



**KOOGLER & ASSOCIATES**  
**ENVIRONMENTAL SERVICES**

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GAINESVILLE, FLORIDA 32609  
352/377-5822 ■ FAX/377-7158

263-03-10  
October 8, 2004

**VIA UPS**

**RECEIVED**

OCT 11 2004

**BUREAU OF AIR REGULATION**

Mr. Al Linero  
FDEP  
111 S. Magnolia Drive, Ste. 23  
Tallahassee, FL 32301

**Subject: Rinker Materials Corporation**  
**Miami Cement Plant, Miami, Florida**  
**FDEP Permit No. 0250014-014-AC**  
**Production Capacity Test**

Dear Al:

In accordance with our telephone conversation on this date, I am hereby requesting that the above captioned Air Construction Permit issued to the Rinker Materials Corporation (Rinker) on September 2, 2004 be extended through December 31, 2004. The purpose of the Air Construction Permit was to allow Rinker to evaluate the feasibility of a clinker production rate increase by conducting a production capacity test. This request to extend the duration of the test period through December 31, 2004 involves no change to any of the conditions of the above captioned permit.

A letter to you and Trina Vielhauer from me dated August 5, 2004 and the appropriate sections of an application for an Air Construction Permit following on August 9, 2004 represented the basis for the issuance of the above captioned permit. Our August 9, 2004 submittal also included a summary of emission data collected on or about July 14, 2004 demonstrating that the Rinker Miami Cement Plant could operate at a production rate greater than originally permitted while still complying with all of the permitted emission limiting standards. The approval to operate at an increased production rate during the July 14<sup>th</sup> preliminary test period was granted by the Department on June 10, 2004 as Air Construction Permit 0250014-012-AC. That permit was issued pursuant to an application submitted to you by Koogler and Associates on June 4 and 9, 2004. Information in that application further described the production rate tests.

The above captioned permit authorizes a preheater feed rate of 260 tons per hour and a clinker production rate of 162 tons per hour. Rinker has successfully operated the plant at a preheater feed rate of approximately 245 tons per hour and a clinker production rate of approximately 147 tons per hour; however, the planned test schedule was dramatically affected by the severe weather experienced in the State of Florida during August and September. The rate at which Rinker operated are approximately 94 and 91 percent of the maximum feed and production rates respectively, authorized by the above captioned permit. As we discussed, Rinker would like to continue the tests at higher production rates with a goal of achieving the maximum rates authorized by this permit. This will be accomplished by refinements to the preheater feed mix, adjustments in the raw mill affecting the coarseness of the feed, and refinements in plant operations. In part because of the storm related delays and in part to continue to develop data requested by the Department, Rinker is requesting that the above captioned permit be extended to allow operations at the presently authorized rates through December 31, 2004.

In support of this request and as required by the above captioned permit, I am submitting with this request the results of emission measurements conducted during the period August 4-7, 2004. Attached to this letter of request (in addition to complete copies of the reports) are summary pages from the reports documenting measured emission rates in compliance with originally permitted emission limiting standards. These emission measurements were conducted with the plant operating at a preheater feed rate in the range of 245 tons per hour (compared with a maximum authorized feed rate of 260 tons per hour). The emission measurements are for:

- Carbon monoxide
- Sulfur dioxide
- Nitrogen oxides
- Methane
- Non-methane hydrocarbons
- Particulate matter
- Sulfuric acid mist
- Lead
- Mercury
- Dioxins/furans.

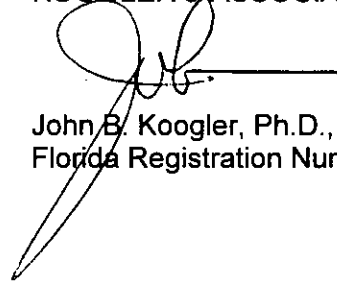


As previously stated, these data demonstrate compliance with originally permitted emission limiting standards while operating at a preheater feed rate of approximately 94 percent of the maximum authorized rate.

