

Check Sheet

→ P ~~res~~ 5/18

Company Name: Florida Solite Company
Permit Number:
PSD Number: AC 10-197099
County:
Permit Engineer:
Others involved:

Application:

- ☒ Initial Application
- ☐ Incompleteness Letters
- ☐ Responses
- ☒ Final Application (if applicable)
- ☐ Waiver of Department Action
- ☐ Department Response
- ☒ Other

Intent:

- ☒ Intent to Issue
- ☒ Notice to Public
- ☒ Technical Evaluation
- ☐ BACT Determination
- ☒ Unsigned Permit
- ☐ Correspondence with:
 - ☐ EPA
 - ☐ Park Services
 - ☐ County
 - ☒ Other
- ☒ Proof of Publication
- ☐ Petitions - (Related to extensions, hearings, etc.)
- ☐ Other

Final Determination:

- ☒ Final Determination
- ☒ Signed Permit
- ☐ BACT Determination
- ☐ Other

Post Permit Correspondence:

- ☐ Extensions
- ☐ Amendments/Modifications
- ☐ Response from EPA
- ☐ Response from County
- ☐ Response from Park Services
- ☒ Other

FOLEY & LARDNER
111 NORTH ORANGE AVENUE, SUITE 1800
ORLANDO, FLORIDA 32801

TELEPHONE (407) 423-7656

FACSIMILE (407) 648-1743

MAILING ADDRESS:

POST OFFICE BOX 2193

ORLANDO, FL. 32802-2193

TAMPA, FLORIDA
JACKSONVILLE, FLORIDA
TALLAHASSEE, FLORIDA
WEST PALM BEACH, FLORIDA

MILWAUKEE, WISCONSIN
MADISON, WISCONSIN
WASHINGTON, D.C.
ANNAPOLIS, MARYLAND
CHICAGO, ILLINOIS

December 29, 1994

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Earnest E. Frey, P.E.
District Director
Northeast District
Florida Department of
Environmental Protection
Suite B-200
7825 Bay Meadows Way
Jacksonville, Florida 32256-7577

RECEIVED

JAN 03 1995

Division of Air
Resources Management

Re: Florida Solite Company

Dear Mr. Frey:

Recently some questions have been raised regarding Florida Solite's authority to operate Kiln No. 5 under its current Air Operation Permit as modified by the Kiln No. 5 Construction Permit. Enclosed is a letter to Jeff Braswell explaining why Solite does have the authority to continue operation under its permits.

While Solite believes that it does have the necessary permits to allow continued operation, there has been a suggestion that the LEAF decision might be extended to apply to Solite's facility. Therefore, in order to protect Solite's rights, the company is hereby providing notice pursuant to Rule 62-210.300(4) that the exemption set forth in that section does apply to

Earnest E. Frey, P.E.
December 29, 1994
Page 2

the facility. As set forth in the attached letter, all of the terms and conditions of the temporary exemption are met by the Solite facility.

Sincerely,

A handwritten signature in cursive script that reads "Thomas K. Maurer".

Thomas K. Maurer


TKM/jh
Enclosure

cc: Howard Rhodes
Jefferson Braswell
William Congdon
Mr. Jon Jewett
John Kopelousos

Memorandum

Florida Department of
Environmental Protection

TO: Chris Kirts, P.E.
Northeast District

FROM: Clair Fancy, Chief 
Bureau of Air Regulation

DATE: January 13, 1994

SUBJECT: Florida Solite Company
Permitting Activity

Florida Solite Company was issued construction permit No. AC 10-197099 for the installation of a baghouse on kiln No. 5. This permit expires on May 1, 1994. We expect the permittee will request that this permit be extended.

Please notify the Bureau of Air Regulation if your District receives a request for a permit extension or application for permit to operate this baghouse. Because of legal questions created by Section 403.7895, F.S. - Requirements for the Permitting of Commercial Hazardous Waste Incinerators, we ask the District not to process any extension request or application for permit to operate this source without guidance from the Bureau of Air Regulation and the Office of General Counsel.

It is desirable that the District air permitting staff be aware of this request.

