



# Department of Environmental Protection

Lawton Chiles  
Governor

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

Virginia B. Wetherell  
Secretary

December 1, 1998

Mr. James S. Jenkins III  
Vice President of Cement Operations  
Rinker Materials Corporation  
1200 Northwest 137th Avenue  
Miami, Florida 33182

Re: DRAFT Permit Modification No. 0250014-006-AC  
Modernization Project, Revisions of Permit Conditions

Dear Mr. Jenkins:

Please replace the enclosed pages (14 and 16) to the November 30, 1998 Technical Evaluation and Preliminary Determination in your possession.

If you have any questions regarding this matter, please contact me or Clay Whitfield at 850/488-0114.

Sincerely,

Teresa Heron  
New Source Review Section

TH/cw

cc: Greg Worley, EPA  
John Bunyak, NPS  
John Koogler, P.E.  
H. Patrick Wong, DERM  
Jose Gonzalez, DERM  
Isidore Goldman, SED

Z 333 612 564

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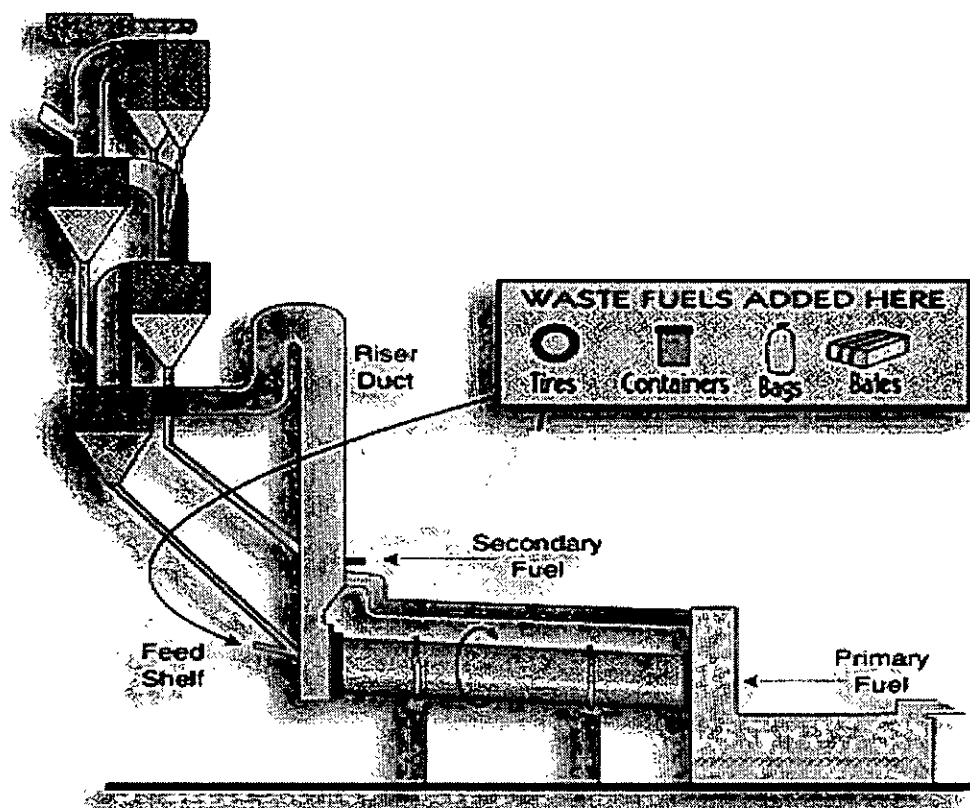
*12-1-98*

PS Form 3800, April 1995

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Rinker's consultant presented a letter at the meeting in response to the Department's May 5 information request.<sup>33</sup> Following are Rinker's responses, dated October 26, 1998. These are paraphrased in some cases and numerically arranged per the 10 items in the Department's request:

1. - 3. Declaratory. No response necessary.
4. All solid supplemental material will be introduced in the vicinity of the feed shelf, as depicted in the drawing, "A typical Precalciner Cement Kiln," included as Attachment 1.



