



Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

AIRS NO. 0530010

PERMITTEE:
FM&M/Southdown, Inc.
P.O. Box 6
Brooksville, Florida 34605-0006

PERMIT/CERTIFICATION:
Permit No: AC27-258571
County: Hernando
Expiration Date: 3/31/96
Project: No. 1 Cement Kiln

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 62-2 through 62-297 & 62-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the deletion of on-specification used oil as a fuel, the addition of natural gas as a primary fuel source, and the addition of virgin fuel oils No. 2 through No. 6 as standby fuels for the No. 1 Cement Kiln. Included in the changes is a sulfur dioxide limitation of 15.0 pounds/hour in lieu of a fuel sulfur limitation.

Raw materials are milled, blended, and introduced into the Kiln Feed System (Preheater-under separate permit) where the material falls through the Kiln exhaust gasses and some weight is lost due to fines removal and heat. This remaining material enters the Kiln, where calcination further reduces the mass exiting the Kiln and entering the Clinker Cooler (under separate permit).

The kiln uses coal and natural gas as the primary fuels. The maximum permitted heat input rate of any fuel is 300 MMBtu/hr. Fuel oil Nos. 2 through 6 oil will be used as a backup fuel during periods of natural gas curtailment.

Waste Tire-Derived Fuel (WTDF) may be used up to 20% of the total Kiln heat input.

Particulate emissions are controlled by the following baghouse:

<u>Baghouse Description</u>	<u>Baghouse ID</u>
Fuller-Dracco Custom Baghouse 16 cells exhausting to a common stack. Rated at 250,000 ACFM.	E-55

Location: U.S. Highway 98 North, NW of Brooksville
UTM: 17-356.0 E 3169.9 N NEDS No: 0010 Point ID No: 03
Facility ID: 40TPA270010

Replaces Permit No.: AC27-186923, AO27-254098

"Protect, Conserve and Manage Florida's Environment and Natural Resources" fm&m571.pmt

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SPECIFIC CONDITIONS:

1. A part of this permit is the attached 15 General Conditions. [Rule 62-4.160, F.A.C.]
2. Issuance of this permit does not relieve the permittee from complying with applicable emission limiting standards or other requirements of Chapter 62-200 through 62-297, 7 62-4, or any other requirements under federal, state or local law. [Rule 62-210.300, F.A.C.]
3. The applicant shall comply with all of the applicable provisions and requirements of 40 CFR 60.60 through 60.66 - Subpart F (New Source Performance Standards - Portland Cement Plants) and applicable requirements of 40 CFR 60.7, 60.8, and 60.11. [Rule 62-296.800, F.A.C.]

PROCESS OPERATING LIMITATIONS

4. The maximum material handling rates, based upon a rolling 30 production-day average, are as follows:

- ✓ Kiln preheater feed rate -- 145 tons/hour. ✓
- ✓ No. 1 Cement Kiln feed rate -- 130 tons/hour.
- ✓ Clinker production (kiln discharge) rate -- 79.6 tons/hour

The maximum material handling rates for any one hour of operation are as follows:

- ✓ Kiln preheater feed rate -- 165 tons/hour.
- ✓ No. 1 Cement Kiln feed rate -- 148 tons/hour.
- ✓ Clinker production (kiln discharge) rate -- 90 tons/hour

[Construction Permit No. AC27-186923 and Dr. John Koogler's letter of November 22, 1994].

5. No. 1 Cement Kiln is permitted to operate 8,760 hours/yr. [Construction Permit No. AC27-186923]. ✓

6. Visible emissions from Kiln No. 1 shall not exceed 20% opacity. [Rule 62-296.800, F.A.C. and 40 CFR 60.62(a)(2)].

7. Emissions from No. 1 Cement Kiln shall not exceed 0.30 pounds of particulate matter per ton of feed material, measured on a dry basis. [Rule 62-296.800, F.A.C., 40 CFR 60.62(a)(1), and construction permit AC27-186923]

for only coal only

X
X
Table
4
Table

- o raw mill is no penetration
or bypassed
- o all the fuels, when are they used?

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8. The No. 1 Cement Kiln fuel heat input rate shall not exceed 300 MMBtu/hr, or specifically:
- A. 24,000 pounds per hour of coal with a heating value of 12,500 Btu/lb.
 - B. 2,116 gallons per hour of No. 2 fuel oil with a heating value of 141,300 Btu/gal.
 - C. 2,060 gallons per hour of No. 4 fuel oil with a heating value of 145,600 Btu/gal.
 - D. 2,016 gallons per hour of No. 5 fuel oil with a heating value of 148,800 Btu/gal.
 - E. 1,982 gallons per hour of No. 6 fuel oil with a heating value of 151,300 Btu/gal.
 - F. 292,683 cubic feet per hour of natural gas with a heating value of 1,025 Btu per cubic foot.
 - G. 2.14 tons per hour of waste tire derived fuel (WTDF).

Use of fuels other than those listed above is prohibited.

[Construction Permit No. AC27-186923 and Supplemental information received by DEP March 31, 1995].

