



Board of County Commissioners

ALACHUA COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION

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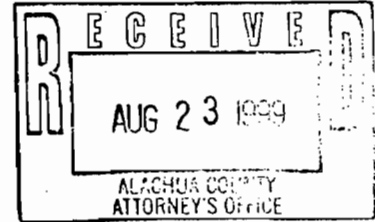
Chris Bird
Environmental Protection
Director

Barbara J. Pierce
Administrative Assistant

Richard J. Burges
Natural Resources
Supervisor

John J. Mousa
Pollution Prevention
Manager

August 20, 1999



MEMORANDUM

To: Board of County Commissioners
Via: Richelle Sucara, Interim County Manager
Via: Chris Bird, Director Environmental Protection *CB*
From: John Mousa, Pollution Prevention Manager *Jm*
Subject: Report on Cement Kiln Control Technology

P/R DW
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Attached is a report prepared by Mr. Robert Schreiber of Schreiber, Yonley & Associates, the cement kiln expert hired by the County to help evaluate control technologies for the Florida Rock Cement plant. The focus of the report is the evaluation of what if any additional control technologies including some European technologies for the control of particulates and nitrogen oxides is feasible or practical at the Florida Rock Cement plant. This report was prepared to assist the BOCC in their deliberations with the Florida Rock negotiations.

CC: Dave Wagner, County Attorney





271 Wolfner Drive • Saint Louis, Missouri 63026
314/349-8399 • Fax 314/349-8384

July 28, 1999

Mr. John J. Mousa
Pollution Prevention Manager
Alachua County Department of Environmental Protection
226 South Main Street
Gainesville, Florida 32601-6538

RECEIVED

JUL 29 1999
ENVIRONMENTAL
PROTECTION DEPT

Re: Evaluation of Cement Plant Air Pollution Control Technologies

Dear Mr. Mousa:

Schreiber, Yonley & Associates recently took the opportunity to tour the new Florida Rock Industries cement plant in Newberry, Florida. I was invited to make a thorough inspection of the facility, including its principal process units, combustion designs and air pollution controls. This tour enabled me to better evaluate the technical feasibility of additional pollution control devices for the purpose of further reducing nitrogen oxides (NO_x) and particulate (PM) emissions.

I would like to preface my evaluation of air pollution control options with the impression I received upon inspecting the plant. The Newberry plant is a well-designed and technologically modern facility that uses efficient operational controls, which results in lower emissions. The plant has been designed with a new set of emission standards in mind, specifically the Portland Cement Maximum Achievable Control Technology (PCMACT) standards and the New Source Performance Standards (NSPS) in Title 40 of the Code of Federal Regulations, Parts 63 and 60, respectively. These regulations set emission limits for opacity, particulate matter, dioxins and furans, and total hydrocarbons.

The following evaluation of emission control systems not currently in use at the Newberry plant will address each technology's ability to reduce emissions of NO_x and PM, based on current plant design and benefits and/or disadvantages.

Particulate Emissions

The collection of PM and PM₁₀ emissions from most industrial sources is accomplished by fabric filtration or electrostatic precipitation. Because of cost-effectiveness and widespread applicability in large and small industrial plants, fabric filters and electrostatic precipitators (ESPs) are used worldwide as the most effective approach to particulate emission control. The tailored design of baghouses and ESPs to most types of industry has reached a science whose results are seen in particulate control efficiencies of greater than 99 percent.



The Newberry plant has baghouses installed on some of its smaller emission points. This type of emission control is considered state of the art for cement plant emission units that are not major pieces of equipment. When installed with consideration to particulate loading and baghouse capacity, a fabric filter represents the most economical solution to controlling PM and PM₁₀ emissions for a small point source. If the device is installed either as a forced-draft or induced-draft filter where 100 percent of the emission stream reaches the baghouse inlet, control efficiencies can approach 99 percent. The device does not occupy a great deal of space, and therefore, has the benefit of being easily installed to numerous locations in a cement plant.

Electrostatic precipitators are also utilized in point sources of PM and PM₁₀ emissions, but are generally reserved for sources of significant emissions. Like fabric filters, ESPs can be tailored to a particular plant in design with a very high control efficiency in mind. The Newberry plant was designed with two ESPs, one for the kiln and another of identical size and design for the clinker cooler. The design control efficiency of each ESP is a notable 99.85 percent.

While various factors can adversely affect ESP control efficiency, the technology is still considered the most effective for application in large industries such as cement plants. Factors such as dust resistivity that compromise collection, corrosive gas streams that slowly destroy the components, and huge energy requirements that represent substantial costs may all serve to lower control efficiencies, however the ESP represents the most technologically feasible option. The ESP is considered to be a high-maintenance, high-cost control device, and for this reason the most effective ESP is generally designed into a new plant rather than installed as a retrofit.

The technical limitations of the ESP in a cement plant can include inability to accommodate the substantial device size. In order to control the remaining 0.15 percent of emissions uncontrolled by the primary ESPs, specific consideration would have to be given to the Newberry plant to determine if the existing plant layout could provide for the large footprint necessary for a second kiln or clinker cooler ESP.

Another technical limitation of the ESP in a cement plant surrounds the nature of the PM₁₀ emissions that are not collectable by the control device. A significant portion of cement kiln particulate emissions fall in the size range of ten micrometers or less, and therefore the potential for one or more ESPs to control these emissions approaches a limit, depending on grain loading in the unit, that will inevitably fall short of 100 percent reduction. I do not feel that installation of a secondary ESP on the kiln or clinker cooler will result in full removal of the remaining 0.15 percent of primary ESP PM/PM₁₀ emissions.

For the successful operation of the existing ESPs, some concern might arise from the electrical resistivity of cement dust. It is known that dust resistivity will decrease, however, with significant moisture in gas streams. Since the moisture driven from the raw materials plus ambient air moisture will travel through this ESP, the high control efficiency is possible with the existing pollution control design. It is notable that efficiencies of this level are state of the art, and ESPs operating at this efficiency are used outside the cement industry in the United States, Europe and Japan.



To address control of PM and PM₁₀ emissions from non-kiln emission units of raw material handling, raw mill, clinker handling, finish grinding, cement handling, and coal handling, it should be noted that fabric filters and ESPs have limited ability to reduce emissions. These sources are considered small and/or dispersed, "difficult" emission units to control. I believe the application of an ESP or baghouse to sources involving raw materials should be discouraged for the Newberry plant, for the fact that the quarry process units handle limestone with high moisture content, eight to twelve percent. The wet rock quarried at the plant cannot be reasonably expected to create significant PM or PM₁₀ emissions. The haul roads (paved and unpaved) to the quarry represent the more likely source of PM and PM₁₀, and the application of point source control devices have no relevance to such fugitive sources.

Another concern regarding a secondary control device's ability to remove particulates centers around the primary capture efficiency of existing enclosures, windscreens, separators, and fabric filters grouped in the Newberry plant raw mill emission unit. For transfer and conveyor points, enclosures and windscreens, a low capture efficiency (25 to 50 percent is often used in EPA accounting guidelines) is likely to cause limited reduction of particulates because these emissions are often fugitive and consequently never collected by such control devices. With the limited control scope of the existing control devices, it is less than reasonable to assure an extra ESP or fabric filter can account for fugitive particulate emissions.

Nitrogen Oxides

Before evaluating the pollution control options for supplemental removal of NO_x, it is important to note that the existing design of the Newberry plant provides a sophisticated control of raw material blending and kiln firing conditions. These controls are collectively termed "good combustion practices," and are realistically one of the most effective options for NO_x control at a cement plant. A portion of the NO_x control that is inherent to this facility comes from the careful sizing and mixing of raw materials entering as kiln feed. Specific units that blend the kiln feed include a modern stacker/reclaimer and a high-efficiency air separator, both part of the raw mill system located upstream of the Newberry plant's blend silo.

When a high level of quality control is applied to the kiln feed, it is possible to operate the kiln at a lower firing temperature than normally used in industry practice. Well-designed kiln feed systems are not only chosen because of their relative fuel savings and consistent high-quality product, but also because the lower kiln firing temperature produces less thermal NO_x. Of the two types of NO_x that are formed as a result of combustion, thermal NO_x is directly proportional to increased kiln temperature. The other type of NO_x, termed fuel NO_x, is dependent on the chemical characteristics and quantity of fossil and/or other fuels used to fire the kiln. Plants that do not have the same testing and controls over kiln feed often increase the kiln temperature in order to get a product of sufficient quality. The Newberry plant, on the other hand, has the advantage of an inherently low-NO_x design.



I am aware that the plant does have the option of adding staged combustion as a NO_x contingency control. This method introduces fuel at the feed end of the kiln or at the precalciner vessel, creating a strongly reducing environment in which more NO_x is destroyed. The technology is currently used in both new construction and kiln retrofits. The Portland Cement Association Report on NO_x Formation and Variability in Portland Cement Kiln Systems, Potential Control Techniques and Their Feasibility and Cost Effectiveness published in December 1998 reports that industry feedback indicated NO_x reduction potential with this control is 30 to 40 percent, compared to conventional precalciner kilns.

The same Portland Cement Association report estimated the cost of operating the staged combustion low-NO_x precalciner for three scenarios based on size of the kiln. For a precalciner kiln producing 100 tons clinker per hour and an estimated 3.4 lbs. NO_x emitted per ton clinker (which most closely matches the operating conditions of the Newberry plant), the capital cost plus annual operating cost was estimated at \$6.395 million dollars. Other sources indicate a capital and annual operating expenditure of approximately \$2.3 million dollars for the staged combustion retrofit. The estimated efficiency results in 383 tons NO_x annual reduction. Since the Newberry plant has the option for staged combustion already designed into the kiln system, capital costs for the conversion to this process are estimated at \$1.2 million dollars.

European standards for NO_x emissions at dry process cement plants range from 200 to 600 parts per million, depending on the age of the plant and the country. The Newberry plant NO_x emissions, as calculated by the Florida Department of Environmental Protection, correspond to kiln stack concentrations of approximately 406 parts per million. This value meets the average European standard without application of additional controls. European counterparts may have to install additional controls in order to achieve their respective standards because of difficulties with kiln firing practices, fuel quality, or kiln/burner design.

Where the existing design of the Newberry plant is established, we can consider post-combustion controls for removal of NO_x already formed by the kiln process. Available options include selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR), which I will separately discuss.

As an add-on control to reduce both thermal and fuel NO_x produced in the kiln, SCR is considered as an option to lower emissions. This technology uses anhydrous ammonia injection into the NO_x-rich kiln gases, then passes the gas over a catalyst to reduce NO_x to nitrogen and oxygen. The reaction takes place in the range of 570-840°F, and needs to occur after the gases have been treated for particulate removal. If the SCR is installed in a cement plant and treats particulate-laden gases, the catalyst will be fouled and NO_x will not be reduced. Therefore, to be technically feasible, the SCR system would have to be applied after the ESP.

