Suwannee American Cement
SAC
Branford, Florida, USA

P.O. Box 410
Branford, Fl 32008

November 22, 2005

Ms. Trina Vielhauer
Division of Air Resources
Department of Environmental Protection
2600 Blair Stone Road, MS # 5500
Tallahassee, Florida 32399-2400

SUBJECT: **Temporary Hydrated Lime Testing**
Suwannee American Cement – Branford Plant
Facility ID No. 1210465
PSD-FL-259D

Dear Ms Vielhauer:

As the Department is aware SAC previously received a Construction Permit (1210465-008-AC) for the construction and operation of a Hydrated Lime System on Kiln Line I at its Branford Plant. SAC has installed the system which helps to reduce SO_2 concentrations should they occur by the injection of hydrated lime into the preheater tower. Here the lime acts as a scrubbing agent keeping the SO_2 from escaping the preheater and exiting via the stack. The system has only had to be utilized on a few occasions due to the relatively low sulfur content of the raw materials used at SAC.

However with the new Hydrated Lime System in place SAC would like to more thoroughly test the reduction limits possible with the system as allowed by F.A.C.. Additionally, SAC would like to further understand the limits allowable with the sulfur-alkali balance in the kiln system which provides the primary means to control SO_2. Unfortunately with SAC's current SO_2 limit of 24 pounds of SO_2 per hour and 0.20 pounds per ton of clinker with the associated three hour rolling average, little room for testing is possible. SAC currently operates well below the sulfur-alkali balance to insure compliance with the low limit and short averaging time. The Hydrated Lime System was installed and is operated when needed to insure that in the event of SO_2 emissions a secondary means of control is present.

SAC would request from the Department a two calendar month period were current SO_2 emission limits could be maintained but on a block calendar thirty day averaging period instead of the current three hour rolling average. This would allow SAC more flexibility to increase sulfur inputs into the kiln system to determine the true acceptable limits of the sulfur-alkali balance. This could lead to more effective use of the quarry since SAC is currently forced to exclude some areas that may have naturally occurring sulfur to insure it stays well below the present limits with the associated averaging time. The test would also allow SAC to operate with an excess of sulfur in the system which could test the efficiency of the hydrated lime system for removal of the SO_2 emissions as well as the long-term ability for hydrated lime to increase the sulfur trapped in the clinker. SAC would also use the time of elevated sulfur in the system to test sources of alkalis which would then be able to trap the sulfur into the clinker reducing the sulfur

cycle and subsequent SO_2 emissions. All of this could be accomplished with no increase in mass emissions since SAC would maintain its current permitted levels of SO_2 emissions but just track SO_2 on a temporary thirty day calendar block. SO_2 emissions with raw mill operating will still be minimal since the raw mill acts as a very efficient scrubber for the low levels of SO_2 present at SAC.

SAC would provide the Department with a report detailing the findings within in 90 days of completion of the two month period of testing. The report would detail the following information:

- Sulfur-Alkali Balance achieved and impacts on internal and external sulfur cycles,
- SO_2 CEM data during the two month calendar period,
- Sulfur content of raw materials during testing,
- Sulfur forms in raw materials, pyritic versus sulfate compounds, during testing,
- Removal efficiency of Hydrated Lime System on SO_2 and impact on sulfur content in clinker,
- Testing of Alkalis and efficiency in increasing sulfur entrapped in the clinker,
- Final recommendations for Sulfur balance control with existing limits and averaging times.

SAC would propose to begin the testing as soon as acceptable with the Department and the use of raw materials, fuels and or other additives would not change from current permitted and allowable limits with the exception of possible small amounts of additives for alkalis such as different sources of fly ash or feldspar. These additives would have no adverse affect on any emission concentration. SAC is requesting only the averaging time for the existing SO_2 limits be modified for a temporary basis during the testing. The following outlines the testing schedule during the two calendar months.

Testing Phase	**Week**							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Increase Sulfur Content in Kiln Feed	■	■	■	■	■	■		
Determine Acceptable Sulfur-Alkali Balance		■	■	■				
Test Hydrated Lime Efficiency (SO_2 Removal & Sulfur in Clinker)					■	■	■	■
Testing of Alkalis for increased Sulfur in Clinker						■	■	■

SAC looks forward to working with the Department and if you or anyone at the Department should have any questions please feel free to contact me directly at (386) 935-5039 or by email at jbhorton@suwanneecement.com.

Sincerely,

Joe Horton
Environmental Manager
Suwannee American Cement

CC: Tom Messer – SAC
Celso Martini – SAC
John Koogler – Koogler & Associates