CHF/WH/bjb

cc: W. Congdon, OGC

File Copy

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

In the matter of an
Application for Permit by:

DER File No. AC10-197099

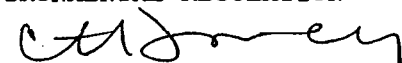
Mr. Tony Saunders, Plant Manager
Florida Solite Company
Post Office Box 297
Green Cove Springs, Florida 32043

Enclosed is Permit Number AC10-197099 to replace an existing scrubber on a light-weight aggregate kiln with a baghouse and lime injection system. This kiln, located near Green Cove Springs in Clay County, calcines locally mined clay with a hazardous waste fuel.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION


C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on 4-7-93 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to
§120.52(11), Florida Statutes,
with the designated Department
Clerk, receipt of which is hereby
acknowledged.


(Clerk)

4-7-93
(Date)

Copies furnished to:

John B. Koogler, P.E.
Ernie Frey, NE District

Willard Hanks }
Ready File } 4-7-93 RAN

Final Determination

Florida Solite Company
Clay County
Green Cove Spring, Florida

Aggregate Kiln No. 5 Alteration
Permit No. AC10-197099

Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

April 01, 1993

Final Determination

The Technical Evaluation and Preliminary Determination for the permit to modify the air pollution control system on kiln No. 5 at Florida Solite Company's light-weight aggregate plant located near Green Cove Springs, Clay County, Florida, was distributed on July 13, 1992. The Notice of Intent to Issue was published in the Clay Today daily newspaper on July 27, 1992. Copies of the evaluation were available for public inspection at the Department's offices in Jacksonville and Tallahassee.

After a review of the determination, the applicant requested that the kiln also be allowed to burn No. 2 fuel oil and propane. The only other response to the public notice was a petition for an administrative hearing from Mr. John N. Austin of Jacksonville dated August 7, 1992, and one from Mrs. Julie Hellmuth of Orange Park, Florida, dated August 6, 1992.

The key reasons given for the petitions and the review engineer's response are summarized in the November 20, 1992, memorandum from Willard Hanks, BAR, to Jeff Braswell, OGC, that is attached to the permit.

An agreement was reached between the petitioner, applicant, and the Department in which the petition would be withdrawn if additional specific conditions were incorporated into the construction permit. Exhibit "B" of the Settlement Agreement summarizes the terms of the agreement. As a result of this agreement, the proposed permit was changed as follows:

Specific Condition No. 9 was revised to give more details on the procedure used to determine the ambient air impact of the kiln's toxic emissions.

A specific condition (No. 10) was added to the permit which limited the lead emissions to one-third of that allowed by the Boiler and Industrial Furnace (BIF) Rule, 40 CFR 266, Subpart H.

A specific condition (No. 11) was added to the permit that limited the mercury in the fuel to 0.2 mg/l during plant operation.

Specific Condition No. 11 of the proposed permit (renumbered 13) was expanded to include the reasonable precautions to be used to control the fugitive emission of the dust captured by the proposed baghouse.

Specific Condition No. 14 of the proposed permit (16 in permit) was revised to allow No. 2 fuel oil and propane to be used as fuels in the kiln.

Specific Condition No. 15 of the proposed permit (17 in permit) was revised to prohibit certain hazardous waste from being in the fuel and to limit the PCB in the fuel to 5 ppm.

Specific Conditions Nos. 18 and 19 were added to the permit incorporating monitoring and operating parameter limits for the kiln based on BIF Rule.

Specific Condition No. 16 of the proposed permit (20 in permit) was revised to include minor changes in the compliance testing requirements.

The final action of the Department will be to issue construction permit AC10-197099 as proposed except for the changes discussed above.

Attach: November 20, 1992, memo
Final Order (DOAH Case No. 92-4961)



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Virginia B. Wetherell, Secretary

PERMITTEE:

Florida Solite Company

P. O. Box 297

Green Cove Springs, FL 32043

Permit Number: AC 10-197099

Expiration Date: May 1, 1994*

County: Clay

**Latitude/Longitude: 30°04'07"N
81°45'17"W**

Project: Kiln No. 5 Modification

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-212 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Authorization to install a Fuller dust collector (or equivalent) and lime injection system on kiln No. 5. Also included in this project is a clay fines bin controlled with a Fuller Model 9-DS-8 dust collector (or equivalent) and a lime bin controlled by a Fuller Model 9-DS-8 dust collector (or equivalent). The existing scrubber may be used to control the emissions from kiln No. 5 only when liquid burnable material (LBM) is not being used as fuel in this kiln. This kiln is located at the permittee's lightweight aggregate manufacturing facility (SIC 3295) on County Road 209A, north of Green Cove Springs, Clay County, Florida 32043. The UTM coordinates of this site are Zone 17, 427.3 km E and 3326.5 km N.