While SCR could allow the Newberry plant to achieve lower NO_x emissions, some significant disadvantages surrounding its application should be considered. As gas temperatures lower with distance from the kiln and passage through the ESP, the gas would require costly reheating to accommodate the necessary operating temperature range. A substantial amount of energy would be expended to reheat the kiln gases, because the Newberry plant will have to comply with the



PC MACT rule that limits the ESP inlet temperature to less than 400°F. Reheating the exhaust gases will also generate significant amounts of air pollution in the form of NO_x, PM₁₀, carbon monoxide and volatile organic compounds, thereby reducing its effectiveness for controlling NO_x emissions.

Another concern is that the SCR operating temperature zone overlaps the chemical formation temperature range for dioxins and furans, which is approximately 400-800°F. Hence, application of SCR may impose a non-compliant status for dioxin and furan emissions with the PC MACT regulation of 40 CFR 63, Subpart LLL. Because of the regulatory implications, SCR cannot be recommended for NO_x control at the Newberry plant.

The other add-on control option to reduce NO_x is SNCR. SNCR employs the same reduction principles as SCR, but requires a temperature range of 1600-2000°F due to absence of the catalyst. Studies have been performed in the cement industry to evaluate SNCR for NO_x reduction. When analyzing the available information, it is important to differentiate between tests performed on one type of kiln versus another. The Portland Cement Association report and other sources indicate European testing of SNCR in preheater kilns results in NO_x reductions from 20 to 70 percent with an NH₃ to NO ratio of 1:1. However, using the same technology on precalciner kilns results in NO_x reductions of 10 to 50 percent.

I have two main concerns relating to the possibility of SNCR as a post-combustion technology for reducing NO_x emissions. The first concern is that the driving chemistry behind ammonia injection requires a specific molar relationship between ammonia and the NO_x concentration in the kiln gases. To maintain the optimal molar ratio, the factors of operating temperature range, gas residence time and NO_x concentration must all be in a fairly stable relationship. In practice, however, kiln operation will see all of these variables fluctuate significantly over relatively short periods of time. The result is that the effectiveness of SNCR cannot be reliably predicted for a cement kiln.

The other concern is that even if a precise 1:1 NH₃ to NO ratio is able to be maintained, some 5 to 20 parts per million ammonia can be expected to escape, unreacted, from the kiln stack. However, based on the studies performed to date, the amount of unreacted ammonia is likely to be substantially greater than that for the ideal operating scenario. Referred to as "ammonia slip," the unreacted ammonia is known to significantly increase PM₁₀ emissions as well as opacity from the kiln stack. The additional PM₁₀ generated by the ammonia exists as a vapor until it is sufficiently cooled by the atmosphere to form a very fine liquid, or aerosol. Hence, the generated PM₁₀ is not controlled with an ESP or fabric filter. This phenomenon also seriously impairs the plant's ability to meet its opacity limits as specified in both the recently promulgated PCMACT rule and the Portland Cement NSPS. The compromised opacity from kiln stack emissions is of particular importance to the Newberry plant, because the PC MACT rule does not allow for exceedances of the opacity standard. As was the case for SCR, SNCR cannot be recommended for NO_x control at the Newberry plant due to present regulatory constraints.



Mr. John J. Mousa
July 28, 1999
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To summarize my evaluation of the particulate and NO_x controls that may be available to the Newberry plant, I wish to emphasize that the potential emission reduction and actual reductions should be weighed in selecting from the most stringent technologies. A six-month to one-year evaluation of actual emissions at the plant may provide interested parties with much more concise data to select the most appropriate controls for NO_x and PM/PM₁₀ emissions.

Please contact me at (636) 349-8399 if you have any questions or additional needs.

Sincerely,

SCHREIBER, YONLEY & ASSOCIATES

Yusef Pabeta
for

Robert J. Schreiber, Jr., P.E., QEP
President

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SEP 25 2000

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NORTHWEST DISTRICT-JAX

TOTAL HYDROCARBONS AND METHANE
EMISSION MEASUREMENTS

FLORIDA ROCK INDUSTRIES
THOMPSON S. BAKER CEMENT PLANT
NEWBERRY, FLORIDA

PERMIT NO. AC01-267311/PSD-FL-228

AUGUST 2, 2000

KOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW 13TH STREET
GAINESVILLE, FLORIDA
352-377-5822

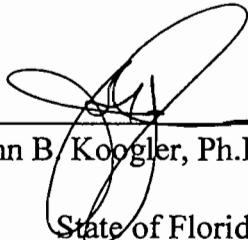
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OCT 09 2000

BUREAU OF AIR REGULATION



To the best of my knowledge, all applicable field and analytical procedures comply with the Florida Department of Environmental Protection requirements and all test data and plant operating data are true and correct.



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

State of Florida
Registration No. 12925

9/22/00

Date

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APPENDIX

1.0 INTRODUCTION

Florida Rock Industries owns and operates a 2300 ton per day (clinker) dry process precalciner Portland cement plant on CR 235, two miles north of the city center of Newberry, Florida. On August 2, 2000, Koogler & Associates Environmental Services of Gainesville, Florida, conducted total hydrocarbon and methane emission measurements on the kiln/raw mill stack in accordance with EPA Test Method 25A (40 CFR 60, Appendix A) for total hydrocarbons and EPA Test Method 25 (40 CFR 60, Appendix A) for methane. The purpose of the testing was part of the continuing evaluation of anomalous hydrocarbon emissions and specifically, to determine the contribution of methane (a non-VOC) to total hydrocarbon emissions.

The Northeast District Branch Office of the Florida Department of Environmental Protection (FDEP) in Gainesville, Florida, was notified of the intent to conduct the emission measurements.

During the test period, the kiln was operating at a preheater feed rate of 140 tons per hour or within 10 percent of the permitted feed rate of 149.9 tons per hour. The plant was operating in the compound mode; i.e., with both the kiln and raw mill operating.

The permit for the plant limits volatile hydrocarbon (VOC) emissions from the kiln/precalciner system to 11.6 pounds per hour or to 0.12 pounds per ton of clinker.

The measured total hydrocarbon emission rate (Method 25A) averaged 43.2 pounds per hour and the measured methane emission rate (Method 25) averaged 5.8 pounds per hour. The VOC emission rate, the difference between total hydrocarbons and methane emissions, averaged 37.4 pounds per hour.

2.0 SAMPLING POINT LOCATIONS

Four sample ports are located in the 112-inch diameter, 241-foot high stack exhausting the kiln/raw mill. The ports are 50.6 feet (5.4 stack diameters) below the top of the stack and 146.8 feet (15.7 diameters) above the point where the kiln/raw mill gases enter the stack. Based on the requirements of EPA Method 1 (40 CFR 60, Appendix A), 12 sample points were selected for the velocity traverse; three points through each of the four ports. Gas samples were collected at a single point near the center of the stack.

3.0 FIELD AND ANALYTICAL PROCEDURES

Total hydrocarbon emission measurements were conducted using EPA Test Method 25A and methane emission measurements were conducted using EPA Test Method 25. Samples for both sample systems were collected at a single point near the mid-point of the stack. Stack gas velocity measurements were made in accordance with EPA Method 2. Stack gas moisture was estimated from wet bulb/dry bulb temperature measurements. Measurements to determine the dry molecular weight of the stack gas were made in accordance with EPA Method 3. All EPA tests methods are described in 40 CFR 60, Appendix A and have been adopted by reference by FDEP by Rule 62-297.401, F.A.C.

4.0 SUMMARY OF RESULTS

The total hydrocarbon emission measurements made on August 2, 2000, are summarized in Table 1. The total hydrocarbon emission rate ranged from 41.2 to 46.8 pounds per hour and averaged 43.2 pounds per hour. This is equivalent to a total hydrocarbon concentration of 42.7 ppm (v/v, wet) as propane. The stack gas flow rate averaged 127,239 standard cubic feet per minute, dry (182,264 acfm). The stack gas temperature averaged 201°F and the moisture content averaged 13.5 percent.

The methane emission rate measured on August 2, 2000, ranged from 5.2 to 6.6 pounds per hour and averaged 5.8 pounds per hour. This is equivalent to a methane concentration of 6.7 ppm (v/v, dry) as propane. These data are summarized in Table 2. The stack gas flow rate during the methane tests averaged 127,239 dry standard cubic feet per minute (182,264 acfm), the stack gas temperature averaged 201°F and the stack gas moisture averaged 13.5 percent.

The non-methane hydrocarbon emissions (VOCs), the difference between total hydrocarbons and methane emissions, averaged 37.4 pounds per hour.

These emission measurements were made by FRI to determine the methane contribution to total hydrocarbon emissions. The measurements were part of an on-going program to evaluate anomalous hydrocarbon emissions.

Calculations, field and analytical data sheets, plant operating information, equipment calibration sheets and a list of project participants are included in the Appendix of this report.

TABLE 1
TOTAL HYDROCARBON EMISSION TEST DATA

FLORIDA ROCK INDUSTRIES, INC
NEWBERRY, FLORIDA

SOURCE: Kiln/Raw Mill Stack

DATE: August 2, 2000

Run No.	Stack Flow Rate		Temp (°F)	Moist (%)	Total Hydrocarbons	
	(SCFMD)	(ACFM)			Conc. (1) (ppm, v/v wet)	Emission Rate (lb/hr)
1	126,097	179,450	196	13.5	41.1	41.2
2	128,476	185,506	206	13.5	45.8	46.8
3	127,144	181,837	200	13.5	41.7	41.6
Avg	127,239	182,264	201	13.5	42.9	43.2

(1) as propane

TABLE 2
METHANE EMISSION TEST DATA

FLORIDA ROCK INDUSTRIES, INC
NEWBERRY, FLORIDA

SOURCE: Kiln/Raw Mill Stack

DATE: August 2, 2000

Run No.	Stack Flow Rate		Temp (°F)	Moist (%)	Methane	
	(SCFMD)	(ACFM)			Conc. (1) (ppm, v/v dry)	Emission Rate (lb/hr)
1	126,097	179,450	196	13.5	7.7	6.6
2	128,476	185,506	206	13.5	6.3	5.6
3	127,144	181,837	200	13.5	6.0	5.2
Avg	127,239	182,264	201	13.5	6.7	5.8

(1) as propane

LAW OFFICES

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Facsimile Cover Sheet

DATE: September 18, 2000

CLIENT NO. 2320-1

TO: Ernest Frey (904) 448-4366
 Al Linero
 Larry Morgan 488-2439
 Howard Rhodes 922-6979

FROM: Segundo J. Fernandez

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September 18, 2000

Via Facsimile (904) 448-4366

Mr. Ernest Frey, Director
 Florida Department of Environmental Protection
 7825 Baymeadows Way
 Suite B200
 Jacksonville, Florida

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SEP 19 2000

BUREAU OF AIR REGULATION

Dear Mr. Frey:

It was a pleasure meeting with you and your staff today. We appreciate the time and effort that you have spent to help resolve the FRI VOC issue.

When you met with Terry Cole, Tim Atkinson, and me on September 6, 2000 you indicated a desire to resolve this matter by Consent Order. We indicated to you that we would call your assistant to set up a meeting in Jacksonville to discuss whatever steps were necessary to insure that the facility operated in compliance with all applicable requirements. That telephone call resulted in our meeting today.

