catalytic Reduction (SCR) system to reduce NO _x emissions.

B. Regulatory Status

1. PSD/NSR/RACT

The PCS Nitrogen facility is considered a major source under PSD/NSR regulations. The facility has previously taken the following limits to avoid PSD/NSR review:

1. Condition 3.2.1 limits NO_x emissions from the ABB/CE Boiler (Source Code AB03) to 40 tons per 12 consecutive months.
2. Conditions 3.2.2 and 3.3.6 limit the amount of natural gas and No. 2 fuel oil allowed to be burned in the ABB/CE Boiler (Source Code AB03).
3. Conditions 3.3.6 and 3.3.12 limit the sulfur content of No. 2 fuel oil burned in Boiler H 6531(Source Code AB01) and Boiler H 6532 (Source Code AB03) to 0.15 percent sulfur, by weight.
4. Conditions 3.2.3 and 3.2.4 establish limits for PM, PM10, NOX and CO for the ABB/CE Boiler (Source Code AB03) when firing natural gas or No. 2 Fuel Oil. These limits appear to have been established to avoid PSD
5. Condition 3.2.8 establishes NO_x limits for the gas turbine based on the standard as required by NSPS Subpart GG or the value used in the PSD Avoidance calculations (74.8 ppm), whichever is smaller. For the Subpart GG emissions limit, the heat rate value is established as 14.4 kilojoules per watt-hour from the most recent performance test and the fuel bound nitrogen allowance is 0 for pipeline natural gas.
6. Condition 3.2.9 limits Ammonia production to 784,750 tons per 12-month period for PSD Avoidance purposes. This production limit was used by the facility in its PSD Avoidance calculations.

The facility has also taken the following limits as a result of a PSD review in June 2004 for pollutants, Nitrogen Oxides (NO_x) and Carbon Monoxide (CO):

1. Condition 3.3.5 limits NO_x emissions from the C-002 Nitric Acid Plant (Source Code N201) to 3.0 lbs per ton 100% nitric acid on a three-hour average. This limit is also the requirements of 40 CFR 60 Subpart GG.

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2. Condition 3.3.10 limits NO_x emissions from the C-002 Nitric Acid Plant (Source Code N201) to 507 tons during any 12 consecutive month period.
3. Condition 3.3.11 limits CO emissions from the C-002 Nitric Acid Plant (Source Code N201) to 30.0 lbs per ton 100% nitric acid on a 12-month rolling average.
4. Condition 3.3.5 limits the emissions of nitrogen oxides from the C-002 Nitric Acid Plant to 3.0 pounds per 100% nitric acid and limits opacity from the source to less than 10%. This condition comes from the results of the PSD BACT review for nitrogen oxide emissions from the C-002 Nitric Acid Plant.

2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	Yes	✓		
PM ₁₀	Yes	✓		
SO ₂	Yes	✓		
VOC	Yes	✓		
NO _x	Yes	✓		
CO	Yes	✓		
TRS	Yes			✓
H ₂ S	Yes			✓
Individual HAP	Yes	✓		
Total HAPs	Yes	✓		

II. Proposed Modification

A. Description of Modification

Per PCS's Title V permit 2873-245-0002-V-02-0 Condition 4.2.9, "During the performance test, the facility shall establish minimum pressure drop and scrubtant flow rate values (or a range of values) that demonstrate compliance with the opacity and particulate matter limits in Condition 3.4.2 and 3.4.6. The values shall be used in determining excursions under Condition 6.1.7.c." The purpose of this amendment is to incorporate these operating ranges into the current permit.

B. Emissions Change

Table 4: Emissions Change Due to Modification

Pollutant	Is the Pollutant Emitted?	Net Actual Emissions Increase (Decrease) (tpy)	Net Potential Emissions Increase (Decrease) (tpy)
PM	Y	0	0
PM ₁₀	Y	0	0
SO ₂	Y	0	0
VOC	Y	0	0
NO _x	Y	0	0
CO	Y	0	0
TRS	Y	0	0
H ₂ S	Y	0	0
Individual HAP	Y	0	0
Total HAPs	y	0	0

C. PSD/NSR Applicability

This modification is not subject to PSD or NSR

III. Facility Wide Requirements

A. Emission and Operating Caps

Not applicable

B. Applicable Rules and Regulations

Not applicable

C. Compliance Status

This facility is operating within compliance with any of the rules or regulations described above.

D. Operational Flexibility

Not applicable

E. Permit Conditions

Not applicable

IV. Regulated Equipment Requirements

A. Brief Process Description

Not applicable

B. Equipment List for the Process

Not applicable

C. Equipment & Rule Applicability

The units of the Formaldehyde-free Urea Pastillation Plant have been installed in 2005. These units include a dryer (Source Code P02), three melters with melt tanks (Source Code P03), five to ten rotoformers (Source Code P03), three domed storage units (Source Codes P04, P05, P06), a dissolving tank (Source Code P08), and a cooling tower (Source Code P07), and a rejects tank (Source Code P09). All of the source codes are subject to the following rules and regulations:

Georgia Rule 391-3-1-.02(2)(b) – Visible Emissions

Georgia Rule 391-3-1-.02(2)(e) – Particulate Matter emissions from Manufacturing Processes

D. Compliance Status

There are no compliance issues.

E. Operational Flexibility

Not applicable

F. Permit Conditions

The Permittee is required by Condition 4.2.9 to conduct initial performance tests for PM from F1 Venturi Scrubber that will control emissions from the pastillation plant dryer, melter(s), and rotoformers. The test shall be used to demonstrate compliance with Georgia Rules (b) and (e) and to determine the proper ranges for the venturi scrubber.

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

Not applicable

VI. Monitoring Requirements (with Associated Record Keeping and Reporting)

Not applicable

VI. Other Record Keeping and Reporting Requirements

Not applicable

VII. Specific Requirements

A. Operational Flexibility

Not applicable

B. Alternative Requirements

Not applicable

C. Insignificant Activities

Not applicable

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

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

A. Individual Equipment: Not Applicable

B. Equipment Groups: Not Applicable