SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. Tom Mountain
FL Crushed Stone Co.
P.O. Box 150
Brooksville, FL 34605-1508

4a. Article Number
P 872 562 649

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
1-20-94

5. Signature (Addressee)

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

PS Form **3811**, December 1991 ☆U.S. GPO: 1992—323-402 **DOMESTIC RETURN RECEIPT**

P 872 562 649

UNITED STATES POSTAL SERVICE

Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to: Mr. Tom Mountain	
Street and No.: FL Crushed Stone Co.	
P.O., State and ZIP Code: P.O. Box 150	
Postage: Brooksville, FL	$ 34605-1508
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date: mailed: 1/14/94 response to a letter from J. Koogler on op. at 90-100% cap. vs 110% issue	

PS Form **3800**, JUNE 1991

File Copy

Florida Department of
Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

January 14, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Tom Mountain
Environmental Manager
Florida Crushed Stone Company
Post Office Box 1508
Brooksville, Florida 34605-1508

Dear Mr. Mountain:

Re: Request for an Increase of the Permitted Operation Rate for the Clinker Kiln

The Department has reviewed Dr. John Koogler's letter of December 17, 1993, which requested that the kiln's permitted operation rate be increased to account for past operational practices (i.e., ± 10% of permitted capacity). Based on a review of the files, the following is pertinent:

o In the Application for State & Federal PSD Approval, Volume I, received September 30, 1982, the kiln's clinker production rate was represented as a 75.0 tons/hr source;

o The cover page to construction permit, No. AC 27-61016, which was issued November 3, 1983, states "For the construction of a cement plant with 75 tons per hour cement product at Florida Crushed Stone Company's existing mining site in Brooksville, Hernando County, Florida."; and, "Construction shall be in accordance with the attached permit application and additional information except as otherwise noted on pages 5, 6, and 7, Specific Conditions.";

o General Condition #13 of the referenced permit provides that the permit also constitutes a "Determination of Best Available Control Technology (BACT)"; and, Specific Condition #1 states "Except as required pursuant to DER's BACT determination (attached) the proposed cement plant construction shall be carried out in accordance with the statements in the application and additional information supplied by the permittee."; and,

o In the BACT's text, it is stated that "...and the design production rate is 75 tons of clinker per hour.".

Based on the above, the kiln's clinker production rate of 75 tons per hour has been established through a construction permit, is federally enforceable, and has not been modified to date. An increase to any production level above this permitted rate would be defined as a modification pursuant to Florida Administrative Code (F.A.C.) Rule 17-212.200, Definitions-Modification, due to the fact that the actual pollutant emissions will be increased; and, if this increase in clinker production rate is requested, then the net pollutant emissions changes (i.e., current actual emissions vs. future allowable/potential emissions) shall be reviewed pursuant to Rule 17-212.400, F.A.C.

Mr. Howard L. Rhodes' Memorandum of August 30, 1993, which is proposed to be incorporated into Chapter 17-297, F.A.C., at the next rule update, provides the direction to be taken regarding compliance testing. This memorandum does not grant any latitude on the operation of a source above permitted capacity, only below permitted capacity and for compliance purposes. Therefore, there has been no change as to what the Department defines as a permitted limitation (i.e., production rate).

I do have a concern about an issue raised in the letter, which stated that "there is no way possible to measure the kiln feed rate at the Florida Crushed Stone plant, or at any other dry process Portland cement plant equipped with a preheater, ...", since the regulations (i.e., 40 CFR 60, Subpart F) for kilns and clinker coolers for particulate matter are based on the "kiln feed rate". If this is the case, then how has Florida Crushed Stone Company or facilities with like sources been demonstrating compliance with the applicable regulations in the past? I will recommend that my compliance personnel look into this matter.

In conclusion, I recommend that you request a modification for an increase in clinker production rate if you desire to operate above 75 tons per hour of clinker production. If the net potential pollutant emissions are less than the significant emissions rates contained in Table 212.400-2, then the Department's Southwest District can process the request. Otherwise, the request will be processed in Tallahassee by the Department's Bureau of Air Regulation.

If there are any questions, please call Mr. Preston Lewis at (904)488-1344 or write to me at the above address.

Sincerely,

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/BM/rbm

Attachments

cc: B. Thomas, SWD
D. Beason, Esq., DEP
J. Koogler, Ph.D., P.E., K&A
C. Hetrick, HCBCC
Ready File
Preston Lewis

1-14-94

Attachments

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 ▪ FAX 377-7158

KA 307-91-01

December 17, 1993

Mr. C. H. Fancy
Florida Department of
Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Florida Crushed Stone Company
Hernando County
FDEP File A027-231888
APIS I.D. 40-TAP-27-0021-20
Discussion of Permit Conditions

Dear Mr. Fancy:

Larry Curtin and I appreciated the opportunity to meet with you on November 29, 1993, to discuss issues related to the Florida Crushed Stone Company. The purpose of this letter is to address only matters related to the production rate of the cement plant.

