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ENVIRONMENTAL SERVICES  
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GAINESVILLE, FLORIDA 32609  
352/377-5822 • FAX/377-7158

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FEB 05 2002

January 31, 2002

Solid Waste Section

John M. Ruddell, Director  
Division of Waste Management  
Department of Environmental Protection  
2600 Blair Stone Road, MS 4500  
Twin Tower Office Building  
Tallahassee, Florida 32399-2400

SWAP 01-5

**Subject:** Rinker Materials Corporation – Miami Soil Thermal Treatment Facility  
Request for Approval of Alternate Procedures and Requirements

Dear Mr. Ruddell:

This letter requests, in writing, a determination by the Secretary that Rule 62-713.510(6), FAC, shall not apply to the referenced facility. This request is necessary because Rule 62-775, FAC was repealed as a result of the adoption of Rule 62-713, FAC; and certain previously approved alternate procedures and requirements became inapplicable.

This request is in accordance with Rule 62-701.310, FAC, and the required information is presented in context with the rule requirements. This request is also in accordance with Rule 62-713.220, FAC.

Simply put, all of the facility's post-treatment soil is used as raw material in the Portland cement manufacturing process. This means that the sampling and analysis of post-treatment soil prescribed by Rule 62-713.510(6) is of little or no value. The Department recognized this in two previously approved Alternate Procedures (AP-STTF001 and AP-STTF0051). AP-STTF001 (Approval Date: April 1, 1991) granted relief from the sampling and analysis of post-treatment soil, instead requiring the sampling and analysis of clinker – the intermediate product from a cement kiln. AP-STTF0051 (Approval Date: January 31, 2000) allowed for the routine thermal treatment of petroleum contaminated soil with concentrations of arsenic above the established cleanup target level and use of the treated soil for a dedicated purpose (raw material for cement).

This request takes the referenced alternate procedures a step farther, and requests that no routine sampling and analysis be required for post-treatment soil or downstream products. Consideration of the technical details of the process flow, and review of the data amassed since 1991, provide clear direction that this alternate procedure will provide an equivalent level of protection to human health and the environment.

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DIVISION OF  
WASTE MANAGEMENT

**Rule 62-701.310, FAC – Request for Alternate Procedure**

*(1) Applicability. Any person subject to the provisions of this chapter or Chapters 62-702 through 62-722 F.A.C., may request in writing a determination by the Secretary that a requirement shall not apply, and shall request approval of alternate procedures or requirements.*

**Discussion:** The Rinker Materials Corporation Miami Soil Thermal Treatment Facility is subject to the provisions of Chapter 62-701 and 62-713, FAC. This letter requests, in writing, a determination by the Secretary that Rule 62-713.510(6), FAC, shall not apply to the referenced facility. This letter also requests approval of alternate procedures or requirements, in the form of non-routine sampling and analysis of post-treatment soil. If the Department has reason to believe that the standards applicable to post-treatment soil are not being met, it shall require that compliance be demonstrated by the test methods specified in the otherwise applicable rule.

*(2) Criteria. The request shall set forth at a minimum the following information:*

*(a) The specific facility for which an exception is sought;*

**Discussion:** Rinker Materials Corporation Miami Soil Thermal Treatment Facility  
1200 NW 137<sup>th</sup> Avenue  
Miami, Florida 33182  
WACS NO: SEDA 13/00059293  
Draft DERM Permit No. 0133892-002-SO

*(b) The specific provisions from which an exception is sought;*

**Discussion:** An exception is sought from the specific provisions of Rule 62-713.510(6), Post-treatment testing. The Alternate Procedures (AP-STTF001 and AP-STTF-0051) discussed above both granted relief from post-treatment testing of soil, recognizing that the soil was to be used as a raw material in cement manufacturing.

*(c) The basis for the exception;*

**Discussion:** The basis for the exception follows.

1. Soil is accepted and treated in full compliance with applicable provisions of Rule 62-713, FAC.
2. Soil thermal treatment results in the desorption and destruction of virtually all of the organic contaminants in the soil. However, metals are relatively unaffected by the thermal treatment.
3. All post-treatment soil is used as raw material for cement manufacturing, at less than 10% by weight of raw material feed to the cement pyroprocessing system.
4. The cement manufacturing process involves very high temperatures (>2500°F) and long residence times, assuring complete destruction of organic compounds. The raw materials including limestone, sand, and post-treatment soil essentially “melt”, undergoing phase and mineralogical changes, and becoming clinker.

5. The clinker is milled to a fine powder, becoming cement. All cement is ultimately used to make concrete, and providing durable encapsulation for elemental composition.

This request is not simply a request for beneficial use of treated soil that does not meet the criteria for cleaned soil. This request has as its basis the beneficial use of treated soil which meets the criteria for cleaned soil (except, perhaps, for arsenic) – showing that the demonstration of compliance with the criteria is not relevant, and of no practicable value.