9. In the No. 1 cement kiln, continuous whole tire-derived fuel (WTDF) utilization/firing shall be allowed (i.e., 8760 hrs/yr operation).
[Construction Permit No. AC27-240349].

10. The No. 1 cement kiln's maximum utilization/firing rate of WTDF shall not exceed 20.0 percent of the total Btu heat input, or 2.14 tons per hour.
[Construction Permit No. AC27-240349].

11. WTDF may be introduced into the No. 1 cement kiln only at a point at the base of the preheater (i.e., kiln exit).
[Construction Permit No. AC27-240349].

12. WTDF firing in the No. 1 cement kiln shall not commence or be conducted unless the cement kiln has reached an operating temperature of at least 1,400°F for one hour. The operating temperature shall be measured at the cement kiln exit.
[Construction Permit No. AC27-240349].

Nov 8, 1966
Brouce said that S.C.#15
refers to CO ONLY. It was
my impression it should have
been the whole facility. Call pollutants
In my opinion, the pollutants
refers to facility etc. etc. etc.
all pollutants etc. etc. etc.

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TESTING AND EMISSIONS

13. By request of the permittee, in lieu of fuel sulfur restrictions, emissions of sulfur dioxide from the No. 1 Kiln System shall not exceed 15.0 pounds per hour.
[Supplemental information received by DEP March 31, 1995]

14. While utilizing/firing WTDF with coal, the maximum allowable/potential carbon monoxide (CO) emissions shall not exceed 57.7 lbs/hr (1-hour average), 234.4 tons/yr, which was requested by the permittee to avoid new source review (NSR) requirements pursuant to Rules 62-212.400(2)(d) and (g) and 62-212.400(5), F.A.C.
[Construction Permit No. AC27-240349].

15. Pursuant to Rule 62-212.400(2)(g), F.A.C., if there is any net increase in potential emissions of +0.1 tons/yr of CO above the maximum allowable/potential emissions of 234.4 tons/yr while utilizing/firing WTDF with coal, the No. 1 cement kiln will be subject to NSR in accordance with Rule 62-212.400(5), F.A.C. For PSD tracking purposes, the net potential CO emissions are +99.9 tons/yr while utilizing/firing WTDF with coal.
[Construction Permit No. AC27-240349].

16. Test the emissions from the Kiln No. 1 baghouse exhaust while firing coal for the following pollutants annually, within 60 days prior to October 1, 1995. Submit a copy of the test data to the Air Section of the Southwest District Office within 45 days of such testing:

- (X) Opacity (VE - Visible Emissions)
- (X) Particulates (PM)
- * (X) CO (Carbon Monoxide)
- (X) Sulfur Dioxide

* Test while firing 20% of total heat input as Waste Tire Derived Fuel
[Rules 62-297.340(1)(d) and 62-297.570(2), F.A.C.].

17. Compliance with the emission limitations of Specific Condition Nos. 6 and 7 shall be determined using EPA Methods 1, 2, 3, 4, 5, 6C, 9 and 10 contained in 40 CFR 60, Appendix A and adopted by reference in Rule 62-297, F.A.C. The minimum requirements for stationary point source emissions test procedures and reporting shall be in accordance with Rule 62-297, F.A.C. and 40 CFR 60, Appendix A.
[Rule 62-297, F.A.C.]

18. The visible emissions test shall be conducted by a certified observer and be a minimum of 180 minutes in duration. The test

Table

Subject to PSD for CO

for all pollutants

NOX₂ VOC Table

OK Table S.C.#12

OK S.P.#16

More 99.9 tons/yr

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observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. [40 CFR 60.11].

identical # 19
19 Testing of emissions must be conducted within 90-100% of the maximum hourly material input, as measured at the entrance to the No. 1 Kiln, attained within the period 30 production days prior to the test date, or 130 tons/hour, as measured at the entrance to the No. 1 Kiln, whichever is greater. A compliance test submitted at a rate less than 90% of the rate specified above will automatically constitute an amended permit rate at that lesser rate plus 10%. Within 30 days of that lower amended permitted rate being exceeded by more than 10%, a new compliance test shall be conducted at the higher rate. The test results shall be submitted to the Southwest District Office of the Department within 45 days of testing. Acceptance of the test by the Department will automatically constitute an amended permit at the higher tested rate plus 10%, but in no case shall the maximum permitted rate of 130 tons/hour, based upon a 30 day rolling average, be exceeded. Failure to submit records of the production rate during the test period, and for the 30 production days prior to the test period, along with the test report, may invalidate the test and fail to provide reasonable assurance of compliance. [Rule 62-4.070(3), F.A.C.]

20 The permittee shall notify the Southwest District Office of the Department at least 15 days prior to the date on which each formal compliance test is to begin of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted. [Rule 62-297.340(1)(i), F.A.C.]

RECORDKEEPING AND REPORTING

21. The utilization/firing rate of WTDF shall be quantified (weighed) continuously and recorded hourly. These records and other records required under this permit shall be kept on file for a minimum of three years. [Construction Permit No. AC27-240349].