During our meeting, we discussed that during the preparation of the permit application for the cement plant (in the early 1980s), the plant was represented as a dry process Portland cement plant with a production capacity of 75 tons per hour of clinker. This production rate, as represented by the design engineer and by us in preparing the permit application, represented the design (average maximum) production rate of the plant (typically a 30-day average). Obviously, to meet the design production rate, this plant, or any plant, would have hourly production rates both above and below the design rate. I believe I am correct in stating that up until recently it was normal to not differentiate between a design (average maximum) production rate and the maximum hourly production rate. I also believe that I am correct in stating that, in the past, the Department has allowed plants to operate within plus or minus 10 percent of the permitted design capacity. This policy is reflected in the fact that many permits issued by the Department have stated that testing of emissions to show compliance is to be conducted within plus or minus 10 percent of the permitted capacity.

The problem that is presently surfacing, both at Florida Crushed Stone and with other companies, is that permits now being issued by the Department are interpreting the previously permitted design production rate as a maximum production rate not to be exceeded. Obviously, if the design (average maximum) production rate becomes a maximum production rate never to be exceeded, the actual average production rate will be reduced by up to 10 percent below design capacity. This entire problem has resulted from changes in the interpretation of stated operating rates.

In the case of Florida Crushed Stone, the design clinker production rate of 75 tons per hour as previously permitted has become a maximum production rate in draft Permit A027-231888. Florida Crushed Stone would like to set the maximum clinker production rate at 83 tons per hour; or 10 percent above the design average production rate of 75 tons per hour. This maximum production rate will result in no increase in actual emissions.

Another matter that should be considered by the Department in establishing permit conditions is those parameters that are measured or continuously monitored and those parameters that are derived by the use of empirical factors. In a dry process Portland cement plant, the three rates associated with the kiln are the preheater feed rate, the kiln feed rate and the clinker production rate. The raw meal for the kiln is fed into the preheater at a measured rate. As the material passes through the preheater (a vertical structure approximately 200 feet in height), the raw meal is preheated by the combustion gases from the kiln which flow countercurrent to the raw meal. At the Florida Crushed Stone plant, it has been determined empirically that eight percent of the raw meal is "lost" as it passes through the preheater. This "lost" material is carried by the kiln combustion gases from the preheater and is recovered in the baghouse. This material is returned to the raw meal system and is eventually recirculated back to the preheater.

The kiln feed rate is empirically determined from the clinker production rate based on an empirically determined 35 percent weight loss during calcining. This kiln feed rate is equivalent to approximately 92 percent of the measured preheater feed rate. There is no way possible to measure the kiln feed rate at the Florida Crushed Stone plant, or at any other dry process Portland cement plant equipped with a preheater, as the preheated raw meal flows from the base of the preheater directly into the kiln.

As the raw meal passes through the kiln, it is calcined to produce clinker with a 35 percent weight loss. This clinker is subsequently cooled in a clinker cooler and transported by deep bucket conveyor to the clinker silos. Clinker production rate is not continuously measured but is monitored after-the-fact by measuring outage of the clinker silos. For process purposes, the clinker production rate is empirically determined to be 60 percent of the preheater feed rate.

For permitting purposes, Florida Crushed Stone would like to see the following maximum permitted rates:

Preheater feed rate	-	138 tons per hour (continuously monitored)
Clinker production	-	83 tons per hour (empirically determined as 60 percent of the preheater feed rate)
Kiln feed rate	-	127 tons per hour (empirically determined from clinker production based upon a 35 percent weight loss during calcining)

As I related to you during our meeting, I have reviewed previously issued construction permits for the Florida Crushed Stone cement kiln to determine which conditions are federally enforceable. Following is a summary of these permits and the relevant conditions.

1. Permit AC27-61016 -- Issued November 10, 1983

This was the original construction permit for the cement kiln, clinker cooler, raw mill and limestone dryer. In the Process Description on page 1 of the permit, the plant is referred to as:

> "... a cement plant with 75 tons per hour cement product ...."

This reference to a product rate refers to the 75 tons per hour clinker production capacity. It has always been interpreted that this refers to the design (average maximum) production capacity as the information used in preparing the permit application was the design (average maximum) information provided by the design engineer and also because the operating permit that was eventually issued (A027-183508) stated that testing of emissions to show compliance was to be conducted within plus or minus 10 percent of the permitted capacity.

