Suwannee American Cement
SAC
Branford, Florida, USA

P.O. Box 410
Branford, Fl 32008

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BUREAU OF AIR REGULATION

July 5, 2004

Al Linero
Division of Air Resources
Department of Environmental Protection
2600 Blair Stone Road, MS # 5505
Tallahassee, Florida 32399-2400

SUBJECT: **Construction Permit Application dated 4/26/04**
Suwannee American Cement – Branford Plant
Facility ID No. 1210465
PSD-FL-259D

Dear Mr. Linero:

In accordance with our discussions on June 29, we hereby formally confirm our request that the construction permit application submitted on April 26, 2004, also address the following:

1. Hydrated Lime System (this is the same description we previously provided).
2. Calculated Clinker Production (amending Conditions III. B. 4 and 24)

Pertinent information is attached.

If you have any questions, please feel free to contact me at (386) 935-5039.

Sincerely,

Joe Horton
Suwannee American Cement

CC: Chris Kirts – Northeast District, DEP
Celso Martini – SAC
Dr. John Koogler – Koogler & Associates

Attachment 1
Hydrated Lime Information

HYDRATED LIME SYSTEM

OVERVIEW

Suwannee American Cement (SAC) is requesting the installation of a hydrated lime system for the control of SO_2 emissions. Under most circumstances SAC has virtually no SO_2 emissions and this project would serve as an assurance that should SO_2 emissions occur they could be controlled to meet the emission limits.

The system would consist of a storage bin for hydrated lime and a pneumatic delivery system to transport the lime to the top of the preheater of tower to be introduced with the kiln feed. Particulate matter emissions from the storage bin would be controlled by a fabric filter (baghouse) dust collector. No emissions would be associated with the pneumatic delivery system or the introduction of the lime into the kiln system.

PURPOSE

Hydrated lime is similar to the raw materials currently fed to the kiln system. When the SO_2 emissions are detected, the hydrated lime would be feed into the kiln system with the kiln feed. The hydrated lime will act as a scrubbing/absorbing agent similar to the raw materials in the raw mill/roller mill, effectively scrubbing virtually all of the SO2 in the kiln exhaust gas and thereby resulting in reduced SO_2 emissions. Since hydrated lime is similar to the limestone in the raw materials the hydrated lime is incorporated into the clinker. It is estimated that the hydrated lime will make up only a small portion (less then one percent) of the total kiln feed.

BENEFITS

SAC believes that this system will almost completely eliminate SO_2 emissions. Presently, SO_2 emissions are close to zero for the vast majority of the time, so this system will only be used for short periods when there are SO_2 emissions for whatever reasons. The system will be controlled automatically with the CEMs in the stack. The system will feed lime as SO_2 is detected in the stack and will control the dosage based on the concentration of SO_2 at the stack. This automation of the system will allow for the most efficient control and reduction of SO_2 emissions.

Included in Figure 1 and 2 are drawings of the Hydrated Lime System.