*This permit is void if construction does not commence within 18 months of its issuance, if construction is discontinued for more than 18 months, or if construction is not completed and the plant is not placed in operation within a reasonable time.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Application received May 17, 1991.
2. Revised application received June 19, 1991.
3. Koogler & Associates' letter dated November 25, 1991.
4. DER letter dated January 28, 1992.
5. Koogler & Associates letter dated April 1, 1992.
6. Attachment 10, Florida Solite Construction Application for Kiln 1 and 1A.
7. Koogler and Associates' letter dated December 6, 1991.
8. Memorandum on Florida Solite Company dated November 20, 1992.
9. Final Order (DOAH Case No. 92-4961).

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

GENERAL CONDITIONS:

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

- a. a description of and cause of non-compliance; and
- b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

GENERAL CONDITIONS:

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
- c. Records of monitoring information shall include:
 - the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the dates analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.

14. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

GENERAL CONDITIONS:

needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

Construction Requirements

1. The construction of the dust collectors, lime injection system, and clay fines bin shall conform to the plans in the application. A programmable logic controller shall be installed on kiln No. 5 that will allow LBM to be burned only when all of the flue gas from the kiln pass through the kiln's dust collector.

2. The permittee shall evaluate the overall sulfur balance of the kiln system at this facility prior to the expiration of this permit. The evaluation shall be based on the test protocol attached to Koogler & Associates' April 1, 1992, letter. ~~The sulfur material balance shall include sulfur analysis of the clay feed, fuels, aggregate product, and stack emissions as determined from the continuous emissions monitor.~~ The emission factors established shall be used to calculate the sulfur dioxide emissions from kiln No. 5.

3. The dust collector serving kiln No. 5 shall be equipped with instruments that continuously record the pressure drop when the unit is in operation. The instrument shall be properly calibrated and maintained.

Emission Restrictions

4. Particulate matter emissions from kiln No. 5 dust collector shall not exceed any of the following: 0.04 gr/dscf corrected to 7% oxygen, 11.8 lbs/hr, 51.7 TPY, and 15% opacity.

5. Sulfur dioxide emissions shall not exceed 227 lbs/hr (1 hr. max.), 84.5 lbs/hr (30 day avg.), and 370 TPY.

6. Nitrogen oxides emissions shall not exceed 24.0 lbs/hr and 105 TPY.

7. Particulate matter emissions from the lime bin dust collector shall not exceed any of the following: 0.02 gr/dscf, 0.12 lbs/hr, 0.5 TPY, or 5% opacity.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

SPECIFIC CONDITIONS:

8. Particulate matter emissions from the clay fines bin dust collector shall not exceed any of the following: 0.02 gr/dscf, 0.06 lbs/hr, 0.3 TPY, or 5% opacity.

9. The combined emissions of metals and other toxic pollutants from all sources at this facility shall not result in ambient air concentrations predicted by Department approved modeling that exceed the acceptable ambient air concentrations established for any toxic pollutant. This will be demonstrated by the permittee modeling the maximum expected emissions of the toxic metals and other hazardous air emissions which could be emitted by this facility. The demonstration that modeled rates do not result in ambient concentrations that exceed the air toxic reference concentration (ATRC) shall be made using the protocol in attachment 10 of the Air Construction Permit Application for Kilns 1 and 1A except where the Department's annual ATRC are more stringent than the EPA's Risk Specific Doses (RACs). In addition, stack measurements of the pollutants tested as required by Specific Condition No. 20 shall be modeled by the permittee and demonstrated to be below the ATRC established for those toxic pollutants. The modeling results must be approved by the Department. The tested emissions rate cannot exceed the maximum estimated rate used to show compliance with the Department's ATRC.