*FLRti62\agNAD\ch62-701\se62-701.310(2)(d)*

*(d) The alternate procedure or requirement for which approval is sought and a demonstration that the alternate procedure or requirement provides an equal degree of protection for the public and the environment; and*

**Discussion:** The alternate procedure for which approval is sought is all treated soil from the soil thermal treatment facility is to be used as raw material for cement manufacturing at the Rinker facility. This alternate procedure has provided an equal (or higher) degree of protection for the public and the environment since 1991. The alternate procedure provides for second thermal treatment of the soil, as part of a fine milled raw material stream going to the cement kiln pyroprocessing system. As described above, organic compounds are destroyed, and inorganic compounds became fused as part of the mineralogical complex of cement. The cement must meet stringent industry standards for quality. When the cement is used to produce concrete, the cement reacts with water to form very stable gel matrices, resulting in encapsulation.

*(e) A demonstration of the effectiveness of the proposed alternate procedure.*

**Discussion:** See above discussion. Clinker has been sampled and analyzed as a surrogate medium instead of post-treatment soil, since 1991. To Rinker's knowledge, all clinker has been shown in accord with previous cleaned soil standards.

The sampling and analysis of clinker as a surrogate medium is of limited value, as the treated soil is a minor component of the raw material mix (<10% by weight) and because of the intense processing for cement manufacturing.

The use of all the post-treatment soil as raw material has been completely effective since 1991. No cement quality problems or environmental problems have occurred as a result of this dedicated material flow. Rinker does not foresee any problems with continuing this effective alternate procedure, by dedicating all post-treatment soil to cement production.

A striking environmental benefit becomes clear with this alternate procedure – as the post-treatment soil generally replaces sand in the raw material mix, a corresponding lesser volume of sand needs to be mined, processed, and transported to the cement plant.

*(3) Department order. The Secretary shall specify by order each alternate procedure or requirement approved in accordance with this section or shall issue an order denying the request for such approval. The Department's order shall be agency action, reviewable in accordance with Sections 120.569 and 120.57, F.S.*

**Discussion:** This section describes agency action.

*(4) Alternate sampling procedures. Approval of alternative or new field and laboratory sampling and analysis procedures shall be requested in accordance with Rules 62-160.430, 62-160.520 and 62-160.530, F.A.C.*

**Discussion:** Not applicable to this request.

*(5) Variances. Requests for variances from specific statutory or rule requirements may be made pursuant to Section 403.201, F.S., and Rule 62-110.104 F.A.C. Requests for variances or waivers from rule requirements may also be made pursuant to Section 120.542, F.S., and Rule 28-104.002, F.A.C.*

**Discussion:** Not applicable to this request.

*(6) Requests for alternate procedures shall be accompanied by the fee specified in Rule 62-701.315(8) , F.A.C. Requests must be submitted to the Director of the Division of Waste Management, 2600 Blair Stone Road, Twin Tower Office Building, Tallahassee, Florida 32399-2400.*

**Discussion:** This request is being submitted to the referenced address, and includes a check for \$500, which is the fee specified in Rule 62-701.315(8)(b), Request for an Alternate Procedure, facility other than landfill.

*(7) To the extent that any request for alternate procedures or requirements involves the practice of engineering or geology, the request shall be signed and sealed by a professional engineer or a professional geologist.*

**Discussion:** This request is signed and sealed by a professional engineer.

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Please contact me if you have any questions, or require additional information related to this request.

Sincerely,



Steven C. Cullen, PE  
Koogler & Associates  
Consultant to Rinker Materials Corporation

Copies to: Scott Benyon and Michael Vardeman – Rinker Materials Corporation



RINKER MATERIALS  
P.O. BOX 24725  
WEST PALM BEACH, FL 33416-4725



PAGE: 1 OF 1  
JANUARY 22, 2002

TRACE NUMBER: 2000503417

CHECK NUMBER 20536436  
AMOUNT PAID: \$500.00

2000503417

FL DEPT OF ENVIRONMENTAL PROTECTION  
C/O DANA BOYD, CASH MANAGEMENT  
AR DEPT  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FL 32399-2400

PAYMENT INQUIRIES: (561) 651-7177

VENDOR NO: 0000703921

DATE	VENDOR INVOICE NUMBER	PURCHASE ORDER NUMBER	AMOUNT	DISCOUNT	NET AMOUNT
01/10/02	REQUEST FOR ALT	4500685263	\$500.00	\$0.00	\$500.00
		RETURN CHECK TO BUD SHARPE EXT 8396			

PLEASE DETACH AND RETAIN THIS STATEMENT BEFORE DEPOSITING THE CHECK



RINKER MATERIALS  
P.O. BOX 24725  
WEST PALM BEACH, FL 33416-4725

20536436

62-28/311

PAY  
TO THE  
ORDER OF:

FL DEPT OF ENVIRONMENTAL PROTECTION  
C/O DANA BOYD, CASH MANAGEMENT

JANUARY 22, 2002

0972584



Bank One, NA - 0710  
Chicago, IL  
Payable through First USA Bank, NA

EXACTLY \*\*\*\*\*500 DOLLARS AND 00 CENTS \$\*\*\*\*\*500.00

TRACE NUMBER: 2000503417

Blair E. Stump

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