Figure 1: Hydrated_Lime Drawing

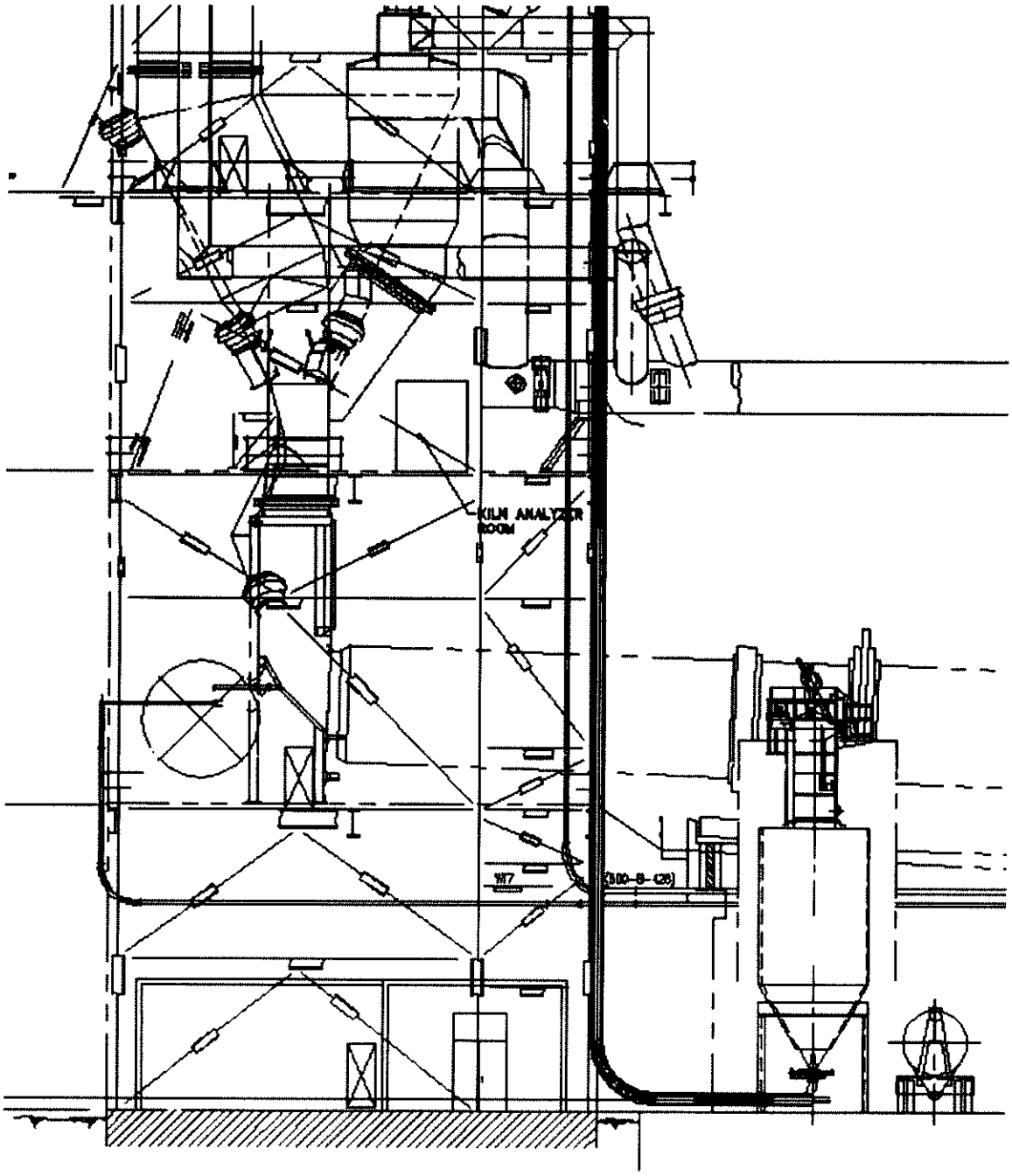


Figure 2: Hydrated Lime Drawing 2