As Florida Rock has continued to investigate the VOC issue, it became apparent that the problem of "compliance" is directly related to a permit limit derived from an emission factor reported in the literature as unreliable, which the company now knows has no significant relationship to its Newberry facility. This was related to you by Company representatives today.

A very similar situation was address by Consent Order in the case of City of Jacksonville Regulatory and Environmental Services Department, Air and Water Quality Division vs. Ameristeel Inc., in which DEP participated, and which Order was entered by Regulatory and Environmental Services Department, an approved local program pursuant to 403.182, Florida Statutes. I am faxing

Mr. Ernest Frey, Director
Florida Department of Environmental Protection
September 18, 2000
Page 2

to you along with this letter a copy of that Consent Order, which I believe forms an appropriate model for the Department and Florida Rock to pursue. Please note that an interim VOC limit of 88.5 TPY was authorized, a number clearly above the PSD threshold for VOC's of 40 TPY. The interim number was to remain in effect until the Department of Environmental Protection took final agency action on Ameristeel's application to modify the construction permit limit, as Florida Rock has proposed to do in the instant case.

I know that you will give this your utmost consideration. Please do not hesitate to call me if you have any questions. We look forward to a speedy resolution of these issues.

Sincerely,

Segundo J. Fernandez by: *bmg*
Segundo J. Fernandez
and Timothy P. Atkinson

SJF:bmg
Enclosure

cc: Al Linero - FDEP
Larry Morgan - FDEP
Howard Rhodes - FDEP

BEST AVAILABLE COPY

RESD

REGULATORY & ENVIRONMENTAL SERVICES DEPARTMENT
Office Of The Director



**BEFORE THE ENVIRONMENTAL PROTECTION BOARD
CITY OF JACKSONVILLE**

CITY OF JACKSONVILLE REGULATORY)
AND ENVIRONMENTAL SERVICES)
DEPARTMENT, AIR AND WATER)
QUALITY DIVISION,)
) Petitioner,)
))
) vs.)
))
) AMERISTEEL, INC.,)
))
) Respondent.)
))

CITATION AP-97-08
REGARDING EXCEEDANCES
OF EMISSION LIMITING
STANDARDS

CONSENT ORDER

This Consent Order is made and entered into between the City of Jacksonville, Regulatory and Environmental Services Department (RESD) and AmeriSteel, Inc. ("AmeriSteel").

1. RESD, through its Air and Water Quality Division (AWQD), administers an approved local program under Section 403.182(8), Florida Statutes, authorized under Chapter 65-1474, Special Acts of 1965 and Chapter 67-1320, Laws of Florida, and an April 19, 1994 Specific Operating Agreement with the State of Florida Department of Environmental Protection (DEP) to enforce air permitting requirements in Duval County, Florida.

2. DEP is the administrative agency of the State of Florida with powers and duties to protect Florida's air and water resources and to administer and enforce Chapter 403, Florida Statutes, and the rules promulgated thereunder, as set forth in Chapter 62, Florida Administrative Code (FAC).

3. AmeriSteel is a Florida corporation that has its principal place of business in Tampa, Florida. AmeriSteel owns and operates the Baldwin Mill in Duval County, Florida. The Baldwin Mill manufactures steel reinforced bars used in construction (known as "rebar") and steel rod products from scrap metal products. AmeriSteel is currently doing business in the State of Florida and is a person within the meaning of Section 403.031(5), Florida Statutes.



421 West Church Street - Suite 412
Jacksonville, Florida 32202-4111

Area Code 904/630-3662

4. On June 28, 1995, DEP issued Permit No. AC 16-259246 to AmeriSteel authorizing AmeriSteel to make certain modifications to the Baldwin Mill. Originally set to expire on July 1, 1996, the construction permit has been extended and remains in effect pending agency consideration of the facility's application for a Title V air operation permit pursuant to Rule 62-213.420(1)(a)(b), FAC. In Specific Condition Nos. 5 and 6 of the construction permit, emission limitations for various pollutants were established, with specific numerical emission rates separately assigned to the baghouse 1-2 and baghouse 3-4 emission points.

5. The Baldwin Mill electric arc furnace's (EAF's) melt shop emissions are captured and ultimately released via two separate systems: baghouse 1-2 and baghouse 3-4. The baghouse systems are designed to reduce emissions of particulate matter. In AmeriSteel's application for the June 28, 1995 permit, the expected air emissions through each system were estimated as a basis for air modelling analysis. In that respect, homogenous emissions from each system were assumed and the resulting mass emissions rates were assigned equally to each baghouse system on the basis of the predicted air flow rates in the prospective control system configurations. After initial operations were undertaken, it became apparent that the air flow rates were distinguishable for each baghouse system, with the majority of carbon monoxide (CO), nitrogen oxides (NO_x), and volatile organic compounds (VOCs) air emissions being released via baghouse 1-2 system. Upon investigation, AmeriSteel determined that this result was attributable to additional compartments being added to that baghouse system, operation of the mill's EAF under negative pressure, and improved duct work. Although the enhanced airflow to the baghouse 1-2 system resulted in elevated levels of CO, NO_x, and VOCs from the baghouse 1-2 system, there were correspondingly decreased emission levels from the baghouse 3-4 system. The modelling analysis submitted with the original application was not materially affected by the enhanced air flow from the baghouse 1-2 system.

6. The VOC emissions limitation in the referenced permit was based on an assumed emission rate of 0.12 lbs/ton, which upon investigation was unrealistically too low. EPA's AIRS Emission Factor Listing for Criteria Pollutants (EPA 450/4-90-003) specifies an EAF emission factor of 0.35 lbs/ton for VOC. Moreover, EAF steel plants listed in the BACT clearinghouse as having VOC emission rate limitations lower than 0.35 lbs VOC/ton all manufacture rolled sheet steel, which requires a different grade of scrap metal with inherently distinguishable emission consequences. No EAF facility which, like the Baldwin Mill, produces rebar and rod products, has demonstrated the capability of complying with a VOC emission rate in the range of 0.12 lbs/ton.

7. In December, 1996, AmeriSteel voluntarily informed both RESD and DEP of the anomalous permit conditions and requested that compliance demonstration requirements be delayed until the referenced construction permit conditions could be amended.

8. By letter dated January 8, 1997, RESD granted AmeriSteel's request for an extension of the date for compliance testing.

9. By letter dated January 10, 1997, DEP requested that AmeriSteel submit a formal application for a permit modification. Subsequently, in a pre-application meeting, DEP informed AmeriSteel that compliance test data must included in the permit application in order to verify that continuous compliance at currently permitted levels is infeasible and to properly establish adjusted emission limitations.

10. Accordingly, the compliance test was performed at the Baldwin Mill on March 25 and 26, 1997. The test results indicated that NO_x levels from the baghouse 1-2 system exceeded the permitted levels, although total NO_x emitted from baghouse 1-2 and 3-4 was below the combined limit for the two emission points. Also, as expected, VOC emissions higher than the permitted limits were measured. On July 24, 1997, a subsequent compliance test demonstrated compliance with the NO_x emission limitations.

11. On May 7, 1997, AmeriSteel filed with DEP an application for adjusted CO, NO_x, and VOC emission limits in the referenced construction permit, and is currently awaiting final agency action on that application.

12. On July 24, 1997, RESD issued Cease and Desist Citation No. AP-97-08 alleging NO_x and VOC emission limitation violations during the March 25-26, 1997 compliance tests.

13. Without admitting that its conduct constitutes a violation of law, AmeriSteel acknowledges that measured emissions of NO_x and VOC have been higher than the specific emission limitations set forth in the referenced permit.

14. Representatives of AmeriSteel and RESD have met in an effort to resolve their disputes as to air compliance issues and any alleged violations of Chapter 403, Florida Statutes, or Jacksonville laws and regulations. The parties have agreed to enter into this Consent Order in order to expeditiously address compliance issues without litigation and its attendant costs, delays, and risks.

Having reached a resolution of this matter, the parties agree, and it is

ORDERED:

15. Effective on the date this Consent Order is acknowledged and filed, AmeriSteel shall be authorized to operate its EAF in accordance with the conditions of DEP Permit No. AC16-259246, and the following:

Emissions from baghouse 1-2 and 3-4, collectively, shall not exceed any of the following limits:

- A. Nitrogen Oxides (as NO) - 0.33 lbs/ton steel, 24.7 lbs/hr and 98.7 TPY.
- B. Carbon Monoxide (CO) - 3 lbs/ton steel, 225.2 lbs/hr and 900.8 TPY.

- C. Volatile Organic Compounds (VOC) - 0.295 lbs/ton steel, 22.1 lbs/hr and 88.5 TPY.

This condition of the Consent Order will remain in effect until DEP takes final agency action on the pending application for modification.

16. AmeriSteel shall pay a settlement of \$54,080 within 30 days after execution of this Consent Order and approval of this agreement by the City of Jacksonville Environmental Protection Board. The check shall be made payable to the City of Jacksonville Environmental Protection Fund and mailed to RESD.

17. This Consent Order fully resolves all issues raised in the Cease and Desist Citation regarding the matters addressed herein. RESD reserves the right to take appropriate enforcement action against AmeriSteel for any future violation of the Department's rules or permit conditions. AmeriSteel reserves its right to contest any such enforcement action in accordance with applicable law.

18. The terms and conditions set forth in this Consent Order may be enforced in a court of competent jurisdiction pursuant to Sections 120.69 and 403.121, Florida Statutes. AmeriSteel's failure to comply with the terms of this Consent Order will constitute a violation of Section 403.161(1)(b), Florida Statutes.

19. A violation of the terms of this Consent Order may subject AmeriSteel to judicial imposition of civil penalties of up to \$10,000 per violation per day.

20. In consideration of the complete and timely performance by AmeriSteel of the obligations agreed to in this Consent Order, RESD waives any right to seek judicial imposition of additional penalties. AmeriSteel waives its right to an administrative hearing pursuant to Section 120.57(1), Florida Statutes, regarding the terms of this Consent Order. AmeriSteel also waives its right to appeal the terms of this Consent Order.

21. The execution of this Consent Order does not obligate RESD to issue a permit for any facility that does not comply with all applicable statutes, rules and regulations. Furthermore, the execution of this Consent Order does not constitute a waiver by AmeriSteel of its right to request a formal administrative hearing or to take all appropriate appeals necessary to challenge DEP's denial of any permit or imposition of any specific permit conditions contained in any permits issued by DEP, other than the conditions contained in Paragraph 15 of this Consent Order.

22. No modification of the terms of this Consent Order will become effective until it is reduced to writing and executed by all parties.

AmeriSteel, Inc.
Consent Order - Citation AP-97-08
Page 5

23. The provisions of this Consent Order shall apply to and be binding upon the parties, their officers, directors, agents, servants, employees, successors, and assigns and all persons, firms and corporations acting under, through or for them and upon those persons, firms, and corporations in active concert or participation with them.

24. Entry of this Consent Order does not relieve AmeriSteel of the need to comply with applicable federal, state or local laws, regulations or ordinances.

CITY OF JACKSONVILLE
REGULATORY AND ENVIRONMENTAL SERVICES

11/21/97
Date

Daniel W. Haskell
Daniel W. Haskell, Director

AMERISTEEL, INC.

