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APR 19 2011

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April 13, 2011

Al Linero
Florida Department of Environmental Protection
Division of Air Resource Management
2600 Blair Stone Road, MS 5500
Tallahassee, Florida 32399-2400

Dear Al,

In July, 2005, an Air Construction Permit was issued to Rinker Materials of Florida, Inc/Florida Crushed Stone Company (now CEMEX via acquisition) to construct a second cement manufacturing line (Line 2) at its Brooksville South facility. The Facility Description called for a capacity of 206.3 tons per hour of preheater feed and 125 tons per hour of clinker production, which is equivalent to 3,000 tons per day of clinker production. However, the permit limited clinker production to 2,800 tons per day based on a 24-hour average. While the proprietary equipment suppliers were told to guarantee 2,800 tons per day of clinker, the plant was to be capable of achieving the 3,000 tons per day capacity specified in the Air Construction Permit. As a result, the equipment supplied and installed for Line 2 effectively has a nominal capacity of 3,000 tons per day of clinker.

The proprietary equipment suppliers generally build their own safety factors into the plants they supply to ensure that they can safely meet all performance guarantee limits in order to avoid any potential penalty payments. Therefore, it is generally safe to assume that a cement plant can out-perform its nominal design capacity. This point was demonstrated in CEMEX's Miami plant (Rinker at that time) that was designed and guaranteed as a 2,750 ton per day system when it went into operation in 2000 but was re-permitted for 3,888 tons per day in 2004. I was personally involved in the construction, operation and re-permitting of the Miami facility. The Miami pyro-processing area has been able to sustain over 3,600 tons per day of clinker production.

I was also personally involved in the construction and start-up of the Brooksville South Line 2. The pyro-processing areas of these two plants are both FLS systems with the same basic design. However, in general the Brooksville South Line 2 pyro-processing area is somewhat larger than the one in the CEMEX Miami facility. For example, the kiln in Miami is 4.15 M in diameter by 48 M long compared to the Brooksville South Line 2 kiln which is 4.35 M by 51 M long. Similarly, the kiln ID fan in Miami is 1500 Hp compared to the 1,750 Hp kiln ID fan installed in Brooksville South Line 2.

CEMEX is now applying to increase in the permitted capacity of Brooksville South Line 2 from 2,800 tons per day to 3,500 tons per day. This is equivalent to a preheater feed rate of 240 tph based on the

observed preheater feed to clinker ratio. Based on the results from Miami, the current operations of the Brooksville South Line 2 and the relative size of the two systems, Brooksville South Line 2 should be capable of operating at 3,500 tons per day clinker production. The limitation will be most likely occur in preheater ID fan and Main Baghouse ID fan capacities.

I have also reviewed the design basis of the supporting systems:

- The raw material handling upstream of the raw mill has a design basis of 337 tph. This is more than adequate to support 3,500 tons per day of clinker production.
- The raw mill system was designed for 240 tph (dry basis) of raw meal production with feed moisture of 14%. During performance testing, the raw mill exceeded its design capacity and produced an average of 247 tph (dry basis) for 24 hours. Based on approximately 7% dust loss due to the inherent inefficiency of the top cyclone of the preheater, 240 tph preheater feed will require the raw mill to run just above design capacity for approximately 90% of the hours that the kiln runs, which is achievable. However, during the performance test the raw material moisture was only 12%. During day-to-day operations, the mill has not been able to achieve design production rates when the feed moisture is over 12%, which occurs during periods of heavy rain. The limitation is caused by plugging of the material handling chutes and diverter gate that were designed to split a portion of the wet feed between the flash dryer and the mill inlet. As a result, all feed is sent through the flash dryer, effectively overloading its drying capacity. Therefore, the raw mill will limit clinker production during the rainy season. Some modifications will be needed to the raw material feed system that splits the feed between the flash dryer and the raw mill inlet. The details of these modifications are yet to be engineered but will involve either a different splitting mechanism and revised materials chutes to eliminate plugging or system to split the fine and coarse fractions of the feed.
- The main baghouse dust handling system and gas conditioning tower have adequate reserve to support 3,500 tons per day of clinker production.
- The kiln feed system has a design capacity of 241 tph, which is right at the level needed to support 3,500 tons per day of clinker production. However, observation of this system while running at 192 tph indicates that the system should still have adequate reserve capacity at 240 tph without modification.
- The clinker cooler undergrate fans and cooler vent fan have adequate capacity to support 3,500 tons per day of clinker capacity. Cooler vent gas temperature will increase and there may be a slight increase in clinker exit temperature, but there will not be any negative impacts to the operation as a result. The clinker transport system, which was designed for 208 tph, also has adequate reserve capacity to handle upset conditions at 3,500 tons per day clinker capacity.
- The coal mill, clinker storage, finish mill, cement storage, shipping and packaging systems are all more than capable of supporting 3,500 tons per day of clinker production.

Based on my experience with both the Miami and Brooksville South Line 2 systems and my review of the design of the as-built systems of the Brooksville South Line 2, it is my opinion that Brooksville South Line 2 is capable of producing 3,500 tons per day of clinker during steady-state operations without modification.

Please let me know if you have any questions.

Best regards,

A handwritten signature in black ink, appearing to read "M. D. Aller", with a long horizontal flourish extending to the right.

Michael D. Aller

Project Manager – East Region

CEMEX USA

Cc: Jim Daniel – Plant Manager – Brooksville South