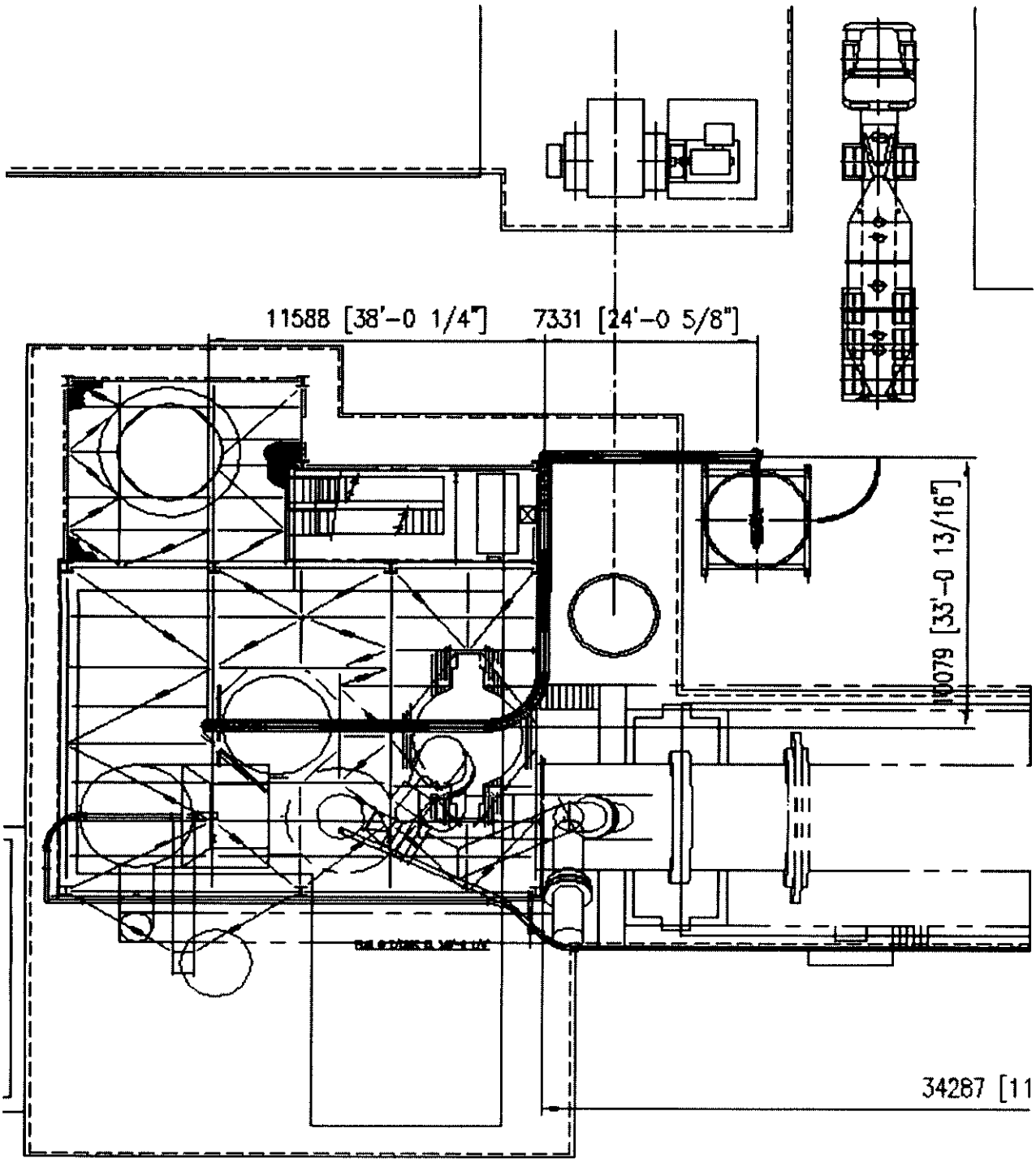
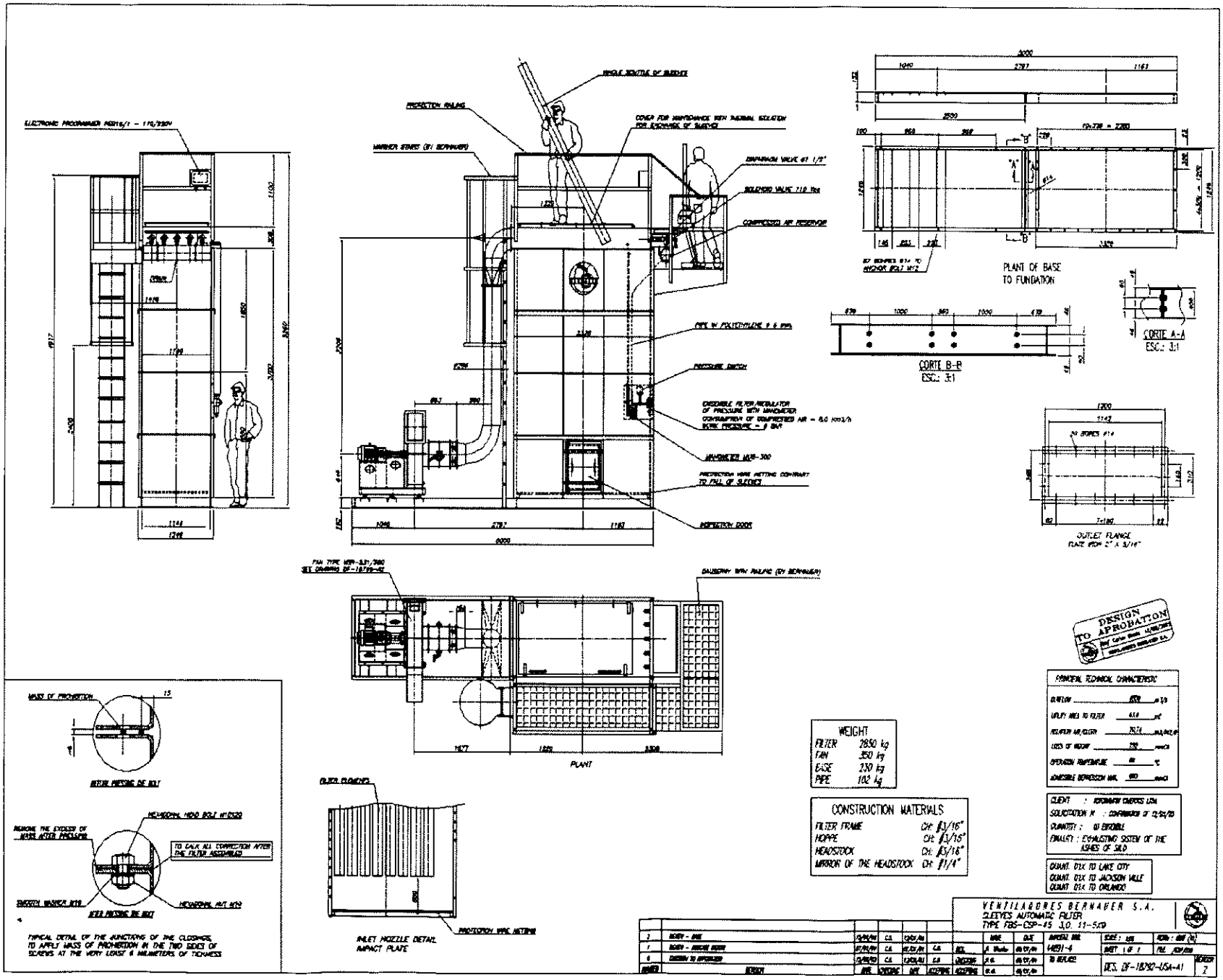