10. Lead emissions from Kiln No. 5 shall not exceed one-third of the emissions allowed under the Boiler and Industrial Furnace (BIF) Rule (40 CFR 266.106(d)).

11. The LBM, as burned, shall not contain mercury at concentrations greater than 0.2 mg/l or the concentration allowed under 40 CFR 266, Subpart H, whichever is most restrictive. The permittee shall confirm that the LBM, as burned, does not contain mercury in excess of the most restrictive concentration by sampling and analysis for mercury as required by the Boiler and Industrial Furnace Rule (40 CFR 266, Subpart H). The Permittee may burn LBM containing mercury at concentrations greater than 0.2 mg/l only to the extent necessary during stack testing for the purpose of demonstrating BIF Rule compliance, so long as Florida DER and/or U.S. EPA have been notified.

12. The operation of this source shall not result in the emissions of air pollutants which cause or contribute to an objectionable odor pursuant to F.A.C. Rule 17-2.600(c)2.

13. Reasonable precautions shall be used to minimize unconfined emissions of particulate matter generated by this operation pursuant to F.A.C. Rule 17-2.610(3). Reasonable precautions shall be defined as the application of dust suppressants to the

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

SPECIFIC CONDITIONS:

material/operation listed in the following table when the visible emissions (maximum 6 minute rolling average) exceed the listed opacity:

<u>Material/Operation</u>	<u>Visible Emissions</u>
Raw Clay Feed Area	5
Coal Storage Area and Coal Handling Equipment	10
Discharges of Product from the Kiln into the Product Cooler	10
Handling and Storage of the Product	20

Also, particulate matter collected by the Kiln No. 5 dust collector shall be managed in enclosed tanks, containers, or conveyances so that it is shielded from wind and rain and shall not be placed on the ground prior to its use as a raw material or its incorporation into the aggregate product or its permitted disposal at a facility authorized to handle this material.

Operation Requirements

14. The kiln may operate continuously, 8760 hrs/yr.

15. Maximum clay input to the kiln shall not exceed 13.2 TPH (dry) or 21.3 TPH (wet). Production shall not exceed 11.0 TPH (dry). The permittee shall have calibrated instruments on site to continuously monitor the clay input or production of this kiln.

16. Maximum allowable heat input to the kiln shall not exceed 66 MMBtu/hr and 6.0 MMBtu/ton of product. A fuel input rate of 5500 lbs coal/hr containing up to 2.5% sulfur (maximum) or 733 gals LBM/hr containing up to 2.0% sulfur (maximum), 475 GPH No. 2 fuel oil containing a maximum of 0.5 percent sulfur (0.3 percent sulfur annual average), and/or 725 GPH of propane may be burned in this kiln provided the actual sulfur dioxide emissions standards established pursuant to Specific Condition No. 5 of this permit are not exceeded. When fuels are burned in combination, the maximum allowable heat input and sulfur dioxide emissions standards for the kiln shall not be exceeded.

17. The LBM shall not contain any hazardous waste that is listed for dioxin or derived from the dioxin-listed wastes F020, F021,

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

SPECIFIC CONDITIONS:

FO22, FO23, FO26, or FO27, organic cyanides, sulfide, mercaptans, insecticides, pesticides, herbicides, electroplating waste, or radioactive material above the detection level by the appropriate analytical procedure. The LBM can contain up to 5.0 ppm PCB provided all applicable requirements listed in 40 CFR 761 (July 1, 1992) are met. In addition to those conditions required by 40 CFR 761.20, the permittee shall document that the LBM contains less than 5.0 ppm PCB and has not been mixed with materials containing PCBs in concentrations of 50 ppm or greater. The LBM shall be tested for PCBs and radioactivity prior to acceptance at the facility. The permittee shall retain the manifest of each load for 3 years for Department inspection.