9-26-97
Date

Dennie J. Andrew
Dennie J. Andrew
Vice President/General Manager

ORDER

I hereby certify that the foregoing document was adopted by order of the Environmental Protection Board of the City of Jacksonville this 19th day of November, 1997.

Barbara Broward
Barbara Broward, Chairman
Environmental Protection Board

BEFORE THE ENVIRONMENTAL PROTECTION BOARD
CITY OF JACKSONVILLE

CITY OF JACKSONVILLE
REGULATORY AND ENVIRONMENTAL
SERVICES DEPARTMENT,
AIR AND WATER QUALITY DIVISION,

Petitioner,

vs.

CITATION AP-97-08

AMERISTEEL CORPORATION,

Respondent.

AMENDMENT TO CONSENT ORDER

This is an amendment to the Consent Order ("Consent Order") that was made and entered into on November 19, 1997, between the City of Jacksonville, Regulatory and Environmental Services Department ("RESD"), and AmeriSteel Corporation ("AmeriSteel") concerning RESD Citation AP-97-08.

1. AmeriSteel wants to conduct a research project at the steel mill ("Mill") that AmeriSteel owns and operates in Baldwin, Florida. Specifically, AmeriSteel wants to measure the emissions of volatile organic compounds ("VOCs") at the Baldwin Mill by performing stack testing over a prolonged period. Some of the tests will be used to measure the VOC emissions at the Baldwin Mill during normal operations. Other tests will be used to determine whether the Mill's VOC emissions are affected by changes in operating conditions.

2. The VOC emissions data collected by AmeriSteel will be incorporated into an application for a modification to the Prevention of Significant Deterioration ("PSD") permit for the Baldwin Mill. The test data should help RESD, the Florida Department of Environmental Protection ("DEP"), and AmeriSteel establish an appropriate VOC emissions factor for the Baldwin Mill based on a sound emissions database. The test data also should help RESD, DEP, and AmeriSteel with their analyses of the Best Available Control Technology ("BACT") for the Mill.

3. There is very little scientific information available concerning the exact sources, precise quantities, and statistical variability of VOCs emitted from electric arc furnaces. There also is very little information available concerning the VOC emissions from the electric arc furnace at AmeriSteel's Baldwin Mill. Consequently, AmeriSteel's proposal to voluntarily perform an

extensive testing program at the Baldwin Mill is in the public interest. Although it is possible that the testing program may result in temporary exceedances of the emission limits contained in the Consent Order, the testing program is not expected to cause or contribute to any exceedances of any ambient air quality standards or PSD Class I or Class II increments.

4. On March 13, 1998, AmeriSteel submitted a written request for RESD's approval to conduct the testing program. On March 16, 1998, the RESD Air and Water Quality Division approved AmeriSteel's request pursuant to Section 403.061(18), Florida Statutes. However, RESD's approval states that the Environmental Protection Board must approve an amendment to the Consent Order before AmeriSteel proceeds with its project.

WHEREFORE, it is hereby ORDERED:

5. The emissions limits of the Consent Order are temporarily suspended during research testing only while AmeriSteel performs an RESD-approved research and testing project concerning VOC emissions from the Mill, subject to the following conditions:

- (a) the testing program shall be performed in a manner that is consistent with the description contained in AmeriSteel's letter dated March 13, 1998 to RESD (which is hereby incorporated by reference);
- (b) the protocol for the testing program shall be provided to RESD for its review within 30 days after the effective date of this amendment to the Consent Order;
- (c) AmeriSteel shall commence the testing within 30 days after RESD approves the test protocol;
- (d) research tests shall be conducted for no more than 15 separate days; and
- (e) the test results shall be provided to RESD within 60 days after the completion of the test program.

6. The test data shall be used by AmeriSteel to prepare promptly an application for a modification of the PSD permit for the Baldwin Mill. The application for a permit modification shall be submitted to DEP and RESD no more than 120 days after the test results are submitted to RESD.

7. The emissions data collected by AmeriSteel during its research testing may be used for scientific purposes, but shall not be used by RESD as the basis for an enforcement action against AmeriSteel for violations of the terms of the Consent Order.

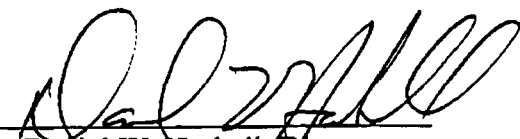
8. This amendment to this Consent Order shall be effective when executed by the Chair of

the Environmental Protection Board.

9. The other provisions and limitations in the Consent Order are incorporated herein by reference and shall remain in effect.

**CITY OF JACKSONVILLE
REGULATORY AND ENVIRONMENTAL SERVICES DEPARTMENT**

Date 5/12/98


Daniel W. Haskell, Director

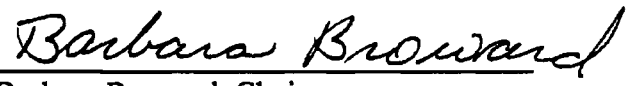
AMERISTEEL CORPORATION

Date _____

Donald R. Schumake
Vice President/General Manager

ORDER

I hereby certify that the foregoing document was adopted by order of the Environmental Protection Board of the City of Jacksonville this 12th day of May, 1998.



Barbara Broward, Chair
Environmental Protection Board

MAY-11-98 MON 15:42
MAY-11-98 15:21

FROM: REG. + ENV. DEPT.

ID: 884 638 3838

P. 04

PAGE 4

the Environmental Protection Board.

9. The other provisions and limitations in the Consent Order are incorporated herein by reference and shall remain in effect.

**CITY OF JACKSONVILLE
REGULATORY AND ENVIRONMENTAL SERVICES DEPARTMENT**

Date

Daniel W. Haskell, Director

AMERISTEEL CORPORATION

5-11-98

Donald R. Schumake

Date

Donald R. Schumake
Vice President/General Manager

The other provisions and limitations in the Consent Order are incorporated herein by reference and shall remain in effect.

CITY OF JACKSONVILLE

REGULATORY AND ENVIRONMENTAL SERVICES DEPARTMENT

ORDER

I hereby certify that the foregoing document was adopted by order of the Environmental Protection Board of the City of Jacksonville this _____ day of _____, 1998.

Barbara Broward, Chair
Environmental Protection Board

Donald R. Schumake

Subject: Florida Rock Industries, Inc

Date: Fri, 22 Sep 2000 16:30:29 -0400

From: "Timothy P. Atkinson" <tatkinson@ohfc.com>

Organization: Oertel, Hoffman, Fernandez & Cole, P.A.

To: Christopher.Kirts@dep.state.fl.us, Kirby.Green@dep.state.fl.us, Trina.Vielhauer@dep.state.fl.us, Ernest.Frey@dep.state.fl.us, Howard.Rhodes@dep.state.fl.us, Doug.Beason@dep.state.fl.us

BCC: Segundo Fernandez <sfernandez@ohfc.com>, Terry Cole <tcollection@ohfc.com>, Fred Cohrs <fcohrc@flarock.com>, John Baker <jdbaker@flarock.com>, "Dr. John Koogler" <Koogler@worldnet.att.net>, Cary Cohrs <caryc@flarock.com>

Dear Chris -

We tried to reach both you and Ernie Frey by telephone this afternoon at your Jacksonville office. As you probably know, State offices in Tallahassee have been closed all day due to Tropical Storm Helene. We nevertheless tried to reach OGC, but their voice mail box was full, as well as Kirby Green, but there was no answer at his number.

We understand that due to operational difficulties, causing failure to reach representative operating conditions, the stack test at Florida Rock in Newberry could not be conducted this afternoon, even though the testing team and FDEP observers were assembled. We understand that the test has been rescheduled for tomorrow morning, and that the appropriate FDEP observers have been notified and have committed to being there.

You probably know about this already, but we wanted to make sure you knew.

Please contact us if you have any questions.

Sincerely,
Tim Atkinson
Segundo J. Fernandez

c: Kirby Green, III
Ernest Frey
Howard Rhodes
Doug Beason
Trina Vielhauer

RECEIVED

~~SEP 28 2000~~

BUREAU OF AIR REGULATION

Timothy P. Atkinson
Oertel, Hoffman, Fernandez & Cole, P.A.

RECEIVED

OCT 02 2000

BUREAU OF AIR REGULATION

Attachment 1

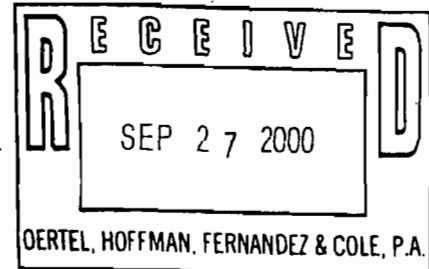


KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 • FAX/377-7158

KA 187-00-09

September 25, 2000



VIA FAX AND MAIL

Mr. Chris Kirts
Florida Department of
Environmental Protection
7825 Baymeadows Way Suite B-200
Jacksonville, FL 32256-7590

Subject: Florida Rock Industries
Thompson S. Baker Cement Plant
Permit AC01-267311/PSD-FL-228
VOC Emission Measurements

Dear Mr. Kirts:

As I discussed with Mr. Rick Banks of your office and Mr. Lalit Lalwani of the FDEP Northeast District Branch Office in Gainesville on Friday, September 22, 2000, compliance testing for volatile organic compounds (VOCs) was conducted at Florida Rock Industries Thompson S. Baker Cement Plant on Saturday, September 23, 2000. These compliance tests were the tests referenced in Kirby Green's letter to Segundo Fernandez dated September 20, 2000. The tests could not be conducted on or before September 22, 2000, as suggested in Mr. Green's letter, because of atypical plant operating conditions. The tests were conducted at the earliest date possible which was September 23, 2000. I would like to express our appreciation to you and your staff for allowing the compliance testing to proceed on a Saturday. As you are aware, this request was made only because of the urgency to demonstrate compliance with the permitted VOC emission limit at the earliest possible date.

I am providing you, at this time, with a summary of the results of the September 23, 2000, compliance testing. The average VOC emission rate was 7.33 pounds per hour compared with an allowable VOC emission rate of 10.74 pounds per hour at the clinker production rate at the time of testing of 89.5 tons per hour. The maximum permitted VOC emission rate is 11.55 pounds per hour.

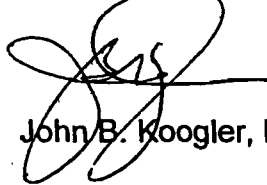
Attachment 2

The results of the three test runs are summarized in the attached table. The data show that the total hydrocarbon emission rate averaged 11.56 pounds per hour, the methane emission rate averaged 4.24 pounds per hour and the VOC emission rate (the difference between total hydrocarbons and methane) averaged 7.33 pounds per hour. During the compliance test period, the feed rate to the preheater averaged 140 tons per hour which is equivalent to a clinker production rate of 89.5 tons per hour. The permitted preheater feed rate and clinker production rate are 149.9 tons per hour and 95.8 tons per hour, respectively. The plant operated normally in the compound mode (both the kiln and raw mill operating) during the entire test period and 100 percent of the heat input to both the kiln and precalciner was provided by coal.

