CEMEX

Via UPS

Mr. Syed Arif, PE
Florida Department of Environmental Protection
New Source Review Section
2600 Blairstone Road
Tallahassee, Florida 32399

SUBJECT: ***CEMEX, Inc. (Florida Crushed Stone Company)***
Brooksville South Cement Plant; Brooksville, Florida
Project No. 0530021-016-AC; Request for Additional Information

Dear Syed:

CEMEX, Inc. (Florida Crushed Stone Company) is in receipt of the Department's Request for Additional Information (RAI) dated September 2, 2008, regarding the Brooksville South Cement Plant (Project No. 0530021-016-AC). The responses are listed below in the order as they appear in the letter.

1. **The application does not state what construction permit and permit condition(s) you are proposing to modify. Please provide this information.**

Response: The application was submitted to obtain an air construction permit that would modify the operation of the Kiln No. 1. The current Title V permit allows the use of tires in the kiln, but specifies that tires must be fed at the back end of the kiln. CEMEX is requesting an air construction permit to install the TIM system and to modify the Title V permit to also allow for tires to be fed at the front end of the kiln.

2. **What is the historical heat input due to tire derived fuel? If the historical heat input is less than the permitted maximum firing rate of 15.0 percent of the total BTU heat input, conduct a Baseline Actual-to-Projected Actual Applicability Test for Modifications at Existing Emissions Units according to Rule 62-212.400(2)(a)1,**

United States Operations
840 Gessner, Suite 1400, Houston, TX 77024. USA, (713) 650-6200

Florida Administrative Code (F.A.C.) in order to determine Prevention of Significant Deterioration applicability.

Response: A summary of the heat input from tires (as percent of total heat input to kiln) is shown in Table 1. As shown in Table 1, the average heat input due to tires for 2006, 2007, and 2008 (through August), is approximately 8.5% of the total kiln heat input. Since this is less that the maximum permitted firing rate of 15% of total heat input, a PSD Baseline Actual-to-Projected Actual applicability analysis was performed, and is discussed further below.

As shown in Table 2, baseline actual emissions are compared to projected future actual emissions along with contemporaneous emissions increases from the past five years. Future actual emissions are based on a representative 2-year period of emissions data from the facility's Annual Operating Reports (AORs). The future actual emissions are based on the proposed operating scenario of burning tires in the kiln up to 15% of the total heat input. Since the kiln does not use Continuous Emissions Monitoring Systems (CEMS) and does not have stack test data while burning tires at varying (between 8.5% to 15% of total heat input) rates of tire input, CEMS data from a similar CEMEX cement plant was evaluated.

CEMS data from Kiln No. 2 at the CEMEX Brooksville (North) facility was evaluated at varying heat input rates for tires. As shown in Figures 1, 2, and 3, the CO and NOx emissions were plotted versus the tire rates (as percent of total heat input rate to the kiln). Although the CO and NOx emissions data varies greatly, a slight correlation between the tire feed rate and CO and NOx emissions can be seen. In Figure 1, CO emissions increase somewhat as the tire feed rates increase, specifically the correlation plot shows an increase in CO emissions of approximately 24% when increasing the tire feed rate from 8.5% to 15%. In Figures 2 and 3, NOx emissions decreased slightly, specifically the correlation plot shows a decrease in NOx emissions of approximately 4% when increasing the tire feed rate from 8.5% to 15%.

To calculate the future actual emissions for the proposed TIM system project, the conclusions from the evaluation of the CEMS data from the Brooksville North cement plant were used. Future actual CO emissions are based on an increase of 24% (refer to Figure 1) from the baseline actual emissions. Although the data showed a slight decrease in NOx emissions

when increasing the tire feed rate, to be conservative, future actual NOx emissions were set equal to baseline actual NOx emissions, assuming that emissions will be relatively the same. As has been demonstrated by numerous stack tests and CEMS data, PM, PM_{10}, SO_2, mercury, and VOC emissions are expected to be relatively the same with increasing tire feed rates. Therefore, the future actual emissions for these pollutants were set equal to the baseline actual emissions.

As shown in Table 2, the total net change due to the proposed project (TIM system installation) is less than the PSD significant emission rate for all pollutants. Therefore, the proposed project does not trigger PSD review.