18. When burning LBM in kiln No. 5 at this facility, baghouse inlet temperature, carbon monoxide and oxygen concentration of the flue gas shall be continuously monitored downstream of the furnace but prior to their release to the atmosphere in the manner prescribed by the Boiler and Industrial Furnace Rule (40 CFR 266, Subpart H), and the kiln shall operate at a minimum temperature of 1800°F and at a minimum oxygen level of 6 percent, and a maximum flue gas temperature at the baghouse inlet of 450° F. The concentration of CO in the stack gases shall not exceed a maximum of 100 ppmv on an hourly rolling average basis, corrected to 7% oxygen, unless the Permittee complies with the alternative carbon monoxide and hydrocarbon standard prescribed by 40 CFR 266.104(c) and (f).

19. Kiln No. 5 shall achieve a minimum destruction and removal efficiency (DRE) of 99.99% for all organic hazardous constituents when burning hazardous LBM. Conformance with this requirement shall be demonstrated as required by 40 CFR 266.104(a).

Compliance Requirements

20. Kiln No. 5 shall be tested at 90 to 100% of its permitted capacity (11.9 to 13 TPH clay input (dry)) for the following pollutants:

<u>Pollutant</u>	<u>Method*</u> (40 CFR 60, Appendix A, 7/1/91)	<u>Frequency</u>	<u>Comments**</u>
PM	5	Annually	While burning high sulfur coal or LBM
SO ₂	6	Annually	While burning high sulfur coal
NO _x	7E	Every 5 yrs	
VE	9	Annually	While burning high sulfur coal or LBM

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

VOC	25	Every 5 yrs	While burning LBM
BIF Metals	EPA Multi/-Metal sampling train	Annually	While burning LBM
Organic***	VOST	Annually	While burning LBM. Analyze by Method 8240 of SW-846

* Or other methods with DER approval.

** Annual stack tests shall be conducted on the Kiln No. 5 baghouse. If either coal or LBM is burned less than 400 hours during any year, the specified tests may be conducted while the plant is burning whichever fuel is burned for more than 400 hours during such year. Tests shall be conducted on any air pollution control system that is used more than 400 hours during any year following initial testing of the baghouse.

*** Analyze for all volatile organic constituents listed in Method 8240.

Administrative Requirements

21. Stack test results shall be submitted to the Northeast District office within 45 days of the test.

22. When the Department, after investigation, has good reason (such as complaints, increased visible emissions, or questionable maintenance of control equipment) to believe that any applicable emission standard contained in this permit is being violated, it may require the owner or operator of the unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the source and to provide a report on the results of said tests to the Department.

23. The Northeast District office shall be notified in writing a minimum of 15 days in advance of any compliance tests to be conducted on this source.

24. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

25. An application for an operation permit must be submitted to the Northeast District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was

PERMITTEE:
Florida Solite Company

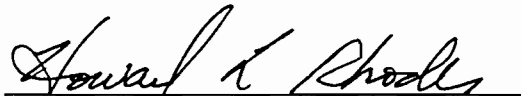
Permit Number: AC 10-197099
Expiration Date: May 1, 1994

SPECIFIC CONDITIONS:

completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this 2 day
of April, 1993

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



Howard L. Rhodes, Director
Division of Air Resources
Management

P 408 532 102

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to	
Jony Saunders	
Street and No.	
FLA Solite Co	
P.O. State and ZIP Code	
Green Cove Sp. FL	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	
AC 10 19 70 99	
4-793	

PS Form 3800, Feb. 1982

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☒ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Jony Saunders, Plant Mgr
Florida Solite Co
P O BOX 297
Green Cove Springs, FL
32043

4a. Article Number

P 408 532 102

4b. Service Type

- | | |
|---|---|
| <input type="checkbox"/> Registered | <input type="checkbox"/> Insured |
| <input checked="" type="checkbox"/> Certified | <input type="checkbox"/> COD |
| <input type="checkbox"/> Express Mail | <input type="checkbox"/> Return Receipt for Merchandise |

7. Date of Delivery

8. Addressee's Address (Only if requested and fee is paid)

5. Signature (Addressee)

6. Signature (Agent)

Sam Saunders



PS Form 3811, December 1991 ★U.S. GPO: 1992-323-402

DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee	
To: _____	Location: _____
To: _____	Location: _____
To: _____	Location: _____
From: _____	Date: _____

Interoffice Memorandum

TO: Howard L. Rhodes
FROM: C. H. Fancy *CHF*
DATE: April 01, 1993
SUBJ: Approval of Construction Permit AC10-197099
Florida Solite Company

Attached for your approval and signature is a construction permit that will allow Florida Solite Company to replace an existing scrubber on a light-weight aggregate kiln with a baghouse and lime injection system. This kiln, located near Green Cove Springs in Clay County, calcines locally mined clay with a hazardous waste fuel.