We will provide you with a complete test report as soon as possible. If there are any questions prior to receiving our report, please feel free to contact me at 352-377-5822.

Very truly yours,

KOOGLER & ASSOCIATES



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

JBK:wa
Enc.

C: Mr. Kirby Green
Mr. Larry Morgan
Ms. Trina Vielhauer
Mr. Howard Rhodes, FDEP, Tallahassee
Mr. Al Linero, FDEP
Mr. Ernest Frey, FDEP, Jacksonville
Mr. Lalit Lalwani, FDEP, Gainesville
Mr. Fred Cohrs, FRI
Mr. Cary Cohrs, FRI
Mr. George Townsend, FRI
Mr. Segundo Fernandez

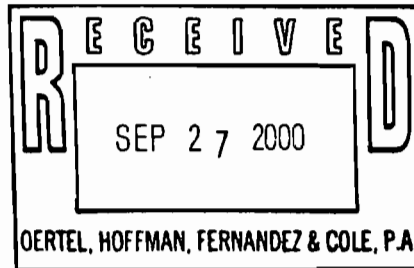
Run	Preheater Feed (tph)	Total Hydrocarbons (as propane) (lb/hr)	Methane (as methane) (lb/hr)	VOC (lb/hr)
1	140	11.16	4.18	6.98
2	140	11.44	4.05	7.39
3	140	12.09	4.48	7.61
Avg	140(1)	11.56	4.24	7.33(2)

- (1) Equivalent to 89.5 tph clinker
- (2) Allowable VOC emission rate at 0.12 lb/ton clinker = 10.74 lb/hr

September 25, 2000



Mr. Chris Kirts
Florida Department of
Environmental Protection
7825 Baymeadows Way, Suite B-200
Jacksonville, FL 32256-7590



Dear Mr. Kirts:

Florida Rock Industries, Inc. has successfully completed its retest for VOC emissions at the Thompson S. Baker Cement Plant in Newberry on Saturday, September 23, 2000. The measured VOC emissions are below the permitted limit.

To accomplish this, the plant omitted the use of mill scale as one of its raw materials and commenced to produce only ASTM Type I cement. After the completion of the test the production of Type I was continued, without the use of any mill scale.

The compliance test report is being prepared by Koogler & Associates and will be completed in the next few days.

As we had correctly surmised, after substantial testing of all of our raw materials, the mill scale has been the major contributor to the formation of volatile organic matter. We worked diligently to identify the cause of the VOC emissions and took prompt actions to bring the emissions into compliance with our permit limits. Most mill scale available in this country contain amounts of hydrocarbons originating in lubricants used in the milling process.

In the meantime we located a limited supply of mill scale with low THC content and have received several truckloads of this material. The material comes from a steel plant which uses a flotation process to separate the spent grease from the steel flakes and attempts to make a THC-free mill scale. We are told the separated grease is being reused for lubrication. Representatives of Florida Rock are scheduled to visit the steel plant offering this material for a personal inspection of the cleaning process and its effectiveness. The samples we received of this material show a presence of only 0.04 % THC. This compares to values of as high as 1% in previously supplied mill scale. We hope to verify that this cleanliness can be reliably maintained and that the quantity of clean mill scale produced is sufficient for our needs. If the answers are affirmative, we will use the material to produce Type II cement to meet FDOT specifications. The difference in the THC contents leads us to believe that the permitted VOC limits will continue to be met.

Simultaneously we are in contact with the Oak Ridge National Laboratories in Oak Ridge, Tennessee to discuss a technical assistance agreement for the production of THC-free mill scale. Oak Ridge has done extensive research in bio-degradation of organic compounds for the Department of Energy and has developed notable expertise in the destruction of organic matter, turning it into harmless carbon dioxide and water molecules. Based on the success of this method, we would be able to tap a large supply of mill scale, which is now being used without prior treatment by most cement companies in this and other countries. The disadvantage of bio-

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Mr. Chris Kirts
September 25, 2000
Page 2 of 2

remediation is the time frame. Bio-remediation of organic matter may take as long as 14 months, leaving us unable to satisfy our requirement for clean material for some period of time, should the present promising source not prove to be reliable or sufficient.

It is possible that more steel mills will make the capital investments to clean up their mill scale and recycle the grease, which would make more material available to our industry. We will continue to search for additional sources.

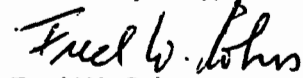
Another option to produce clean mill scale for our use is the construction of a mill scale pretreatment facility, which would be somewhat similar to a remediation plant for oil soaked soils, using asphalt driers with afterburners. Given the relatively small amount of mill scale consumed by our plant, pretreatment may be totally cost prohibitive. Our inquiries to existing soils remediation operators have not met with encouraging responses. At this time none of the facilities we have been able to contact are available to pretreat our mill scale.

On a related matter, you have pointed out in our meetings, that the Title V permit must reflect the planned TDF facility. The construction permit allows up to 30% replacement of coal with TDF, but so far the company has not installed a TDF system, nor used TDF in its operation. We have scheduled a visit to recently installed systems to determine if the latest technology satisfies our requirements and, at the same time find out how much iron addition can be expected from the ash contained in the tires. This source of iron may further help to reduce our mill scale requirements.

We are certain of a short-term solution toward meeting the VOC limits at the TSB Cement Plant, but should continue to discuss and explore all options with the department, which may include short-term relief for a long-term answer.

Your co-operation and assistance will be appreciated.

Yours very truly,



Fred W. Cohrs
Vice President

FWC/bc

Cc: Mr. Howard Rhodes
Mr. Al Linero
Mr. Ernie Frey
Mr. Kirby Green
Mr. John Baker
Segundo Fernandez, Esq.

Voc File

CLIENT : Florida Rock Industries
ADDRESS: 4000 CR 235
Newberry, FL 32669

REPORT # : JAX13227
DATE SUBMITTED: September 15, 2000
DATE REPORTED : September 22, 2000

PAGE 1 OF 4

ATTENTION: Mr. Cary Cohrs

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT : FL. ROCK INDUST

09/15/00

#1 - LEVAND STEEL
#2 - BULK MATERIAL

PROJECT MANAGER

Scott D. Martin

Attachment 4

ENCO LABORATORIES
 REPORT # : JAX13227
 DATE REPORTED: September 22, 2000
 REFERENCE : FL. ROCK INDUST

PAGE 2 OF 4

RESULTS OF ANALYSIS

<u>MISCELLANEOUS</u>	<u>METHOD</u>	<u>LEVAND STEEL</u>	<u>BULK MATERIAL</u>	<u>Units</u>
Percent Solids	SM2540G	96	95	%
Date Analyzed		09/20/00	09/20/00	

<u>EPA METHOD FLPRO - PETROL. RESIDUAL ORG.</u>	<u>LEVAND STEEL</u>	<u>BULK MATERIAL</u>	<u>Units</u>
Hydrocarbons (C9-C40)	620	11000 D1	mg/Kg
<u>Surrogate:</u>	<u>% RECOV</u>	<u>% RECOV</u>	<u>LIMITS</u>
o-Terphenyl	110	*	51-148
Date Prepared	09/20/00	09/20/00	
Date Analyzed	09/22/00	09/22/00	

* = Surrogate recovery unavailable due to sample dilution.
 U = Compound was analyzed for but not detected to the level shown.
 D1 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JAX13227
DATE REPORTED: September 22, 2000
REFERENCE : FL. ROCK INDUST

PAGE 3 OF 4

RESULTS OF ANALYSIS

EPA METHOD FLPRO -
PETROL. RESIDUAL ORG.

Hydrocarbons (C6-C40)

LAB BLANK

6.6 U

Units

mg/Kg

Surrogate:

o-Terphenyl

Date Prepared

Date Analyzed

% RECOV

103

09/20/00

09/21/00

LIMITS

51-145

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JAX13227
DATE REPORTED: September 22, 2000
REFERENCE : FL. ROCK INDUST

PAGE 4 OF 4

QUALITY CONTROL DATA

<u>Parameter</u>	<u>% RECOVERY MS/MSD/LCS</u>	<u>ACCEPT LIMITS</u>	<u>% RPD MS/MSD</u>	<u>ACCEPT LIMITS</u>
PETROL. RESIDUAL. ORG. Hydrocarbons (C8-C40)	88/100/101	62-204	13	25

Environmental Conservation Laboratories Comprehensive QA Plan #910190

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.



FAX TRANSMISSION

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NORTHEAST DISTRICT

7825 BAYMEADOWS WAY, SUITE 200
JACKSONVILLE, FL 32256-7590
(904) 448-4310 OR SUNCOM 880-4310
FAX: (904) 448-4363 OR SUNCOM 880-4363

XC:
To: **Al Linceo, Mike Horley** Date: 10/10/00
Fax #: *copy to Mike PK* Pages: 3, including this cover sheet.
From: **M. Benjamin**
Subject: **Letter to John Kasper**

COMMENTS:



PROTECT
THE ENVIRONMENT

PUBLIC SERVICE - OUR #1 COMMITMENT



Department of
Environmental Protection

Jeb Bush
Governor

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

David R. Scruse
Secretary

October 9, 2000

CERTIFIED - RETURN RECEIPT

Mr. John B. Koogler
Koogler & Associates
4014 Northwest Thirteenth Street
Gainesville, FL 32609

Dear Mr. Koogler:

Compliance Testing
Florida Rock Industries, Inc.
Alachua County - Air Compliance

It has come to our attention that Koogler & Associates intends to conduct compliance testing at Florida Rock Industries' Newberry cement plant on or about October 10, 2000. The proposed testing will use EPA Methods 25A and 18.

This office has no objection to running EPA Method 18. However, the applicable permit presently requires compliance testing using either EPA Method 25 or 25A. While Method 18 may provide interesting results, they are irrelevant under present permit conditions.

If you have any questions, please contact me at the above address or telephone (904) 448-4310, extension 234.

Sincerely,

Richard A. Banks
Environmental Manager

OERTEL, HOFFMAN, FERNANDEZ & COLE, P.A.

301 SOUTH BRONOUGH STREET
SUITE 500
TALLAHASSEE, FLORIDA 32301
—
(850) 521-0700
FAX (850) 521-0720

MAILING ADDRESS:
POST OFFICE BOX 1110
TALLAHASSEE, FLORIDA 32302-1110

<http://www.ohfc.com>

TIMOTHY P. ATKINSON
JEFFREY BROWN
M. CHRISTOPHER BRYANT
C. ANTHONY CLEVELAND
TERRY COLE
SEGUNDO J. FERNANDEZ
SCOTT W. FOLTZ
KENNETH F. HOFFMAN
CHRISTOPHER D. JOHNSTON
KENNETH G. OERTEL
PATRICIA A. RENOVITCH

RECEIVED

OCT 02 2000

September 29, 2000

BUREAU OF AIR REGULATION

Via Facsimile (922-5380) and U.S. Mail

Mr. Kirby B. Green, III
Deputy Secretary
Florida Department of Environmental Protection
3900 Commonwealth Blvd., MS-47
Tallahassee, FL 32399-3000

RE: Florida Rock Industries
Thompson S. Baker Cement Plant
Newberry, Alachua County

Dear Mr. Green:

Thank you for your letter of September 28, 2000. My client and I appreciate your prompt response to the matters we brought to your attention.

