



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

Cornwell
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OCT 31 2011

AIR PROTECTION BRANCH

October 25, 2011

Mr. James A. Capp, Chief
Air Protection Branch
Environmental Protection Division
Georgia Department of Natural Resources
4244 International Parkway, Suite 120
Atlanta, Georgia 30324

Dear Mr. Capp:

Thank you for sending the comments from CARBO responding to letter on the Prevention of Significant Deterioration (PSD) permit application for a proposed project at CARBO Ceramics in Millen GA. Region 4 has reviewed the letter and has the following supplementary comments:

Nitrogen Oxides (NO_x) – As noted in the earlier letter, NO_x control remains a significant concern. The facility proposes only combustion control as Best Available Control Technology (BACT). The most significant issue presented regarding whether BACT controls are reasonably available hinges on the expected degradation of the product that will result from the conversion of the sulfur in the clay to ammonium sulfate and bisulfate. The letter cites a third party engineering source as the basis for this concern.

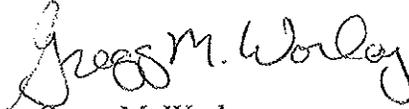
Since the BACT determination will rely heavily on this stated concern, it seems appropriate that the actual information from the third party source documenting how much sulfate would cause unacceptable levels of contamination and the engineering analysis underlying the finding that SNCR is infeasible be included in the record. It also seems appropriate to explore what can be done on site to reduce the sulfur in the incoming clay. If the sulfur in the clay is pyritic, perhaps washing the clay, as is done with coal, might be an option to reduce its content to an acceptable level prior to firing.

Sulfur Dioxide (SO₂) – The concerns expressed with the emission limit are based on the expectation that the facility will be using clay with 0.82% sulfur content for significant periods of time. This value is presented as an assumption with no further documentation. The expected sulfur content has an impact on the appropriate allowable emission rate for SO₂ as well as the ability of the facility to control NO_x as noted above. We have only limited data on the sulfur contents of Georgia clay. However what data we do have indicates that an appropriate emission factor for the clay would be much lower. We also have anecdotal information that there is limited variability in the seam which seems to conflict with CARBO's experience. An emission factor of 4.99 lb of SO₂ per ton of clay fired would infer an average sulfur content of 0.125%. If this were the case here, even allowing a 100% margin for variability, at 95% control we would expect an emission limit of 0.5 lb SO₂ per ton of clay fired.

We previously requested information explaining why the SO₂ limit is so high in this application. Since CARBO apparently presently manages its clay selection at Toombsboro to select clay with lower sulfur content, it seems that data applicable to the expected distribution on the sulfur content of the clays to be fired at Millen should be available. We request the record include more site specific data and information on the sulfur content of the clays to be used and whether having a 30 day rolling average would address the concern of sulfur variability.

If you have any questions about these comments or require additional information, please contact Heather Ceron at (404) 562-9185 or John Calcagni at (919) 541-9775.

Sincerely,

A handwritten signature in black ink that reads "Gregg M. Worley". The signature is written in a cursive style with a large, stylized initial "G".

Gregg M. Worley
Chief
Air Permits Section