If there are any questions regarding this request for extension or if further information is required, please do not hesitate to contact me at 352-377-5822 or [jkoogler@kooglerassociates.com](mailto:jkoogler@kooglerassociates.com).

Sincerely,

KOOGLER & ASSOCIATES



John B. Koogler, Ph.D., P.E.  
Florida Registration Number 12925

JBK/lt

cc: Trina Vielhauer  
Scott Benyon  
Mike Vardeman



Emission Test Summary

August 4-7, 2004

Rinker Miami Cement Plant

**Table 6**

**CO, SO2, NOx, CH4, and NMHC Emissions Test**

Summary of Operating Conditions CSR Rinker Materials Miami, Florida Cement Kiln / Raw Mill August 5, 2004						
Run No.	Preheater Feed Rate (Ton/Hr)	Clinker Production (Ton/Hr)	Stack Gas Conditions			
			Flow (dscfm)	Flow (scfm,wet)	Temp. (F)	Moisture (%)
1	245.5	147.4	262708	298532	291	12.0
2	245.5	147.4	256008	292247	301	12.4
3	245.5	147.4	223597	259093	267	13.7
Ave.>	245.5	147.4	247438	283290	286	12.7

Summary of Emissions for CO, SO2, NOx, CH4, and NMHC CSR Rinker Materials Miami, Florida Cement Kiln / Raw Mill August 5, 2004										
Run No.	Carbon Monoxide		Sulfur Dioxide		Nitrogen Oxides		Methane(1)(3)		NMHC(2)(3)	
	(ppm)	(lb/hr)	(ppm)	(lb/hr)	(ppm)	(lb/hr)	(ppm)	(lb/hr)	(ppm)	(lb/hr)
1	216	247	2.79	7.3	186	349	2.42	1.8	6.66	13.7
2	232	259	0.00	0.0	166	304	2.30	1.7	7.27	14.6
3	247	241	2.54	5.7	239	384	2.37	1.5	6.62	11.8
Ave.>	232	249	1.78	4.3	197	346	2.36	1.7	6.85	13.4

- (1) As Methane
- (1) As Propane
- (2) Wet Basis

**Table 4**

**Summary of Source Particulate Matter Emission Test Data**

**Rinker Materials**

**Cement Kiln, Mill Up**

**August 4, 2004**

Run No.	Process Weight Rate (tons/hr)	Stack Gas Flow Rate (SCFMD)	Stack Gas Temperature (F)	Stack Gas Moisture (%)	Particulate Matter		
					Conc. (gr/dscf)	Emission Rate (lbs/hr)	lb/ton feed
1	245.5	262,915	291	11.9	0.0044	9.87	0.040
2	245.6	255,618	301	12.6	0.0042	9.20	0.037
3	245.4	222,270	267	13.9	0.0044	8.43	0.034
Average	245.5	246,934	286	12.8	0.0043	9.17	0.037

**Table 5**

**Summary of Source Particulate Matter Emission Test Data**

**Rinker Materials**

**Cement Kiln, Mill Down**

**August 5, 2004**

Run No.	Process Weight Rate (tons/hr)	Stack Gas Flow Rate (SCFMD)	Stack Gas Temperature (F)	Stack Gas Moisture (%)	Particulate Matter		
					Conc. (gr/dscf)	Emission Rate (lbs/hr)	lb/ton feed
1	245.6	195,528	453	10.1	0.0087	14.57	0.059
2	245.6	193,468	466	10.0	0.0087	14.39	0.059
3	200.7	198,739	464	10.2	0.0096	16.30	0.081
Average	230.6	195,912	461	10.1	0.0090	15.09	0.067

**Table 1**  
**Acid Mist Emission Summary**  
**Rinker Miami Cement Plant**  
**Facility ID - 0250014**  
**August 6, 2004**