Fred W. Cohrs, Florida Rock's Vice President in charge of cement plant operations has already directed the scheduling of a stack compliance test. We are enclosing a copy of his letter for your information. Florida Rock's consultant, Dr. John Koogler, will be coordinating the scheduling of the test with Mr. Chris Kirts of the Jacksonville FDEP office.

Please do not hesitate to contact me if you need further information.

Sincerely,



Segundo J. Fernandez

SJF:bmj
Enclosure

cc: John D. Baker, II
Fred W. Cohrs
Cary Cohrs
Larry Morgan

Ernest Frey
Chris Kirts
Trina Vielhauer
Howard Rhodes

Al Linero
George Townsend
Lalit Lalwani

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF GENERAL COUNSEL
3900 Commonwealth Boulevard, M.S. 35
Marjory Stoneman Douglas Building
Tallahassee, Florida 32399-3000**

FACSIMILE TRANSMITTAL

To: Ernie Frey; Chris Kirts; Rick Banks; Mort Benjamin; John Gay
Howard Rhodes; **Al Linero**

Fax: NED
Air-Magnolla

From: Trina Vielhauer
Assistant General Counsel

Phone: (850) 921-8875

Fax: (850) 488-2439

Pages: 25 Pages Including Cover **Date:** January 31, 2001

RE: DEP v. Walczak

Comments:

Florida Rock's enforcement response. Let's still get together at 1:00 to discuss.

Thanks,
Trina

Original WILL follow VIA United States Postal Service
 Federal Express

Original will NOT follow

The information contained in this facsimile message is attorney privileged and confidential, intended only for the use of individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or copy of this communication is strictly prohibited. If you have received this communication in error, please immediately notify sender by telephone and return the original to us at the above address via United States Postal Service.

OERTEL, HOFFMAN, FERNANDEZ & COLE, P.A.

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KENNETH F. HOFFMAN
CHRISTOPHER D. JOHNSTON
KENNETH G. OERTEL
PATRICIA A. RENOVITCH

January 30, 2001

(Via Hand Delivery)

Trina L. Vielhauer, Assistant General Counsel
Office of General Counsel
Florida Department of Environmental Protection
3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000

Re: Florida Rock Industries, Inc.

Dear Ms. Vielhauer:

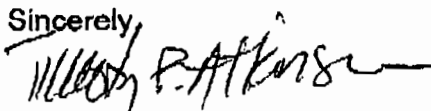
Please find enclosed a re-draft of the Consent Order regarding the Department's civil enforcement case for Florida Rock's portland cement plant in Newberry, Florida.

We wanted to provide you with some feedback as soon as possible. However, please bear in mind that our client and environmental consultant have not had a chance to review the enclosed draft and may suggest further changes, which will would forward to you as soon as possible.

We would like an opportunity to meet with you next week to discuss the language and penalty amount to be included in the Consent Order, and suggest a meeting in the morning of February 6, 2001. Please let me or Segundo Fernandez know if that would be acceptable to you.

Please call me if you have any questions.

Sincerely,



Timothy P. Atkinson

Enclosure

c: Fred W. Cohrs
Segundo J. Fernandez
John Koogler, Ph.D., P.E.

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION,)	IN THE OFFICE OF THE NORTHEAST DISTRICT
)	
Complainant,)	
)	
v.)	OGC FILE NO.: _____
)	
FLORIDA ROCK INDUSTRIES, INC.)	
)	
Respondent.)	

CONSENT ORDER

This Consent Order is entered into between the State of Florida Department of Environmental Protection ("Department") and Florida Rock Industries, Inc. ("Respondent") to reach settlement of certain matters at issue between the Department and Respondent.

~~The Department finds and the Respondent admits the following:~~

Preliminary Findings:

1. The Department is the administrative agency of the State of Florida having the power and duty to protect Florida's air and water resources and to administer and enforce the provisions of Chapter 403 Florida Statutes ("F.S.") and the rules promulgated thereunder in Florida Administrative Code ("F.A.C.") Title 62. The Department has jurisdiction over the matters addressed in this Consent Order.

2. Respondent is a corporation and is a person within the meaning of Section of 403.031(5), F.S.

3. Respondent owns and operates Thompson S. Baker Cement Plant ("Facility") located on Alachua County Road 235, Newberry, Alachua County, Florida. The Facility is a portland cement plant that makes Types I and II cement.

4. The Facility is a "facility" as that term is defined in Rule 62-204.200(16) F.A.C. and is an "affected facility" as that term is used throughout 40 CFR 60.7, Notification and Recordkeeping.

5. As part of its activities at the Facility, Respondent utilizes and has utilized equipment, operations and activities, specifically the kiln/~~raw mill~~ precalciner, that have emitted or caused and that emit or cause the emission of "air pollutants" as that term is defined in Rule 62-204.200(2) F.A.C.

6. The kiln/~~raw mill~~ precalciner is an "emission unit" as that term is defined in Rule 62-204.200(14) F.A.C. and is a stationary source.

7. On March 11, 1995, the Department received Respondent's application for a construction permit for its Facility.

8. Rule 62-204.340, F.A.C., establishes the areas of the state that are in attainment and nonattainment with the national ambient air quality standards ("NAAQS"). Alachua County is in attainment with the NAAQS.

9. Portland cement plants are a listed "Major Facility Category" in Table 62-212.400-1, F.A.C.

10. Respondent's Facility has the potential to emit 100 tons per year of at least one regulated air pollutant and is, therefore, a new Major Facility subject to the preconstruction

review requirements of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration ("PSD").

11. Rule 62-212.400, F.A.C., requires Respondent to implement the best available control technology ("BACT").

12. As part of the application process, Respondent provided the Department with information related to the BACT for its Facility pursuant to Rule 62-212.400(5)(h), F.A.C.

13. On December 23, 1996, the Department issued permit # AC01-267311 (PSD-FL-228) ("Permit") for Respondent's Facility with an expiration date of December 31, 1999. By letter dated September 17, 1999, Respondent requested an extension of the Permit. By letter dated October 6, 1999, the Department extended the Permit from December 31, 1999 to July 30, 2000 to allow completion of physical construction. A hearing has been requested by a third party on the October 6, 1999 extension. At Respondent's request, the Permit was amended on July 13, 2000 to allow Respondent to demonstrate compliance with VOC emissions by either Method 25 or Method 25A ("amended Permit"). By letter dated July 17, 2000, Respondent requested an extension of the amended Permit until January 31, 2001. Also, by letter dated December 20, 2000, Respondent requested an extension of the amended construction Permit until March 31, 2001.

14. Respondent's Facility is subject to all applicable provisions of Chapter 403, F.S., Chapters 62-204 through 297 F.A.C., and 40 CFR 60 (1995) which are incorporated into Specific Condition 1 of the Permit and amended Permit.

15. Respondent's Facility is subject to the requirements established in 40 CFR 60, Subpart A, Appendix A and Appendix B (1994), Subparts F, Y, OOO and Kb which are

incorporated by Rule 62-204, F.A.C., and Specific Condition 2 of the Permit and amended Permit.

16. ~~Based, at least in part, upon information submitted to the Department by Respondent,~~ Table II of the Permit and amended Permit establishes an emission limit for volatile organic compounds ("VOC") from the kiln/~~raw mill~~ precalciner stack of 11.55 pounds per hour and 0.12 pounds per ton of clinker. These numbers were derived from an estimate provided by Respondent as BACT for VOC emissions by avoiding the products of incomplete combustion in the kiln/precalciner.

17. Specific Condition 6 of the Permit required Respondent to utilize Method 25- "determination of total gaseous nonmethane organic emissions as carbon," to demonstrate compliance with VOC emission limits. Specific Condition 6 of the amended Permit allowed Respondent to utilize Method 25A-~~"determination of total gaseous organic concentration using a flame ionization analyzer"~~ to demonstrate compliance with VOC emission limits.

18. 40 CFR 60.7(a)(1) requires an owner or operator of a facility to furnish the Administrator with notification of commencement of construction of the facility. 40 CFR 60.7(a)(3) requires an owner or operator of a facility to furnish the Administrator with notification of the actual date of initial startup of an affected facility. This notification must be postmarked within 15 days of the initial startup.

19. On or about ~~December 31, 1996~~ April 7, 1997, Respondent commenced construction of its Facility. Respondent ~~did not~~ provided the notice required by 40 CFR 60.7(a)(1), which was received by the Department on May 8, 1997.

The Department's finds and the Respondent admits Allegations:

20. On or about ~~October 15~~ November 22, 1999, Respondent commenced initial startup of its Facility. Respondent did not provide the notice required by 40 CFR 60.7(a)(3). The pyro-processing system, including the kiln/precalciner, was started on or about December 23, 1999.

21. Specific Condition 6 of the Permit required and the amended Permit requires Respondent to install, operate and use a continuous emission monitor ("CEM") to determine compliance with applicable emission limits for sulfur dioxide.

22. By letter dated July 25, 2000, Respondent advised the Department:

"Adjustment and/or modifications may be required for these CEMs. It is anticipated that this matter can be completed by August 15, 2000. If the evaluation results in the need to purchase new CEM equipment, [Respondent] will notify the Department with the anticipated delivery and installation dates".

23. To date, Respondent has not used a CEM to demonstrate compliance with the applicable emission limits for sulfur dioxide nor notified the Department of anticipated delivery and installation dates for replacement CEMs.

24. Koogler & Associates Environmental Services ("Koogler") is the company that has conducted the stack testing referred to in the consent order on behalf of Respondent.

25. On May 31 and June 1, 2000, Koogler conducted stack testing at the Facility using EPA Method 25A to determine VOC emissions. The results of this test were submitted to the Department on September 22, 2000 and indicated an average emissions rate of 71.1 lbs/hr VOCs reported as total hydrocarbons ("THC"). Respondent failed to immediately notify the Department of possible noncompliance with the VOC emission limit set forth in the Permit and amended Permit [see paragraph 16 above] as required by Rule 62-4.130,

F.A.C. In addition, Method 25 was not used to determine VOC emissions as required by Specific Condition 6 of the Permit.

26. On June 16, 2000, Koogler notified the Department that a compliance stack test would be conducted at the Facility beginning on July 5, 2000.

27. On July 13, 2000, Department personnel witnessed compliance stack tests at the Facility [EPA Methods 6C (SO₂), 7E (NO_x), 10 (CO), and 25A (VOC)].

28. On August 28, 2000, the Department received the results of the July 13, 2000 compliance stack tests. The average VOC emission rate during the July 13, 2000 compliance stack test at the Facility was reported as 30.8 lbs/hr. The VOC emissions exceeded the VOC emission limit set forth in the Permit and amended Permit [see paragraph 16 above].

29. On August 2, 2000, Department personnel witnessed compliance stack tests at the Facility [EPA Method 25A and Method 25 (VOC)].

30. On September 25, 2000, the Department received the results of the August 2, 2000 compliance stack tests. The average VOC emission rate during the August 2, 2000 compliance stack test at the Facility was reported as 37.4 lbs/hr. The VOC emissions exceeded the VOC emission limit set forth in the Permit and amended Permit [see paragraph 16 above].