22. The quantity of all deliveries of WTDF shall be documented and kept on record/file for a minimum of three years. [Construction Permit No. AC27-240349].

23. Daily sampling and recording of the baghouse dust for the No. 1 kiln is required. The concentration of thallium in the baghouse dust shall not exceed 1.5%. Compliance shall be demonstrated using the "Thallium Concentration Monitoring and Analysis

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Procedure" as described in Mr. Bob Rogers's letter to Dr. John Koogler, dated January 12, 1994 (Attachment #9 of Construction Permit No. AC27-240349).

[Construction Permit No. AC27-240349].

24. The Preheater and No. 1 Kiln daily feed rates and clinker production rates shall be monitored and recorded in accordance with 40 CFR 60.63.

[Rule 62-296.800, F.A.C. and 40 CFR 60.62(b)(2)].

25. The following Kiln No. 1 fuel records shall be maintained and made available upon request:

A. Coal

- (1) the coal usage rate in tons/day;
- (2) the average sulfur content and heating value (Btu/lb) of each coal shipment based upon analysis of a sample representative of the shipment (trainload);

B. Liquid Fuels

- (1) The fuel type (number) and usage rate in gal/day;
- (2) Records of the sulfur content and heating value (Btu/gal) of each oil shipment based upon analysis of a sample representative of the shipment

C. Natural Gas

- (1) The fuel usage rate in cubic feet per day.
- (2) The average heating value (Btu/Ft³) provided by the gas supplier.

[Rule 62-4.070(3), F.A.C.].

26. Submit to this office each calendar year, on or before March 1, an emission report for this source [DER Form 62-210.900(4)] for the preceding calendar year, pursuant to Rule 62-210.370(2), F.A.C.

OTHER REQUIREMENTS

27. If there is any change in the method of operation, etc., pursuant to Florida Administrative Code (F.A.C.) Rule 62-210.200, Definitions-Modification, the permittee shall submit an application along with the appropriate processing fee to the Department's Bureau of Air Regulation. Any physical modifications to the WTDF feed mechanism utilized during the test burn of WTDF/coal that results in an increased feed rate, a change in the location where WTDF is introduced into the kiln, or the introduction of WTDF into the kiln through the use of a mechanism other than a double air lock feed system, may require a modification to this permit. If the WTDF feed mechanism is to be

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physically modified in this manner, a description of such modifications shall be submitted to FDEP and HCBCC 90 days prior to actual modification. FDEP and HCBCC shall review this information and, prior to any modification, determine whether further stack testing is required in order to determine if such modifications will result in an increase in actual emissions, whether a permit modification is necessary, and/or what the terms of any modified permit shall be. FDEP will provide a clear point of entry for Hernando County and any other substantially-affected parties to challenge any of FDEP's proposed determinations in this regard. Florida Mining & Materials (FM&M) shall bear the burden to provide reasonable assurances that such modifications will not affect the conclusions derived from the test burn of May and June, 1993. [Construction Permit No. AC27-240349].

28. Objectionable odors shall not be allowed off the facility's property in accordance with F.A.C. Rule 62-296.320(2).
[Construction Permit No. AC27-240349].

29. All reasonable precautions shall be taken to prevent and control generation of unconfined emissions of particulate matter in accordance with the provisions in Rule 62-296.310(3), F.A.C. These provisions are applicable to any source, including but not limited to, vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrial related activities such as loading, unloading, storing and handling. Specific work practices to minimize fugitive PM emissions shall include:

- A. All permanent haul roads shall be paved.
- B. Temporary haul roads shall be watered or treated with chemical dust suppressants at regular intervals.
- C. Dry materials (moisture content \leq 14%) shall be stored below grade, in silos, or in enclosed structures.
- D. Coal stored at or above natural grade shall be compacted, turned and/or watered as necessary to maintain a minimum 8% moisture content in the surface layer, and shall be aligned with the predominant wind direction to minimize wind erosion.
- E. Abandoned haul roads and other disturbed areas shall be revegetated within 60 days of the date that active service of the road ends.
- F. All cement products shall be transferred to transport trucks with a sealed pneumatic conveying system which is either a closed system or exhausted through a bag filter.

[Rule 62-296.310(3), F.A.C.].

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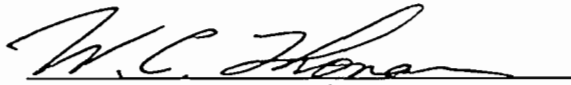
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30. The cement kiln and its associated equipment are subject to the applicable provisions of F.A.C. Rules 62-210.650: Circumvention; 62-210.700: Excess Emissions; and, 62-4.130: Plant Operations- Problems.

31. Construction permits AC27-186923, AC27-213207, and AC27-240349, and all associated amendments, documents, and applicable conditions, are herein incorporated by reference.

32. Four copies of an application for a Title V permit shall be submitted to the Department in accordance with the provisions of Rule 62-213.420, F.A.C.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION


For Richard D. Garrity, Ph.D.
Director of District Management