The construction permit also limits the emission rates of particulate matter, sulfur dioxide, and nitrogen oxides and limits the opacity of emissions. The permit further specifies that the plant can operate up to 8760 hours per year and limits the coal firing rate to the cement kiln to a maximum of 10.3 tons per hour. No limit is placed on the heat input to the kiln. It should be noted that the permit specified a maximum coal firing rate but did not specify that the clinker production rate was a maximum rate.

2. PSD-FL-091 -- Issued March 27, 1984

This permit places limits on the emission rates of particulate matter, sulfur dioxide, nitrogen oxides and limits the opacity of emissions. No limits were placed on hourly feed or production rates or on fuel or heat input rates to the plant.

3. AC27-118674 -- Issued August 26, 1986

This permit reestablished the conditions of Permit AC27-61016 and extended the construction period to June 30, 1987. This permit reduced the hourly and annual sulfur dioxide emission rates from the rates established in AC27-61016.

4. Amendment to Permit AC27-118674 -- Issued November 18, 1992

This amendment permits shredded TDF to be used at a rate not to exceed 15 percent of the total heat input to the cement kiln or 1.33 tons per hour. Other conditions relate to record keeping and shredded TDF firing conditions.

5. AC27-222095 -- Issued December 21, 1992

This permit authorizes utilization of whole tire TDF at a rate not to exceed 15 percent of the total heat input to the kiln or 1.33 tons per hour. This permit also limits the use of whole tire TDF to not more than 8300 hours per year.

To summarize federally enforceable permit conditions, the only references to a kiln feed or production rate is the reference to a 75 tons per hour "cement product" rate in the process description in the original permit issued by the Department. As previously stated, it has always been interpreted that the 75 tons per hour rate was the average maximum production capacity as it was derived from information provided in the permit application that was based upon average maximum production data provided by the design engineer. Reinforcing this interpretation was the condition in the initial operating permit that compliance testing was to be conducted within plus or minus 10 percent of the permitted capacity. The other federally enforceable permit conditions such as the maximum coal feed rate of 10.3 tons per hour, the hours of operation, the emission rates and the TDF limits are acceptable to Florida Crushed Stone. It is only the feed rates and production rate associated with the cement kiln that need to be addressed.

I would appreciate your review of the information presented herein and your concurrence that the maximum rates requested herein are consistent with the permitted maximum average design rates. As stated previously, these maximum rates can be achieved with no increase in actual emissions as the plant has been operating on the basis of an average maximum clinker production rate of 75 tons per hour clinker production rate since the plant went on line.

If there are any questions regarding the information presented herein or if additional information is required, please do not hesitate to contact me.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:wa

c: Mr. Tom Mountain, FCS
Mr. Charles Allen, FCS
Mr. Larry Curtin, Holland & Knight, Tallahassee

Memorandum

Florida Department of
Environmental Protection

TO: District Air Program Administrators
Local Air Program Administrators
Bureau of Air Regulation Engineers

FROM: Howard L. Rhodes, Director
Division of Air Resources Management

DATE: August 30, 1993

SUBJ: Guidance on Rate of Operation During Compliance Testing

Testing of emissions shall be conducted with the source operating at capacity. Capacity is defined as 90-100% of rated capacity. If it is impracticable to test at capacity; then sources may be tested at less than capacity; in this case subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the Department.

If a source tests at less than capacity, the source should be notified of the limited capacity, however, the permit should not be changed to reflect the reduced loading. The above paragraph should be used as a condition in all construction and operating permits where capacity is a permit limitation.

This guidance will be incorporated into Rule 17-297 at the next update.

HLR/CHF/kt

{ consecutive calendar
cumulative total

device temperature shall be recorded along with supporting calculations.

(8)–(13) [Reserved]

(14) For cofired combustors having an MWC unit capacity greater than 225 megagrams per day (250 tons per day) of MSW, the weight of MSW and each other fuel combusted on a daily basis.

(15) For combustors firing both medical waste and other MSW, the amount of non-medical MSW and the amount of medical waste combusted on a daily basis, unless it is assumed that the total heat input to the combustor is from MSW with a design heating value of 10,500 kilojoules per kilogram (4,500 British thermal units per pound).

(e) Following the initial compliance test as required under § § 60.8 and 60.58a, the owner or operator of an affected facility located within a large MWC plant shall submit the initial compliance test data, the performance evaluation of the CEMS using the applicable performance specifications in appendix B, and the maximum demonstrated MWC unit load and maximum demonstrated particulate matter control device temperature established during the dioxin/furan compliance test.