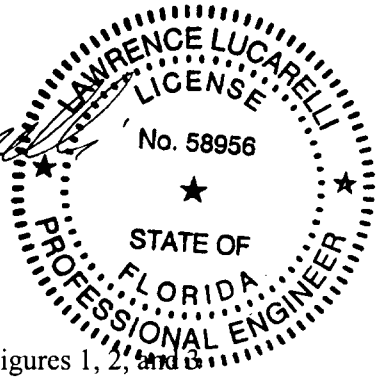
3. **If the heat input due to tire derived fuel is within 90 percent of the permitted firing rate, please provide the necessary documents to substantiate the claim.**

Response: As described in Response No. 2 above, the heat input due to TDF is less than 90-percent of the permitted firing rate. Therefore, no response is needed.

If you should have any questions regarding this application, please do not hesitate to contact me (352) 377-5822 or FBergen@kooglerassociates.com, Koogler and Associates, Inc. (consultant to CEMEX), or Mr. George Townsend, CEMEX Brooksville South Environmental Manager, at (352) 799-7881 or GTownsend@cemexusa.com.

Very truly yours,

CEMEX, Inc..



Lawrence Lucarelli, PE
Florida PE # 58956
Senior Manager, Environmental

Enclosures: Tables 1, 2, and 3; Figures 1, 2, and 3

copy to: J. Daniel, CEMEX Brooksville South
L. Deprimo, CEMEX Knoxville
F. Bergen, Koogler and Associates
G. Townsend, CEMEX Brooksville South

Table 1. Summary of Kiln 1 Heat Input Rate Substitution from Tire-Derived Fuel, CEMEX Brooksville South

		Tire % of Total Heat Input
2006	JAN	8.0%
	FEB	7.8%
	MAR	7.3%
	APR	8.2%
	MAY	7.8%
	JUN	10.4%
	JUL	9.0%
	AUG	6.2%
	SEP	7.6%
	OCT	7.3%
	NOV	8.8%
	DEC	8.6%
2007	JAN	9.2%
	FEB	7.8%
	MAR	9.5%
	APR	8.3%
	MAY	9.5%
	JUN	9.8%
	JUL	9.0%
	AUG	9.2%
	SEP	8.4%
	OCT	8.7%
	NOV	9.2%
	DEC	9.3%
2008	JAN	10.5%
	FEB	9.9%
	MAR	9.0%
	APR	7.2%
	MAY	7.4%
	JUN	8.5%
	JUL	8.3%
	AUG	7.4%

average = 8.5%
max = 10.5%
min = 6.2%

Source: CEMEX Brooksville South, 2008

Table 2. PSD Applicability Analysis - Kiln No. 1 TIM System Project; CEMEX Brooksville South

	Annual Emissions (TPY)						
	CO	NO_x	PM	PM_{10}	SO_2	Hg	VOC
Baseline (Past) Actual - Tires at about 8.5% [b]							
Kiln No. 1	336.10	1,205.50	20.50	18.05	36.00	0.10	43.65
Projected (Future) Actual - Tires at < 15% [b]							
Kiln No. 1	416.76	1,205.50	20.50	18.05	36.00	0.10	43.65
Net Emissions Increase	**80.66**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Contemporaneous Emissions (Past 5-Years)							
Kiln 2 PSD Permit (-009-AC)	[a]	[a]	[a]	[a]	[a]	0.061	[a]
Total Net Change Due to Project	80.66	0.00	0.00	0.00	0.00	0.06	0.00
PSD Significant Emission Rate (TPY)	**100**	**40**	**25**	**15**	**40**	**0.10**	**40**
PSD Review Triggered? (Yes/No)	**No**	**No**	**No**	**No**	**No**	**No**	**No**

[a] PSD triggered for this pollutant. Therefore, any previous contemporaneous emission changes are wiped clean.

[b] Refer to Table 3 for derivation of baseline actual and protected actual emission rates.

Note:
Projected actual emissions due not include increased utilization due to product demand growth.

Table 3. Summary of Derivation of Past Actual and Future Actual Emission Rates, CEMEX Brooksville South Kiln 1

		Emission Rates (TPY)						
		CO	NO_x	PM	PM_{10}	SO_2	Hg	VOC
Baseline Actual [a]	(year of data)							
	2007	378.7	**1115**	85	68	**36**	0.000024	**46.4**
	2006	334.2	**1296**	81	68	**36**	0.1	**40.9**
	2005	**338.3**	493	**23.4**	**21.4**	8.2	0.08	41.4
	2004	**333.9**	326	**17.6**	**14.7**	2.8	**0.09**	40.9
	2003	1261.6	785	3.9	3.9	5.2	**0.1**	40.9
Representative 2-year average =		**336.1**	**1205.5**	**20.5**	**18.05**	**36**	**0.095**	**43.65**
Future Actual [b]		**416.764**	**1205.5**	**20.5**	**18.05**	**36**	**0.095**	**43.65**

[a] Based on AOR data, 2003 - 2007. For 2006-2003, Hg emissions are for the combined power plant and cement kiln.

