

Part 70 Operating Permit Amendment

Permit Amendment No.: 2873-245-0002-V-02-1 Effective Date: March 26, 2007

Facility Name: PCS Nitrogen Fertilizer – Augusta Plant

Facility Address: 733 ½ Laney Walker Blvd Extension
Augusta, Georgia 30901, Richmond County

Mailing Address: P.O. Box 1483
Augusta, Georgia 30903

Parent/Holding Company: PotashCorp

Facility AIRS Number: 04-13-245-00002

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to and in effect under the Act, the Permittee described above is issued a construction permit for:

The modification of the C-001 Nitric Acid Plant and the installation of a Selective Catalytic Reduction (SCR) system to reduce NOx emissions.

This Permit Amendment shall also serve as a final amendment to the Part 70 Permit unless objected to by the U.S. EPA or withdrawn by the Division. The Division will issue a letter when this Operating Permit amendment is finalized.

This Permit Amendment is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit Amendment and Permit No. 2873-245-0002-V-02-0. Unless modified or revoked, this Permit Amendment expires upon issuance of the next Part 70 Permit for this source.

This Permit Amendment may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. 16989 dated October 10, 2006; any other applications upon which this Permit Amendment or Permit No. 2873-245-0002-V-02-0 are based; supporting data entered therein or attached thereto; or any subsequent submittal or supporting data; or for any alterations affecting the emissions from this source.

This Permit Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached 5 pages.

Director
Environmental Protection Division

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PART 1.0 FACILITY DESCRIPTION

1.3 Process Description of Modification

The facility proposes to install or modify some pieces of equipment in the C-001 Nitric Acid Plant and install a Selective Catalytic Reduction (SCR) system as a control device to reduce NOx emissions.

Phase 1 of this project will be to install two Steinmueller converters with a higher pressure rating and to install the Selective Catalytic Reduction (SCR) system. The installation of the SCR unit will greatly reduce NOx emissions from the C-001 Nitric Acid Plant.

The facility will perform the following modifications for the C-001 Nitric Acid Plant in Phase 2: install a new process condenser, modify the absorber water chiller system, upgrade the absorption system, replace the packing in the absorption system, upgrade of the plant instrumentation, upgrade of the ammonia evaporation system, upgrade of the air filtration system, upgrade of the cooler condenser, upgrade or replace the air compressor, repack the bleaching column, increase process air supply, install a washing system on the air compressor, upgrade of the ammonia-air mixer, and upgrade the tail gas heaters. The facility expects to start construction on Phase 2 of the project within 24 months after issuance of the permit.

This application is being processed as a significant modification with construction because the proposed project constitutes a modification under provisions of New Source Performance Standards. The facility is replacing or modifying most of the process units in the Nitric Acid Plant, and it will qualify as a reconstruction under NSPS. Thus, the C-001 Nitric Acid Plant will become subject to 40 CFR 60 Subpart G.

The pre-modification production capacity of the C-001 Nitric Acid Plant is 585 tpd 100% nitric acid. The post-modification capacity will be 700 tpd 100% nitric acid.

This proposed project only affects equipment in C-001 Nitric Acid Plant, and no changes will be made in C-002 Nitric Acid Plant.

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PART 3.0 REQUIREMENTS FOR EMISSION UNITS

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any of the Emissions Limitations or Standards included in this permit are tied to or based on the run time(s) specified for the applicable reference test method(s) or procedures required for demonstrating compliance.

3.1.1 Modification to Emission Units

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
N101	C-001 Nitric Acid Plant	40 CFR 60 Subpart G 40 CFR 64	<u>3.3.4, 3.3.5, 4.2.2, 4.2.8, 4.2.14, 5.2.1, 5.2.2, 5.2.5, 5.2.8, 5.2.18, 6.1.7, 6.2.22</u>	C101	Selective Catalytic Reduction (SCR) System
AN01	C001 AN Neutralizer	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)† 40 CFR 64	3.4.2, 3.4.6, <u>4.2.14</u> , 5.2.3, 5.2.5, 5.2.11, 6.1.7	VS01	Venturi Scrubber

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

** AN = Ammonium Nitrate

For determination of 391-3-1-.02(2)(e) the following Emission Units are to be grouped:

