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KA 446-88-02

January 6, 1989

Mr. Bill Thomas
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Rinker Portland Cement Corporation
Trial Burn for Processing Creosote-Contaminated Soil
Dade County, Florida

Dear Bill:

I am writing on behalf of the Rinker Portland Cement Corporation (Rinker) with corporate offices in West Palm Beach and a Portland cement plant in Dade County. As you are aware, Rinker is interested in processing soils contaminated with hydrocarbon products, including coal tars and creosote, in a rotary materials dryer located at their cement plant in Dade County. The dryer was originally installed in the plant to dry limestone used in the manufacture of Portland cement. The dryer has not been used for that purpose or for any other purpose for the past several years.

The dryer is approximately 90 feet long and six feet in diameter and was rated at approximately 25 tons per hour for drying limestone. The dryer is a counter-flow dryer with feed material entering the cold end of the dryer and discharging at the hot end. Rinker's plans are to feed contaminated soil to the dryer and to use the heat generated within the dryer to vaporize/combust the organic contaminants in the soil. The degree of vaporization and combustion will vary, depending on the volatility (the boiling point) of individual compounds. Rinker plans to control the organic compounds that are vaporized by ducting the off-gases from the dryer to the combustion zone of their cement kiln. In my professional opinion, the incineration of organics in the off-gases of the dryer in the cement kiln will offer very effective and virtually complete destruction of these compounds.

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In order to fully evaluate the effectiveness of the dryer for processing contaminated soil, to determine the most effective operating conditions (material throughput, rotational speed of the dryer, fuel firing rate, material discharge temperature, etc.), and to conduct the tests necessary to characterize and quantify the off-gases from the dryer that will be ducted to the cement kiln, Rinker would like Department approval for a trial burn. I understand that this matter has already been discussed with you in some detail.

As stated, the purpose of the trial burn would be to establish optimum dryer operating conditions and to characterize and quantify the gas stream that will be discharged from the dryer. During the test period, the gas stream from the dryer will be discharged to the atmosphere through a stack exhausting approximately 95 feet above ground level. Once the test has been conducted and the necessary information developed, Rinker will proceed with the installation of the ductwork and other necessary appurtenances to introduce the dryer off-gases to the existing cement kiln. I understand, based upon a conversation with you, that this modification will require an air construction permit.

For purposes of the test burn, Rinker would like permission to process 1000-1200 tons of creosote-contaminated soil. The initial conversations with you have been along the lines of a 500-ton trial burn. At a material processing rate of 25 tons per hour, a 500-ton trial burn will allow only 20 hours to develop all of the necessary information. We feel that this would be cutting things too close, considering the time that will be required to bring the dryer to a steady state operating condition, evaluate the performance of the dryer, change operating conditions (perhaps several times) and again, allow time for stabilization and evaluation, and finally to conduct the necessary tests to characterize the gases discharged from the dryer once the optimum operating range has been found. In addition, inclement weather could substantially add to the time for completing the tests.

Based on these considerations, and consistent with my telephone conversation with you on this date, Rinker is requesting approval to process 1000-1200 tons of soil during the trial burn. This will allow 40-48 hours to evaluate the dryer's performance and to conduct the necessary tests. It is anticipated that all testing can be completed in a two-week period. Generally, the first week would be allotted for the shake-down of the dryer and for evaluating the dryer operating conditions. The second week would be generally set aside for conducting all necessary tests. Generally, most of the trial will be conducted during daylight hours to take advantage of the manpower present during the day shift. I would also like to restate, as I told you during our telephone conversation, that the initial shake-down of the dryer will be with a limestone or other uncontaminated feed material.

I appreciate your consideration of this request and will be more than happy to provide you with any additional information should it be required. Rinker is presently proceeding with the maintenance and repairs to the dryer and should be ready to conduct the trial burn by the week of January 16, 1989. I would appreciate your consideration of these matters and a decision at the earliest possible time, so that we can proceed on schedule.

Very truly yours,

KOOGLER & ASSOCIATES

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

JBK:mab

cc: Mr. I. Goldman, FDER, West Palm Beach
Mr. H. Patrick Wong, Dade County Environmental Resource Management
Mr. W.E. Voshell, Rinker, West Palm Beach
Mr. M.D. Vardeman, Rinker, Miami