(d) [Reserved]

(e) The owner or operator of an affected facility located within a large MWC plant shall submit quarterly compliance reports for sulfur dioxide, nitrogen oxide (if applicable), carbon monoxide, load level, and particulate matter control device temperature to the Administrator containing the information recorded under paragraphs (b)(1), (2)(ii), (3), (4), (5), and (6) of this section for each pollutant or parameter. The hourly average values recorded under paragraph (b)(2)(i) of this section are not required to be included in the quarterly reports. Combustors firing a mixture of medical waste and other MSW shall also provide the information under paragraph (b)(15) of this section, as applicable, in each quarterly report. Such reports shall be postmarked no later than the 30th day following the end of each calendar quarter.

(f) The owner or operator of an affected facility located within a large MWC plant shall submit quarterly excess emission reports, as applicable for opacity. The quarterly excess emission reports shall include all information recorded under paragraph (b)(3) of this section which pertains to opacity and a listing of the 6-minute average opacity levels recorded under paragraph (b)(2)(i)(A) of this section for all periods when such 6-minute average levels exceeded the opacity limit under § 60.52a. The quarterly report shall also list the percent of the affected facility operating time for the calendar quarter that the opacity CEMS was operating and collecting valid data. Such excess emission reports shall be postmarked no later than the 30th day following the end of each calendar quarter.

(g) The owner or operator of an affected facility located within a large MWC plant shall submit reports to the Administrator of all annual performance tests for particulate matter, dioxin/furan, and hydrogen chloride as recorded under paragraph (b)(7) of this section, as applicable, from the affected facility. For each annual dioxin/furan compliance test, the maximum demonstrated MWC unit load and maximum demonstrated particulate matter control device temperature shall be reported. Such reports shall be submitted when available and in no case later than the date of required submittal of the quarterly report specified under paragraph (e) of this section covering the calendar quarter following the quarter during which the test was conducted.

(h) [Reserved]

(i) Records of CEMS data for opacity, sulfur dioxide, nitrogen oxides, and carbon monoxide, load level data, and particulate matter control device temperature data shall be maintained for at least 2 years after date of recordation and be made available for inspection upon request.

(j) Records showing the names of persons who have completed review of the operating manual, including the date of the initial review and all subsequent annual reviews, shall be maintained for at least 2 years after date of review and be made available for inspection upon request.

(k)–(l) [Reserved]

(m) The owner or operator of a cofired combustor located within a plant having an MWC plant capacity, as determined under §§ 60.51a and 60.58a(j)(3), greater than 225 megagrams per day (250 tons per day) shall submit quarterly reports of the daily weights of MSW and each other fuel fired as recorded under paragraph (b)(14) of this section. Such reports shall be postmarked no later than the 30th day following the end of each calendar quarter.

Subpart F—Standards of Performance for Portland Cement Plants

§ 60.60 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities in portland cement plants: Kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading systems.

(b) Any facility under paragraph (a) of this section that commences construction or modification after August 17, 1971, is subject to the requirements of this subpart.

[42 FR 37936, July 25, 1977]

§ 60.61 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in Subpart A of this part.

(a) *Portland cement plant* means any facility manufacturing portland cement by either the wet or dry process.

(b) *Bypass* means any system that prevents all or a portion of the kiln or clinker cooler exhaust gases from entering the main control device and ducts the gases through a separate control device. This does not include emergency systems designed to duct exhaust gases directly to the atmosphere in the event of a malfunction of any control device controlling kiln or clinker cooler emissions.

(c) *Bypass stack* means the stack that vents exhaust gases to the atmosphere from the bypass control device.

(d) *Monovent* means an exhaust configuration of a building or emission control device (e.g., positive pressure fabric filter) that extends the length of the structure and has a width very small in relation to its length (i.e., length to width ratio is typically greater than 5:1). The exhaust may be an open vent with or without a roof, louvered vents, or a combination of such features.

[36 FR 24877, Dec. 23, 1971, as amended at 39 FR 20793, June 13, 1974, 53 FR 50363, Dec. 14, 1988]

§ 60.62 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any kiln any gases which:

(1) Contain particulate matter in excess of 0.15 kg per metric ton of feed (dry basis) to the kiln (0.30 lb per ton).

(2) Exhibit greater than 20 percent opacity.

(b) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any clinker cooler any gases which:

(1) Contain particulate matter in excess of 0.050 kg per metric ton of feed (dry basis) to the kiln (0.10 lb per ton).

(2) Exhibit 10 percent opacity, or greater.

(c) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility other than the kiln and clinker cooler any gases which exhibit 10 percent opacity, or greater.

[39 FR 20793, June 14, 1974, as amended at 39 FR 39874, Nov. 12, 1974, 40 FR 46258, Oct. 6, 1975]

§ 60.63 Monitoring of operations.

(a) The owner or operator of any portland cement plant subject to the