31. On September 23, 2000 a stack test was conducted at the Facility using Method 25A and Method 25 (VOC). The average VOC emissions were reported to be in compliance with the VOC emission limit set forth in the Permit and amended Permit [see paragraph 16 above].

32. Respondent operated the Facility continuously from at least May 31, 2000 through present except a shutdown period due to a lightning strike from August 19 through 25, 2000.

Respondent's Allegations:

33. Specific Condition No. 6 of the Permit provides that: "Performance tests shall begin within 60 days after achieving and maintaining the permitted production rate, but not later than 180 days after initial operation at that rate." Respondent first achieved and maintained the permitted production rate on or about May 18, 2000.

34. Respondent conducted initial performance tests on July 13, 2000, for VOCs and other permitted air pollutants. All tests conducted by Respondent prior to July 13, 2000, were only preliminary in-house measurements, which were not designed to comply with Permit conditions and did not constitute official compliance tests. The emission data developed during the period of May 31-June 2, 2000, were based on preliminary, in-house measurements made during the shakedown period of the plant. Being preliminary, in-house measurements, the formalities required of official compliance tests were not applicable.

35. The average VOC emission rate alleged in paragraph 28, above, did not contain an adjustment for the methane fraction of the THC. Respondent estimates, based on in-house measurements made on August 2, 2000, and consistent with measurements made on September 23, 2000, that the methane fraction on July 13, 2000, was approximately 13.4 percent of THC or approximately 4.1 pounds per hour methane.

36. The initial performance tests of July 13, 2000, began within 60 days after achieving and maintaining the permitted production rate. Pursuant to Specific Condition No. 6 of the Permit, Respondent had 180 days from May 18, 2000, or until November 14, 2000, to complete these tests.

37. The measurements taken May 31-June 2, 2000, were made with a flame ionization total hydrocarbon analyzer; the instrument specified in EPA Method 25A. Being preliminary, in-house measurements, the emission measurements did not comply with all of the requirements of EPA Method 25A, or of the formalities required of official compliance tests. Deviations from Method 25A included: (A) the THC analyzer was not calibrated before and after each period of time for which emission data are reported; (B) stack gas flow rate measurements did not correspond to the specific periods of time when THC measurements were made; (C) the performance of the THC analyzer was not documented as required by EPA Method 25A; and (D) plant operating parameters were not documented.

38. On August 2, 2000, Respondent conducted additional in-house tests for total hydrocarbon and methane emission data as part of an ongoing effort by Respondent to evaluate anomalous hydrocarbon emissions, and specifically, to determine the methane contribution to total hydrocarbon (THC) emissions. The Department was notified that this testing would be conducted and an FDEP observer was on site during the tests.

39. Respondent has continuously kept the Department apprised of its efforts to conclude its performance testing. Dr. Koogler sent a letter dated May 22, 2000 to Mr. Lalit Lalwani of DEP, advising the Department that initial testing was being postponed to insure that the tests would be performed at a time when the plant was operating at permitted

capacity. This was done well within the "180 days from start up" time clock. The Department did not respond to that letter with any concerns.

40. Even though Respondent was not required to submit a report to FDEP on the July 13, 2000, initial performance tests for 45 days following the tests, Respondent immediately met with FDEP Bureau of Air Quality Management representatives in Tallahassee and with the Jacksonville Office of FDEP to inform them of the test results. Respondent received assurances that it would receive sufficient time to address and correct the VOC issue as contemplated by the construction Permit process.

41. Respondent reacted to the anomalous VOC measurements by conducting additional stack tests, and subsequently embarked on a time consuming and expensive program of testing and process modifications to determine if the anomalous VOC emissions alleged by the Department were the product of incomplete combustion in the kiln/precalciner.

42. The results of Respondent's investigations revealed that the VOCs measured in the stack were not the result of incomplete combustion, but rather from some extraneous source of hydrocarbons that entered the process. Thus, fuel and the combustion process were eliminated as a source of the VOC readings. Tests from the kiln/precalciner system demonstrated VOC values of 0.07-0.08 lbs./ton clinker, well below the Permit limit.

43. Respondent then proceeded to test all raw materials for hydrocarbons. The results indicated that the ash received from Florida Power Corporation contained some hydrocarbons and the mill scale contained a sufficient amount of hydrocarbons to potentially be the cause of the VOC readings found in the stack gas.

44. Respondent immediately secured another source of fly ash lower in volatile matter.

45. Respondent immediately reduced, and ultimately discontinued, its use of mill scale to the minimum needed to meet ASTM standards, and searched for a replacement mill scale with lower hydrocarbon content. When Respondent voluntarily discontinued the use of mill scale, it was not longer able to produce the AASHTO Type II cement presently required under Florida DOT specifications and the market at large in Florida. Even so, the company continued to operate the Facility so as to only produce Type I cement until an alternative source of iron was located which would allow both FDOT specifications and FDEP Permit requirements to be met.

46. On September 23, 2000 a stack test was conducted at the Facility using Method 25A and Method 25 (VOC). The average VOC emissions were reported to be in compliance with the VOC emission limit set forth in the Permit and amended Permit. The average VOC emission rate was found to be 7.33 pounds per hour compared to the maximum permitted VOC rate for Respondent's Facility of 11.55 pounds per hour.

47. On October 11, 2000, Respondent conducted an additional stack compliance test using mill scale with low total hydrocarbon content, and making Type II cement. The average VOC emission rate was found to be 8.51 pounds per hour compared to the maximum permitted VOC rate for Respondent's Facility of 11.55 pounds per hour.

48. Respondent's FDEP Air Construction Permit for the Facility does not contain any ambient standards for VOC emissions. Respondent is required to meet Best Available Control Technology ("BACT"), which is described in the Permit as "combustion

technology.” Florida Rock has complied with BACT at its Facility, through the appropriate design of the kiln/precalciner combustion system. Florida Rock has tested the exhaust gases from the kiln/precalciner process and determined that regardless of the total hydrocarbon content of the mill scale used that it is well below the VOC Permit limits. The BACT-set emission limit for VOCs was based on the efficacy of the combustion process of the kiln/precalciner system, and addressed the potential for VOC emissions as a product of incomplete combustion. The unexpected VOC readings from unanticipated sources constitute an anomaly not envisioned by Respondent, by the administrative regulation at issue, or by the FDEP Air Construction Permit.

49. Respondent’s Facility was the first portland cement plant permitted and constructed in Florida with an emission limit for VOCs.

50. The Alachua County Air Quality Commission’s Final Report (January 2000) was the first comprehensive scientific review of air quality issues in Alachua County, Florida. Appendix 2.3.4 of the Final Report is an inventory of all sources of Volatile Organic Compounds in Alachua County, Florida for the year 1997. The inventory reveals that there were 39,626 tons of VOC emissions in Alachua County in 1997, from all sources, including major stationary sources, minor stationary sources, major stationary areas, on-vehicles, off-road vehicles and engines, natural biogenic and fire sources, and other miscellaneous sources. Natural or biogenic sources of VOC emissions are a significant portion of the overall VOC emission total, contributing over 26,500 tons, or 68 percent of the total VOC emissions countywide. The total permitted emissions of VOCs in Alachua County amount to slightly

more than 500 tons per year. Permitted sources represent about one percent of the total VOC emissions in the County.

51. Table II of Respondent's FDEP Air Construction Permit establishes a limit for VOC compounds from the kiln/precalciner of 11.55 pounds per hour and 0.12 pounds per ton of clinker. The Permit also establishes an annual emission limit of 42.90 tons per year.

52. In the summer of 2000, the Federal EPA published a new regulation which establishes a total hydrocarbon content (THC) "MACT" (Maximum Available Control Technology) standard for new portland cement plants of 50 ppmvd, which is equivalent to approximately 43.4 pounds per hour THC with the Facility operating in compound mode. Measurements at the Florida Rock Facility on July 13, 2000, August 2, 2000, September 23, 2000, and October 11, 2000, all referenced above would all have complied with the new MACT standard for THC. (VOC's are a subset of THC) See 40 CFR 63, Subpart LLL at Section 63.1340 et seq., particularly Table 1 to Section 63.1342.

53. A continuous emission monitor (CEM) supplied by Air World for SO₂ was installed on or about the last half of June 2000. Certification of the SO₂ CEM component was attempted in early July 2000. However, the SO₂ instrument exhibited excessive drift and was ultimately rejected as unacceptable and unreliable to be used as a scientific measuring device for the purpose it was installed. A stand-alone SO₂ CEM unit with its own sampling system, loaned to Respondent by Air World, was installed and calibrated on August 9, 2000. Respondent installed and certified a new permanent and replacement CEM system for all applicable parameters, manufactured in Minnesota by SICK USA, which includes a CEM for SO₂ emissions, the week of January 15, 2001.

Agreement to Settle

Representatives of Florida Rock Industries, Inc. and the Department have met in an effort to resolve their disputes as to air compliance issues and any alleged violation of Chapter 403, Florida Statutes. Entry into this agreement does not constitute an admission by Respondent to any violations. The parties have agreed to enter into this Consent Order in order to expeditiously address compliance issues without litigation and its attendant costs and delays.

Having reached a resolution of the matter, the Department and the Respondent mutually agree and it is,

ORDERED

54. Within thirty days of the effective date of this Consent Order, Respondent shall pay the Department ~~\$117,400~~ \$ _____ in settlement of the matters addressed in this Consent Order. This amount includes ~~\$167,400~~ \$ _____ in civil penalties for alleged violations of the Florida Statutes and of the Department's rules and ~~\$10,000~~ \$ _____ for costs and expenses incurred by the Department for costs and investigation of this matter and the preparation and tracking of this Consent Order. Payment shall be made by cashier's check or money order. The instrument shall be made payable to the "Department of Environmental Protection" and shall include thereon the OGC number assigned to this Consent Order and the notation "Ecosystem Management and Restoration Trust Fund." The payment shall be sent to: Department of Environmental Protection, Northeast District, 7825 Baymeadows Way, Jacksonville, FL 32256-7590.

55. This Consent Order fully resolves all issues regarding the matters addressed herein and in the Department's September 5, 2000, Warning Letter. The Department reserves the right to take appropriate enforcement action against Florida Rock Industries, Inc. for any future violation of the Department's rules or permit conditions. Florida Rock Industries, Inc. reserves its right to contest any such enforcement action in accordance with applicable law.