Run	Preheater Feed (tph)	Clinker Production (tph)	Stack Gas			Acid Mist	
			Flow (dscfm)	Temp (°F)	Moist (%)	(lb/hr)	(lb/ton clinker)
1	244.4	146.7	218354	254	15.2	0.333	0.0023
2	245.5	147.4	228686	243	16.0	0.655	0.0044
3	245.3	147.3	215801	249	15.6	0.322	0.0022
Average							
Average	245.1	147.1	220947	249	15.6	0.436	0.0030

Permit Limit = 1.92 lb/hr and 0.014 lb/ton clinker



**Table 2**  
**Lead and Mercury Emission Summary**  
**Rinker Miami Cement Plant**  
**Facility ID - 0250014**  
**August 6, 2004**

Run	Preheater Feed (tph)	Clinker Production (tph)	Stack Gas			Lead		Mercury	
			Flow (dscfm)	Temp (°F)	Moist (%)	(lb/hr)	(lb/ton clinker)	(lb/hr)	(lb/ton clinker)
1	244.4	146.7	196147	248	16.8	0.00137	0.9 E-05	0.00093	0.6 E-05
2	245.3	147.3	203565	249	16.2	0.00391	2.7 E-05	0.00109	0.7 E-05
3	245.4	147.3	201965	242	16.1	0.00263	1.8 E-05	0.00094	0.6 E-05
Average	245.0	147.1	200559	246	16.4	0.00264	1.8 E-05	0.00099	0.7 E-05

Lead Permit Limit = 0.01 lb/hr and 7.5 E-05 lb/ton clinker

Mercury Permit Limit = 0.0033 lb/hr and 2.4 E-05 lb/ton clinker

**Table 1**

Dioxin / Furan Rinker Materials Miami, Florida Cement Kiln / In-line Raw Mill / Clinker Cooler									
Raw-mill Up/down	Run No.	Date	Pre-heater Feed Rate (Ton/Hr)	Clinker Production (Ton/Hr)	Stack Gas Conditions				
					Flow (dscfm)	Stack (F°)	Moisture (%)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)
up	1	4-Aug	245.6	147.4	233761	363	11.2	12.2	11.6
up	2	7-Aug	245.6	147.4	262554	260	10.6	12.7	11.2
up	3	7-Aug	245.6	147.4	258228	296	10.5	12.5	11.7
Average			245.6	147.4	251514	306	10.8	12.5	11.5
down	1	5-Aug	225.5	135.4	190162	458	9.0	9.5	16.5
down	2	5-Aug	230.1	138.1	191746	457	9.5	10.7	16.7
down	3	8-Aug	245.6	147.4	181957	451	10.7	10.0	17.5
Average			233.7	140.3	187955	455	9.7	10.1	16.9

Dioxin / Furan Rinker Materials Miami, Florida Cement Kiln / In-line Raw Mill / Clinker Cooler						
Run No.	Bag House Inlet (F°)	Sample Volume (dscf)	Sample Volume (dscm)	D/F TEQ (ng)	D/F TEQ (ng/dscm)	D/F TEQ @ 7% O <sub>2</sub> (ng/dscm)
up-R1	312	124.6	3.53	0.308	0.087	0.139
up-R2	317	128.5	3.64	0.098	0.027	0.045
up-R3	314	132.4	3.75	0.412	0.110	0.182
average	314	128.5	3.64	0.273	0.075	0.122
down-R1	513	125.0	3.54	0.386	0.109	0.133
down-R2	508	131.3	3.72	0.365	0.098	0.134
down-R3	515	129.2	3.66	0.206	0.056	0.072
average	512	128.5	3.64	0.319	0.088	0.113

MACT Standard Baghouse Inlet Temperature Greater Than > 400 F° >(0.2 ng/dscm)

MACT Standard Baghouse Inlet Temperature Less Than < 400 F° >(0.4 ng/dscm)