Group † A103, A104, A105 & AN01

Group ‡ A201, A202, A204 & AN02

3.3 Equipment Federal Rule Standards

3.3.4 The C-001 Nitric Acid Plant (Source Code N101) and the C-002 Nitric Acid Plant (Source Code N201) are subject to all applicable requirements of the Federal Standards of Performance for New Stationary Sources, 40 CFR Part 60, Subpart G - “Standards of Performance for Nitric Acid Plants”.
[40 CFR 60 Subpart G]

3.3.5 The Permittee shall not discharge into the atmosphere from the C-001 Nitric Acid Plant (Source Code N101) and the C-002 Nitric Acid Plant (Source Code N201) any gases which contain nitrogen oxides in excess of 3.0 pounds per ton of 100% nitric acid and which exhibit 10 percent opacity, or greater.
[40 CFR 60 Subpart G, 40 CFR 52.21]

3.5 Equipment Standards Not Covered by a Federal or SIP Rule and Not Instituted as an Emission Cap or Operating Limit

3.5.1 Deleted

PART 4.0 REQUIREMENTS FOR TESTING

4.2 Specific Testing Requirements

4.2.2 The Permittee shall conduct or cause to be conducted an annual performance test for emissions of NO_x and CO during the month of July or August as follows:

- a. NO_x in the C-001 Nitric Acid Plant (Source Code N101).
[40 CFR 60 Subpart G]
- b. NO_x in the C-002 Nitric Acid Plant (Source Code N201).
[40 CFR 60 Subpart G, 40 CFR 52.21]
- c. CO in the C-002 Nitric Acid Plant (Source Code N201).
[40 CFR 52.21]

4.2.14 Within 60 days after the completion of all of the projects and achieving the maximum production rate of nitric acid from the C-001 Nitric Acid Plant, but no later than 180 days after startup of the C-001 Nitric Acid Plant after the completion of all of the projects, the Permittee shall conduct a performance test for particulate matter from the C-001 AN Neutralizer. If necessary, the Permittee shall submit an application, within 90 days after submittal of the test report, to revise the excursion values for the VS01 Venturi Scrubber.
[391-3-1-.02(3), 391-3-1-.03(2)(c)]

PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)

5.2 Specific Monitoring Requirements

5.2.2 The Permittee shall install, calibrate, maintain, and operate a system to continuously monitor and record the indicated parameters on the following equipment. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.

[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

f. Nitric Acid production rate for the C-001 Nitric Acid Plant (Source Code N101).

5.2.8 The Permittee shall comply with the performance criteria listed in the table below for the NO_x emissions from the C-001 Nitric Acid Plant (Source Code N101).

[40 CFR 64.6(c)(1)(iii)]

Performance Criteria [64.4(a)(3)]	Indicator No. 1 NO_x Concentration
Data Representativeness [64.3(b)(1)]	NO _x Continuous Emissions Monitor. The CEM is located in the C-001 Nitric Acid Stack.
Verification of Operational Status (new/modified monitoring equipment only) [64.3(b)(2)]	N/A.
QA/QC Practices and Criteria [64.3(b)(3)]	Calibrate, maintain, and operate CEM per equipment manufacturer.
Monitoring Frequency [64.3(b)(4)]	Continuous.
Data Collection Procedures [64.3(b)(4)]	NO _x concentration (ppm) will be converted to lb NO _x per ton 100% nitric acid using the conversion factor calculated from the most recent NO _x stack test. NO _x emissions will be calculated hourly by multiplying the actual production rate by the lb NO _x per ton 100% nitric acid emission rate.
Averaging Period [64.3(b)(4)]	3.0 lb NO _x per ton 100% nitric acid – 3 hour average

5.2.18 Within 60 days of issuance of this permit, the Permittee shall submit a monitoring plan for ammonia emissions on the Selective Catalytic Reduction (SCR) System (Source Code: C101). This plan will also determine appropriate excursion values for the operating parameters (inlet temperature, outlet temperature, etc.) for the proper operation of the SCR.

PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS

6.1 General Record Keeping and Reporting Requirements

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:

[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. Excess emissions: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement)

2. For the C-001 Nitric Acid Plant, Nitrogen Oxide emissions, expressed as NO₂, in excess of 3 pounds per ton of 100% nitric acid produced for greater than 3 hours. [40 CFR 60 Subpart G]

6.2 Specific Record Keeping and Reporting Requirements

6.2.22 The Permittee shall provide written notice of the date of completion of the Phase I projects and the Phase II projects. The notifications shall include a list of the projects completed during each phase. The notices shall be provided within 30 days of the completion of each phase.

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