~~56. Within 120 days of the effective date of this consent order and no later than April 1, 2001, Respondent shall install, calibrate, maintain and operate a continuous emission monitoring system in the kiln/raw mill stack to measure and record the emissions of VOC from the kiln/raw mill. The CEM system shall be installed, operated and maintained in accordance with Performance Specification 8/A of Appendix B to 40 CFR 60. The owner or operator shall report no later than the 10th day following each calendar quarter a summary of the daily average VOC emissions reported by the CEMS system for the days of that calendar quarter to the Department's Northeast District Office. These results should be reported as propane corrected to 7 percent oxygen, pounds per hour of VOC, and pounds of VOC per ton of clinker.~~

~~57. Beginning with the last quarter of 2000, Respondent shall, on the 10th day of the month following each calendar quarter, provide to the Department's Northeast District Office, a summary of that quarter's daily and 30 day average sulfur dioxide emissions reported by the CEMS system, as described in Specific Condition 6 of the Permit and amended Permit. These should be reported in units corresponding to the emission limits given in the Permit and amended Permit.~~

~~58. Beginning with the third quarter of 2000, Respondent shall, on the 10th day of the month following each calendar quarter, provide to the Department's Northeast District Office, a summary of that quarter's daily and 30-day average nitrogen oxide emissions reported by the CEMs system, as described in Specific Condition 6 of the Permit and amended Permit. These should be reported in units corresponding to the emission limits given in the Permit and amended Permit.~~

~~59. Within 30 days of the effective date of the consent order, Respondent shall provide copies of the notifications sent to USEPA or the Department for all sources subject to 40 CFR 60 subparts: F (Standards of Performance for Portland Cement Plants), Y (Standards of Performance for Coal Preparation Plants), QQQ (Standards of Performance for Non-metallic Mineral Plants), and Kb (Storage Vessels for Petroleum Liquids) that Respondent submitted in accordance with the notification requirements of 40 CFR 60.7(a)(3).~~

~~60. Commencing immediately and henceforth, Respondent shall take all necessary measures to ensure the Facility is in compliance with 40 C.F.R. 60, Chapter 403 of the Florida Statutes, Title 62 of the Florida Administrative Code, and all construction and operation permit requirements issued by the Department.~~

~~61. In the event that Respondent determines it is out of compliance with air pollution control emission limits established in 40 C.F.R. 60, Chapter 403 of the Florida Statutes, Title 62 of the Florida Administrative Code, and/or construction or operation permits issued by the Department, Respondent shall immediately notify the Department's Northeast District Office as required by Rule 62-4.130, F.A.C. In addition, Respondent~~

~~shall immediately cease operations and conduct appropriate maintenance or repairs to return to compliance with such emission limits.~~

~~62. In the event that Respondent determines it is out of compliance with air pollution control emission limits established in 40 C.F.R. 60, Chapter 403 of the Florida Statutes, Title 62 of the Florida Administrative Code, and/or construction or operation permits issued by the Department and Respondent does not immediately cease operations and conduct appropriate maintenance or repairs to return to compliance with such emission limits as required by paragraph 39 above, Respondent may be subject to criminal prosecution as provided in 403.161, F.S.~~

63. Persons who are not parties to this Consent Order but whose substantial interests are affected by this Consent Order have a right, pursuant to Sections 120.569 and 120.57, Florida Statutes, to petition for an administrative hearing on it. The Petition must contain the information set forth below and must be filed (received) at the Department's Office of General Counsel, 3900 Commonwealth Boulevard, MS-35, Tallahassee, Florida 32399-3000, within 21 days of receipt of this notice. A copy of the Petition must also be mailed at the time of filing to the District Office named above at the address indicated. Failure to file a petition within the 21 days constitutes a waiver of any right such person has to an administrative hearing pursuant to Sections 120.569 and 120.57, Florida Statutes.

The petition shall contain the following information:

(a) The name, address, and telephone number of each petitioner; the Department's Consent Order identification number and the county in which the subject matter or activity is located; (b) A statement of how and when each petitioner received notice of the Consent Order; (c) A statement

of how each petitioner's substantial interests are affected by the Consent Order; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of facts which petitioner contends warrant reversal or modification of the Consent Order; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Consent Order; (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Consent Order.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the subject Consent Order have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 21 days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Sections 120.569 and 120.57, Florida Statutes, and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-106.205, Florida Administrative Code.

A person whose substantial interests are affected by the Consent Order may file a timely petition for an administrative hearing under Sections 120.569 and 120.57, Florida Statutes, or may choose to pursue mediation as an alternative remedy under Section 120.573 before the deadline for filing a petition. Choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement. The procedures for pursuing mediation are set forth below.

Mediation may only take place if the Department and all the parties to the proceeding agree that mediation is appropriate. A person may pursue mediation by reaching a mediation agreement with all parties to the proceeding (which include the Respondent, the Department, and any person who has filed a timely and sufficient petition for a hearing) and by showing how the substantial interests of each mediating party are affected by the Consent Order. The agreement must be filed in (received by) the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, by the same deadline as set forth above for the filing of a petition.

The agreement to mediate must include the following:

- (a) The names, addresses, and telephone numbers of any persons who may attend the mediation;
- (b) The name, address, and telephone number of the mediator selected by the parties, or a provision for selecting a mediator within a specified time;
- (c) The agreed allocation of the costs and fees associated with the mediation;
- (d) The agreement of the parties on the confidentiality of discussions and documents introduced during mediation;
- (e) The date, time, and place of the first mediation session, or a deadline for holding the first session, if no mediator has yet been chosen;
- (f) The name of each party's representative who shall have authority to settle or recommend settlement; and
- (g) Either an explanation of how the substantial interests of each mediating party will be affected by the action or proposed action addressed in this notice of intent or a statement clearly

identifying the petition for hearing that each party has already filed, and incorporating it by reference.

(h) The signatures of all parties or their authorized representatives.

As provided in section 120.573 of the Florida Statutes, the timely agreement of all parties to mediate will toll the time limitations imposed by sections 120.569 and 120.57 for requesting and holding an administrative hearing. Unless otherwise agreed by the parties, the mediation must be concluded within sixty days of the execution of the agreement. If mediation results in settlement of the administrative dispute, the Department must enter a final order incorporating the agreement of the parties. Persons whose substantial interests will be affected by such a modified final decision of the Department have a right to petition for a hearing only in accordance with the requirements for such petitions set forth above, and must therefore file their petitions within 21 days of receipt of this notice. If mediation terminates without settlement of the dispute, the Department shall notify all parties in writing that the administrative hearing processes under Sections 120.569 and 120.57 remain available for disposition of the dispute, and the notice will specify the deadlines that then will apply for challenging the agency action and electing remedies under those two statutes.

64. Entry of this Consent Order does not relieve Respondent of the need to comply the applicable federal, state or local laws, regulations or ordinances

65. The terms and conditions set forth in this Consent Order may be enforced in a court of competent jurisdiction pursuant to Sections 120.69 and 403.121, Florida Statutes. Failure to comply with the terms of this Consent Order shall constitute a violation of Section 403.161(1)(b), Florida Statutes.

66. Respondent is fully aware that a violation of the terms of this Consent Order may subject Respondent to judicial imposition of damages, civil penalties up to \$10,000.00 per day per violation and criminal penalties.

67. Respondent shall allow all authorized representatives of the Department access to the property and Facility at reasonable times for the purpose of determining compliance with the terms of this Consent Order and the rules of the Department.

68. All plans, applications, penalties, stipulated penalties, costs and expenses, and information required by this Consent Order to be submitted to the Department should be sent to Florida Department of Environmental Protection, Northeast District Office, 7825 Baymeadows Road Suite 200B, Jacksonville, Florida 32256-7590.

69. The Department hereby expressly reserves the right to initiate appropriate legal action to prevent or prohibit any violations of applicable statutes or the rules promulgated thereunder that are not specifically addressed by the terms of this Consent Order.

70. The Department, for and in consideration of the complete and timely performance by Respondent of the obligations agreed to in this Consent Order, hereby waives its right to seek judicial imposition of damages or civil penalties for alleged violations outlined in this Consent Order. Respondent acknowledges but waives ~~their~~ its right to an administrative hearing pursuant to Sections 120.569 and 120.57, Florida Statutes, on the terms of this Consent Order. Respondent acknowledges ~~their~~ its right to appeal the terms of this Consent Order pursuant to Section 120.68, Florida Statutes, but waives that right upon signing this Consent Order.

71. With regard to any determination made by the Department regarding implementation of the requirements of this Consent Order, if Respondent objects to the Department's determination, Respondent may file a Petition for Formal or Information Administrative Hearing Proceeding, pursuant to Sections 120.569 and 120.57, Florida Statutes. The petition must be received by the Department's Office of General Counsel, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399, within 14 days after receipt of written notice from the Department of any determination Respondent wishes to challenge. Failure to file a petition within this time period shall constitute a waiver by Respondent of its right to request an administrative proceeding under Sections 120.569 and 120.57, Florida Statutes.

72. The provisions of this Consent Order shall apply to and be binding upon the parties, their officers, their directors, agents, servants, employees, successors, and assigns and all persons, firms and corporations acting under, through or for them and upon those persons, firms and corporations in active contact or participation with them.

73. No modifications of the terms of this Consent Order shall be effective until reduced to writing and executed by both of the Respondent and the Department.

74. In the event of a sale of the Facility or of the property upon which the Facility is located, if all of the requirements of this Consent Order have not been fully satisfied, Respondent shall, at least 30 days prior to the sale or conveyance of the property or Facility, (1) notify the Department of such sale or conveyance, (2) provide to the Department the name and address of the purchaser, or operator, or person(s) in control of the Facility, and (3) provide a copy of this Consent Order with all attachments to the new owner. The sale or

conveyance of the Facility or the property upon which the Facility is located shall not relieve the Respondent of the obligations imposed in this Consent Order.

75. This Consent Order is a settlement of the Department's civil and administrative authority arising from Chapters 403 and 376, Florida Statutes, to resolve the allegations addressed herein. This Consent Order is not a settlement of any criminal liabilities which may arise under Florida law, nor is it a settlement of any violation which may be prosecuted criminally or civilly under federal law.

76. Respondent does not admit, by signature of this Order or otherwise, any of the Department's allegations that its Facility, or the operation thereof, has caused any violation of any applicable Department standard or rule or any applicable provision of State or federal law, and enters this Consent Order to amicably resolve the Department's allegations without resort to litigation. Neither this Consent Order nor actions taken hereunder shall be admissible as evidence in any administrative or judicial proceeding without Respondent's agreement, except for proceedings initiated pursuant to the terms of this Order. Respondent hereby expressly reserves the right to an administrative or judicial determination as to the Respondent's compliance with any term or condition of this Consent Order, and reserves all of its legal rights and defenses in any legal action which may be initiated by the Department, including the right to challenge the validity or enforceability of the standards and/or criteria alleged by the Department to be applicable.

77. This Consent Order is a final order of the Department pursuant to Section 120.52(7), Florida Statutes, and it is final and effective on the date filed with the Clerk of the Department unless a Petition for Administrative Hearing is filed in accordance with Chapter

120, Florida Statutes. Upon the timely filing of a petition this Consent Order will not be effective until further order of the Department.

FOR THE RESPONDENT:

Mr. Fred W. Cohrs
Vice President
Florida Rock Industries Inc.
155 East 21st Street
Jacksonville, FL 32206

Date

Done and ordered this _____ day of _____, 2001 in Duval County, Florida.

DRAFT

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Ernest E. Frey
Director of District Management
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256-7590

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to §120.52, Florida Statutes,
with the designated Department Clerk receipt of
which is hereby acknowledged.

CLERK

Date

c: Larry Morgan
Segundo J. Fernandez
Timothy P. Atkinson