In response to the public notice, an environmental group from the area petitioned for a hearing to challenge the proposed permit. A settlement agreement between the parties was reached which incorporates more restrictive conditions into the construction permit.

I recommend your approval and signature of the revised construction permit.

CHF/WH/kbw

Attachments

RECEIVED

FEB 2 1992

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGSDept. of Environmental &
Office of General Couns.

JOHN N. AUSTIN,

Petitioner,

vs.

CASE NO. 92-4961

STATE OF FLORIDA, DEPARTMENT
OF ENVIRONMENTAL REGULATION
and FLORIDA SOLITE COMPANY, INC.,

Respondents.

JULIE HELLMUTH,

Petitioner,

vs.

CASE NO. 92-4962

STATE OF FLORIDA, DEPARTMENT
OF ENVIRONMENTAL REGULATION
and FLORIDA SOLITE COMPANY, INC.,

Respondents.

ORDER GRANTING MOTION TO WITHDRAW PETITIONS
FOR ADMINISTRATIVE HEARING, CANCELLING FINAL HEARING
AND CLOSING FILES

The Petitioners have filed a Motion to Withdraw Petitions for Administrative Hearing. It has been represented in the motion that the parties have entered into a Settlement Agreement resolving their dispute. Based upon the terms of the Settlement Agreement, the Petitioners have withdrawn their request for hearing. Accordingly, it is

ORDERED:

1. The Motion to Withdraw Petitions for Administrative Hearing is GRANTED;


2. Jurisdiction of these cases is relinquished to the Florida Department of Environmental Regulation for disposition of

these cases consistent with the Settlement Agreement entered into by the parties;

3. The final hearing of these cases scheduled for January 27-29, 1993, is CANCELLED; and

4. The Division of Administrative Hearings' files in these cases are CLOSED.

DONE and ORDERED this 30 day of February, 1993, in Tallahassee, Florida.


LARRY J. MARTIN
Hearing Officer
Division of Administrative Hearings
The DeSoto Building
1230 Apalachee Parkway
Tallahassee, Florida 32399-1550
(904) 488-9675

Filed with the Clerk of the
Division of Administrative Hearings
this 30 day of February, 1993.

Copies Furnished To:

Leslie Goller Dillingham, Esquire
3644 Hedrick Street
Jacksonville, Florida 32205

John Kopelousos, Esquire
Post Office Box 855
Orange Park, Florida 32067-0855

Jefferson M. Braswell
Assistant General Counsel
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

JOHN N. AUSTIN,

Petitioner,

vs.

DOAH CASE NO. 92-4961
OGC CASE NO. 92-1417

FLORIDA SOLITE COMPANY, INC. and
STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION,

Respondent.

JULIE HELLMUTH,

Petitioner,

vs.

DOAH CASE NO. 92-4962
OGC CASE NO. 92-1436

FLORIDA SOLITE COMPANY, INC. and
STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION,

Respondent.

FINAL ORDER

On August 10, 1992, the Florida Department of Environmental Regulation (Department) received Petitions for an administrative hearing from Petitioners, John N. Austin and Julie Hellmuth. The Petitions challenged the Department's intent to issue Permit No. AC 10-197099 to Florida Solite Company, to construct a dust collector and lime injection system on Kiln No. 5 in Duval County. Also included in this project is a clay fines bin controlled with a dust collector and a lime bin.

RECEIVED

FEB 16 1993

Division of Air
Resources Management

On January 26, 1992, a settlement agreement was entered into between Carolina Solite Corporation d/b/a Florida Solite Company and the Petitioners, John N. Austin and Julie Hellmuth, which resolved the differences between the parties. See Exhibit 1.

