

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

**Air Permit Review**

**Permit Issue Date:**

**Region:** Washington Regional Office  
**County:** Beaufort  
**NC Facility ID:** 0700071  
**Inspector's Name:** Robert Bright  
**Date of Last Inspection:** 11/18/2003  
**Compliance Code:** C/In Compliance With  
 Procedural Reqr

<b>Facility Data</b>			<b>Permit Applicability (this application only)</b>		
<b>Applicant (Facility's Name):</b> PCS Phosphate Company Inc. - Aurora  <b>Facility Address:</b> PCS Phosphate Company Inc. - Aurora NC 306 North Aurora, NC 27806  <b>SIC:</b> 2874 / Phosphatic Fertilizers <b>NAICS:</b> 325312 / Phosphatic Fertilizer Manufacturing  <b>Facility Classification: Before:</b> Title V <b>After:</b> Title V <b>Fee Classification: Before:</b> Title V <b>After:</b> Title V			<b>SIP:</b> <b>NSPS:</b> <b>NESHAP:</b> <b>PSD:</b> <b>PSD Avoidance:</b> <b>NC Toxics:</b> <b>112(r):</b> <b>Other:</b>		
<b>Contact Data</b>			<b>Application Data</b>		
<b>Facility Contact</b>	<b>Authorized Contact</b>	<b>Technical Contact</b>	<b>Application Number:</b> 0700071.04D <b>Date Received:</b> 01/10/2004 <b>Application Type:</b> Appeal <b>Application Schedule:</b> Appeal <b>Existing Permit Data</b> <b>Existing Permit Number:</b> 04176/R25 <b>Existing Permit Issue Date:</b> 03/10/2004 <b>Existing Permit Expiration Date:</b> 12/30/2008		
Pete Wind Environmental Engineer (252) 322-8125 P O Box 48 Aurora NC, 27806	Bill Cooper General Manager/Phosphate Div. (252) 322-4111 P O Box 48 Aurora NC, 27806	Pete Wind Environmental Engineer (252) 322-8125 P O Box 48 Aurora NC, 27806			
<b>Review Engineer:</b> Ken Babb  <b>Review Engineer's Signature:</b> _____ <b>Date:</b> _____		<b>Comments / Recommendations:</b> Issue 04176/T26 <b>Permit Issue Date:</b> <b>Permit Expiration Date:</b>			

**1. Purpose of Application:**

The facility filed this adjudication in response to their initial Title V permit. The issue concerns SO<sub>2</sub> emissions from the Rock Dryer. As discussed below, DAQ has accepted the facility's estimates of SO<sub>2</sub> emissions. The descriptions of calciners 5 and 6 have also been modified to reflect the final steps in the installation of Wet electrostatic precipitators (WESP) on all six calciners.

Table of Changes to Permit

Location in permit	Change
Pages 6 and 7 , descriptors for calciners 5 and 6.	Added WESP
Page 47, 2.1.2.B.1.c	SO <sub>2</sub> emissions from Rock dryer

**2. Application Chronology:**

The application chronology is detailed on the attached IMPAQ Comprehensive Application Report.

### **3. Adjudicated Issue:**

The adjudicated issue concerns SO<sub>2</sub> emissions from the Rock Dryer (ID No. 332-120). In the original permit emissions were estimated by the standard assumption, that is, by assuming that all sulfur contained in fuel burned by the rock dryer is emitted from the dryer as SO<sub>2</sub>. PCS has submitted historical test data that shows emissions much less than would result from the standard assumption (see attachment). It appears that much of the sulfur originally contained in the fuel is bound to the rock during the drying process. Because of the lowered emission estimates, it no longer appears that this source has the potential to exceed the modeled NAAQS limit for SO<sub>2</sub> for this source, so no regular monitoring will be required. Annual testing will continue to be required to continue confirm these new emission estimates. However should the testing show that potential emissions are less than 20% of the NAAQS limit, the timing will be shifted to once every five years.

### **4. Other Changes:**

The only other change to the permit involves calciners 5 and 6. As required by permit R21, the facility has been installing WESP's on each of the six calciners. Currently the WESP's on calciners 1 through 4 are operating and are shown in the permit. WESP's on calciners 5 and 6 are currently being installed and should be operational before this permit is ready to be issued.

### **5. Conclusions, Comments, and Recommendations:**

A draft of this permit was sent to the WaRO.

The RCO recommends issuance of permit revision 04176R25.

The WaRO recommends issuance of permit revision 04176R25.

Because of the relaxing of monitoring requirements on the Rock Dryer this permit will need to go back through public notice.

### Rock Dryer SO<sub>2</sub> emission calculation

PCS Test results:

0.782 lb of SO<sub>2</sub> per 515.3 gallon of fuel oil and 0.0 lb of SO<sub>2</sub> per gallon of fuel oil

To be conservative I will use the higher value instead of averaging.

Daily fuel oil capacity:

93,000,000 Btu/hr \* 24 hr/day \* 1 gallon/150,000 Btu = 15,000 gallons of fuel/day

Potential Emissions:

15,000 gallons fuel oil/day \* 0.782 lb of SO<sub>2</sub> /gallon of fuel oil = 22.8 lb of SO<sub>2</sub> /day

Allowed by NAAQS modeling: 75 pound per day