Figure 3: Dust Collector Information

Airflow – 2700 acfm

Air to Cloth Ratio 685 ft^2



Attachment 2
Calculated Clinker Production Information

SECTION III.B - SPECIFIC CONDITIONS 4 and 24

4. **Process Rate Limitations:** The kiln shall not process more than 178 tons of dry preheater feed per hour and shall not produce more than 105 tons of clinker per hour as calculated based on preheater feed. Clinker production shall be calculated from dry preheater feed using the Loss of Ignition (LOI) factor. The LOI factor shall be determined using ASTM Test Methods or other similar Industry Test Methods with consideration for baghouse dust returns. The LOI factor shall be evaluated on a quarterly basis by the permittee to insure accuracy with inventory and cement production records, and the factor shall be adjusted if necessary within 7 days of the beginning of the quarter. The facility shall not produce more than 150 tons of cement per hour. Process and production rates shall be further limited to 1,427,880 tons of dry preheater feed in any consecutive 12-month period, 839,500 tons of clinker in any consecutive 12-month period, and 1,191,360 tons of portland cement in any consecutive 12-month period. [Rule 62-210.200, F.A.C., Definitions – potential to emit (PTE)]

24. **Process Rate Limitations:** The owner or operator shall make and maintain records of the process rate of dry preheater feed in units of tons per hour and tons per consecutive 12-month period, and the production rate of clinker and cement in units of tons per hour and tons per consecutive 12-month period. ~~The clinker rate shall be directly measured independently of preheater feed.~~

[SAC additions to permit underscored; SAC deletions are ~~stricken~~]

Explanation/Rationale: SAC uses a very accurate system for processing and measuring the preheater feed. This system is supplied by Polysius and is called the Poldos. The Poldos accurately measures and transfers preheater feed into the kiln system. SAC uses this preheater feed measurement and a set Loss of Ignition (LOI) Factor to determine the clinker produced. SAC determined the LOI factor using the ASTM test method 2863 on its preheater feed with consideration for dust return from the main baghouse. This method accurately determines the clinker produced and corresponds with physical inventory numbers and cement production. This method is an industry standard for determining clinker production, and it is the method by which SAC determines its own production for accounting and inventory purposes. Accordingly, SAC requests that paragraph 4 be revised to expressly provide that only clinker measurements based off of preheater feed shall be used for compliance determinations.

SAC uses a load cell for measurement of clinker as it exits the clinker cooler. This number is recorded in the NEXUS software, but should not used for determining compliance with production limits or in emission limit calculations due to various factors that may cause this information to be inaccurate. Load cells operate accurately only when a known area of the belt comes in consistent and uniform contact with the load cell to measure throughput. Clinker must be transported from the clinker cooler using a bucket or pan conveyor because of the high heat of the clinker. Bucket and pan conveyors do not uniformly contact the load cell in the same manner as a flexible belt due to the stiffness of the metal buckets and the chain pulling the buckets. .In addition, clinker leaving the kiln system is not in a steady state because various amounts of accumulation can occur in the clinker cooler dependent on the amount of cooling needed. For these reasons, a load cell may not always provide an accurate determination of clinker production. Accordingly SAC requests that paragraph 24 be revised by deleting the unnecessary requirement to measure clinker production independently of preheater feed.