On February 3, 1993, after receiving a Motion to Withdraw Petitions for Administrative Hearing, Canceling Final Hearing and Closing Files the assigned Hearing Officer issued an order which closed the Division of Administrative Hearings' file and relinquished jurisdiction back to the Department. See Exhibit 2. There being no further matters to consider,

IT IS ORDERED:

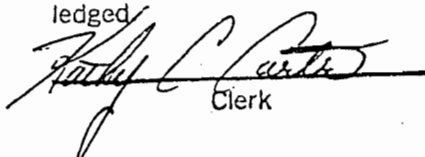
The Department's file is closed and the Division of Air Resources Management is directed to issue Permit No. AC10-197099 in accordance with the Draft Permit. See Exhibit A of Exhibit 1.

Any party to this Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Order is filed with the clerk of the Department.

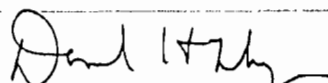
DONE AND ORDERED this 12th day of February 1993 in
Tallahassee, Florida.

FILING AND ACKNOWLEDGEMENT

FILED, on this date, pursuant to S120.52
Florida Statutes, with the designated Depart-
ment Clerk, receipt of which is hereby acknow-
ledged

 Clerk 2/15/93 Date

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION


DANIEL H. THOMPSON
General Counsel

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

CERTIFICATE OF SERVICE

I CERTIFY that a true copy of the foregoing was mailed to:

Leslie G. Dillingham, Esquire
3644 Hedrick Street
Jacksonville, Florida 32205

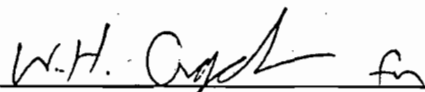
John Kopelousos, Esquire
Post Office Box 855
Orange Park, Florida 32067-0855

and by hand delivery to:

Ann Cole, Clerk
Ella Jane P. Davis, Hearing Officer
Division of Administrative Hearing
The DeSoto Bldg.
1230 Apalachee Parkway
Tallahassee, FL 32399-1550

on this 15th day of February 1993.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION


JEFFERSON M. BRASWELL
Assistant General Counsel

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400
Telephone: (904) 488-9730

SETTLEMENT AGREEMENT

THIS SETTLEMENT AGREEMENT entered into this 26th day of January, 1993, between Carolina Solite Corporation d/b/a Florida Solite Company, ("Solite") and Julie Hellmuth and John Austin ("Petitioners"), Nelson Hellmuth, Petitioners' Expert and Leslie Goller Dillingham, Petitioners' Attorney.

WHEREAS, Solite submitted an application for a permit to construct a new baghouse and lime injection system as an addition to Kiln No. 5, and

WHEREAS, the Petitioners, Julie Hellmuth and John Austin, requested an administrative hearing pursuant to Section 120.57, Florida Statutes, and

WHEREAS, Nelson Hellmuth has acted as an expert witness in the pending proceeding and Leslie Goller Dillingham has acted as attorney for the Petitioners in the pending proceeding and there are certain restrictions placed upon them pursuant to the terms of this Settlement Agreement, and

WHEREAS, a hearing was scheduled before the Division of Administrative Hearings ("DOAH"), DOAH Case Nos. 92-004961 and 92-004962, for January 27, 28 and 29, 1993, and

WHEREAS, the parties have attempted to resolve the issues raised in the Petitioners petition, and

WHEREAS, the parties have submitted to the Department of Environmental Regulation the settlement proposal and DER has modified the proposed permit to substantially conform it to the Settlement Agreement in a manner acceptable to both parties, and a copy of the modified permit is attached as Exhibit "A", and

WHEREAS, there are certain other agreements between the parties that are not the proper subject to the DER permit, but nevertheless the parties wish to be bound by said agreements;

NOW THEREFORE, in consideration of the execution and filing of a Settlement Agreement, the issuance of the modified permit by DER and the mutual covenants and promises hereinafter made by each party to the other, as set forth in Exhibit "B", attached hereto, the sufficiency of which is hereby acknowledged, the parties agree to resolve their differences pursuant to the terms of this Settlement Agreement.