[b] Based on a 24% increase in CO emissions (refer to Figure 1 for derivation of 24% increase).

As shown in Figures 2 and 3, NOx emissions may decrease slightly. To be conservative, baseline actual NOx emissions were set equal to future actual NO_x emissions.

PM, PM_{10}, SO_2, Hg, and VOC emissions are expected to be relatively the same (has been demonstrated through stack tests and CEM data at numerous cement plants). Therefore, future actual = baseline actual.

Figure 1 - 3-hr Avg CO vs TDF Feed Rate

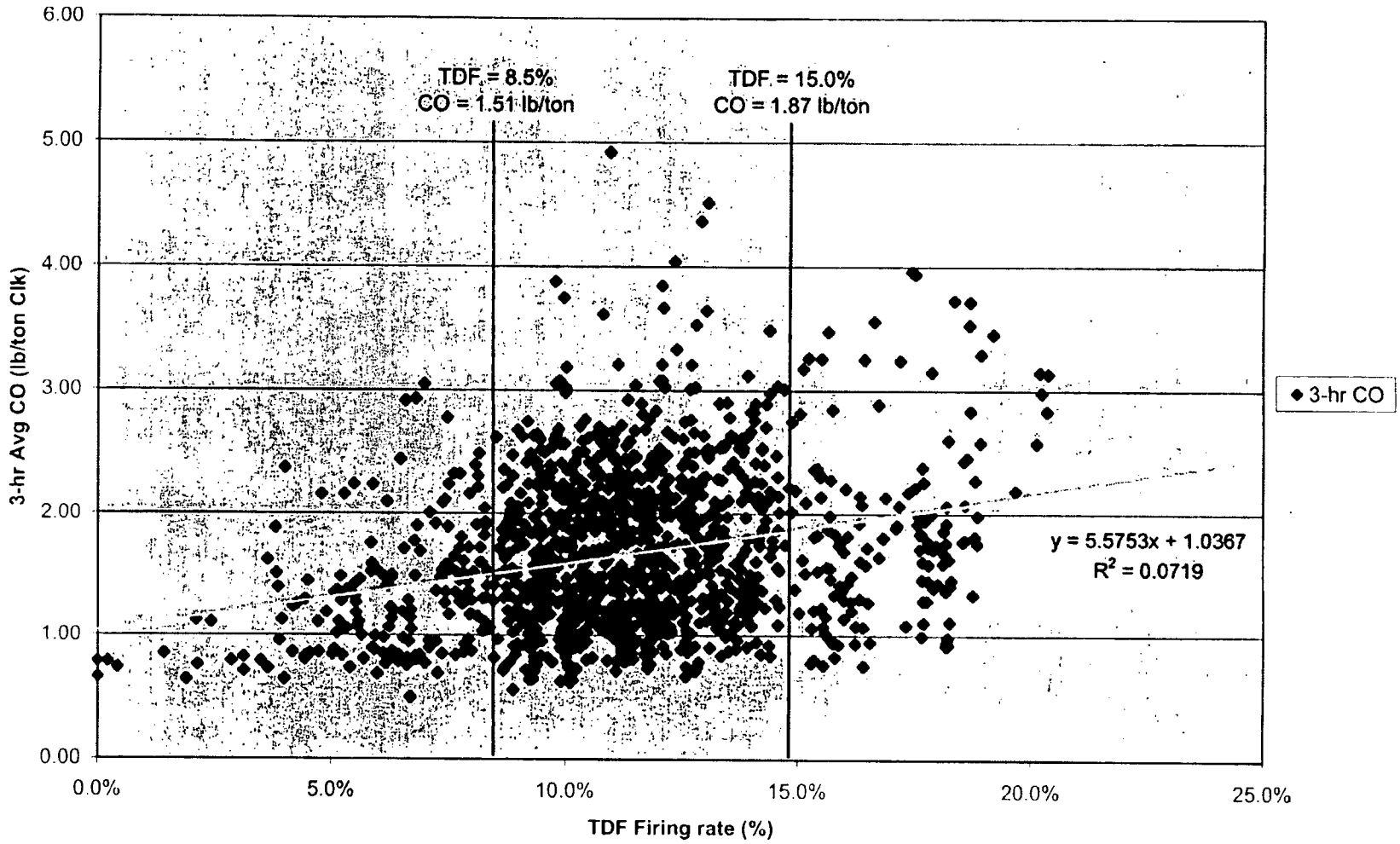


Figure 2 - 3-hr Avg NOx vs TDF Feed Rate

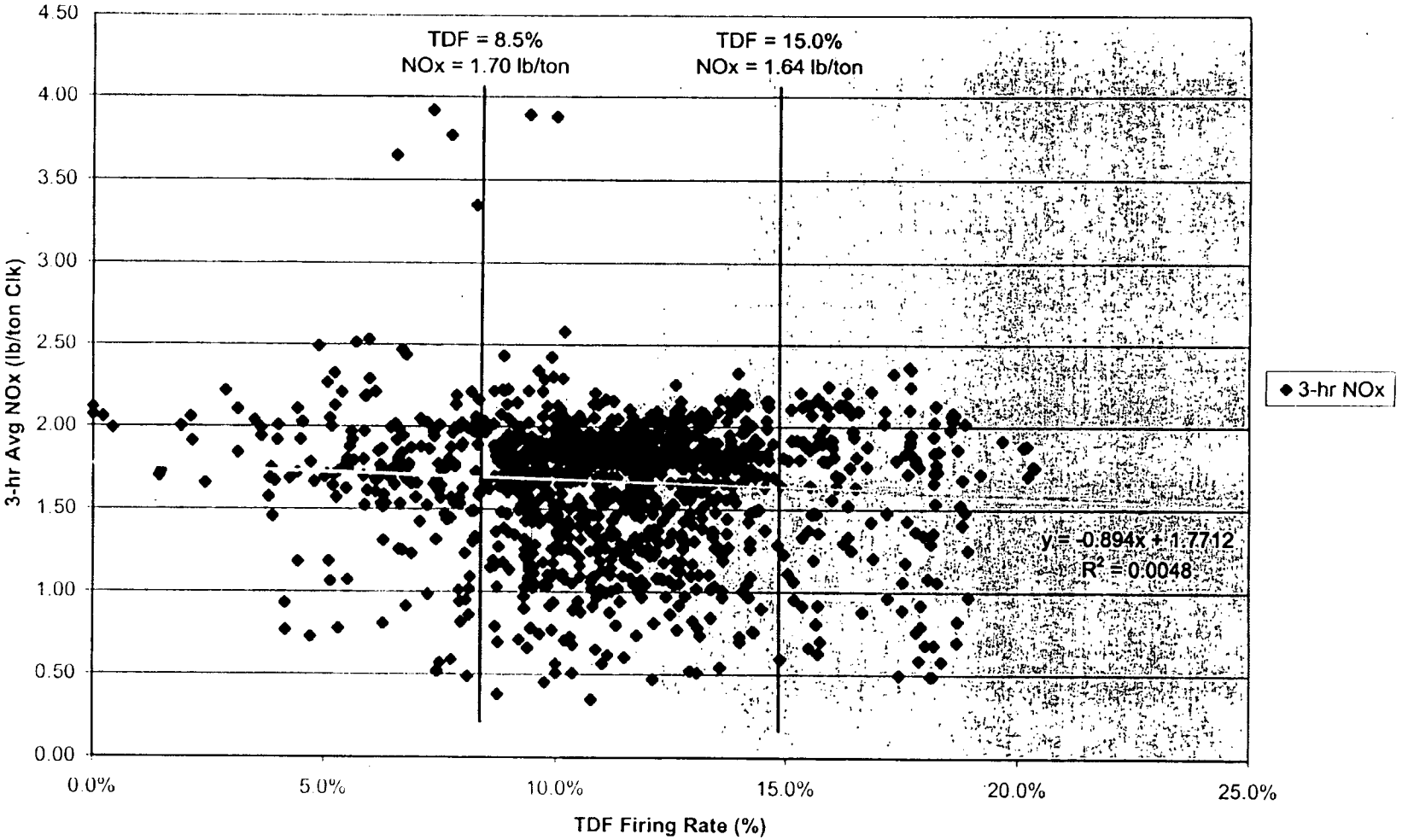


Figure 3. 24-hr Avg NOx vs TDF Feed Rate