5. Declaratory. No response necessary.
6. Rinker has reasonable assurance that tire-derived fuel could exceed 25 percent of the pyroprocessing system's heat input and approach 40 percent while meeting all applicable emission standards and producing acceptable clinker. Rinker claims that heat input has exceeded 45 percent during "practice compliance runs" on its existing wet process kilns. Rinker believes that other cement producers are constrained in heat input from tires for various reasons (including fuel and tire availability, raw materials, air flow, production parameters, etc.)
7. Tires and tire-derived fuel will be introduced in the vicinity of the feed shelf. This will allow the precalciner to act as an afterburner. The establishment of a temperature to replace the temperature requirement is of little practical value.

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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The Department contacted EPA regarding the test information collected in preparation of the proposed cement industry MACT Rule. The project officer could not cite a single example of any significant amounts of municipal solid wastes burned at cement kilns in the United States.<sup>35</sup>

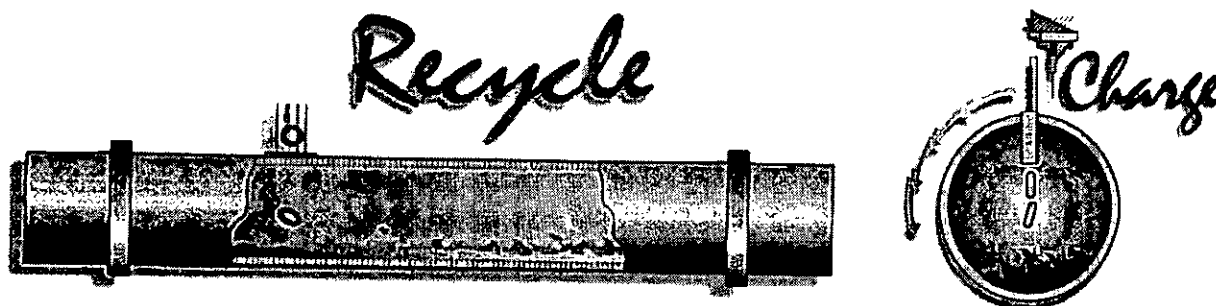
The Department had previously relied extensively on statements by Rinker and its consultants regarding the ability to burn significant amounts of wastes in the proposed kiln. As a result of the lack of specific information regarding the amounts and the manner by which the various wastes will be burned, the Department conducted its own evaluation in determining whether reasonable assurance exists that such wastes can be properly handled by Rinker. Following is the updated assessment by the Department:

### **Tire Burning**

The Department found no case of a cement kiln actually combusting more than 30 percent tires as fuel. Several cement kilns were found in California that had burned or tested tires and tire derived fuel. The tests ranged between 18 and 25 percent of the heat input to pyroprocessing.<sup>36</sup>

Information from an EPA document listed tire burning at kilns in Florida, California, Oregon, Texas, South Carolina, Washington, Ohio, and Virginia. No kiln was tested while operating at more than 25 percent tires and tire derived fuel. According to tests at the Calaveras facility in California, low NO<sub>x</sub> emissions (1.6 pounds per ton of clinker) were realized while firing tires.

The permit at the existing Rinker wet process cement facility allows use of up to 40 percent tires, but was tested only at 30 percent. The Department observed during a site visit that Rinker installed a system made by or similar to a "fork" system manufactured by Cadence.<sup>37</sup> The system looks like the following pictures from Cadence website:



The system observed by the Department engineer appeared to have an adequate delivery system (not shown above). So far no details have been provided regarding the system to be employed for the new kiln even though the kiln has reportedly been delivered to the site. To-date, Rinker has not acknowledged the manufacturer of the kiln or any details about the solid waste handling systems.

Notwithstanding the lack of information, the Department accepts that Rinker has sufficient experience burning tires to provide reasonable assurance that it will be properly done. The consultant described the mechanism adequately at an administrative hearing for the Florida Rock Cement Plant.<sup>38</sup>