Witnesses:

CAROLINA SOLITE CORPORATION
d/b/a FLORIDA SOLITE COMPANY

John K. Ketchum

Tony S. Sander, Plant Manager
By:

Theresa A. Summer

Julie Hellmuth
JULIE HELLMUTH, Petitioner

John Austin

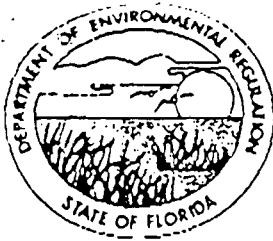
John Austin
JOHN AUSTIN, Petitioner

Nelson Hellmuth

Nelson Hellmuth
NELSON HELLMUTH, Expert Witness
for Petitioners

Amanda Campbell

Leslie Goller Dillingham
LESLIE GOLLER DILLINGHAM, as
Petitioners' Attorney



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:

Florida Solite Company

P. O. Box 297

Green Cove Springs, FL 32043

Permit Number: AC 10-197099

Expiration Date: May 1, 1994*

County: Clay

Latitude/Longitude: 30°04'07"N
81°45'17"W

Project: Kiln No. 5 Modification

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Authorization to install a Fuller dust collector (or equivalent) and lime injection system on kiln No. 5. Also included in this project is a clay fines bin controlled with a Fuller Model 9-DS-8 dust collector (or equivalent) and a lime bin controlled by a Fuller Model 9-DS-8 dust collector (or equivalent). The existing scrubber may be used to control the emissions from kiln No. 5 only when liquid burnable material (LBM) is not being used as fuel in this kiln. This kiln is located at the permittee's lightweight aggregate manufacturing facility (SIC 3295) on County Road 209A, north of Green Cove Springs, Clay County, Florida 32043. The UTM coordinates of this site are Zone 17, 427.3 km E and 3326.5 km N.

*This permit is void if construction does not commence within 18 months of its issuance, if construction is discontinued for more than 18 months, or if construction is not completed and the plant is not placed in operation within a reasonable time.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Application received May 17, 1991.
2. Revised application received June 19, 1991.
3. Koogler & Associates' letter dated November 25, 1991.
4. DER letter dated January 28, 1992.
5. Koogler & Associates letter dated April 1, 1992.
6. Attachment 10, Florida Solite Construction Application for Kiln 1 and 1A.
7. Koogler and Associates' letter dated December 6, 1991.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

GENERAL CONDITIONS:

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

- a. a description of and cause of non-compliance; and
- b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

GENERAL CONDITIONS:

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

14. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

GENERAL CONDITIONS:

needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

Construction Requirements

1. The construction of the dust collectors, lime injection system, and clay fines bin shall reasonably conform to the plans in the application. A programmable logic controller shall be installed on kiln No. 5 that will allow LBM to be burned only when all of the flue gas from the kiln pass through the kiln's dust collector.

2. The permittee shall evaluate the overall sulfur balance of a kiln system at this facility prior to the expiration of this permit. The evaluation shall be based on the test protocol attached to Koogler & Associates' April 1, 1992, letter. The sulfur material balance shall include sulfur analysis of the clay feed, fuels, aggregate product, and stack emissions as determined from the continuous emissions monitor. The emission factors established shall be used to calculate the sulfur dioxide emissions from kiln No. 5.

3. The dust collector serving kiln No. 5 shall be equipped with instruments that continuously record the pressure drop when the unit is in operation. The instrument shall be properly calibrated and maintained.

Emission Restrictions

4. Particulate matter emissions from kiln No. 5 dust collector shall not exceed any of the following: 0.04 gr/dscf corrected to 7% oxygen, 11.8 lbs/hr, 51.7 TPY, and 15% opacity.

5. Sulfur dioxide emissions shall not exceed 227 lbs/hr (1 hr. max.), 84.5 lbs/hr (30 day avg.), and 370 TPY.

6. Nitrogen oxides emissions shall not exceed 24.0 lbs/hr and 105 TPY.

7. Particulate matter emissions from the lime bin dust collector shall not exceed any of the following: 0.02 gr/dscf, 0.12 lbs/hr, 0.5 TPY, or 5% opacity.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

SPECIFIC CONDITIONS:

8. Particulate matter emissions from the clay fines bin dust collector shall not exceed any of the following: 0.02 gr/dscf, 0.06 lbs/hr, 0.3 TPY, or 5% opacity.

9. The combined emissions of metals and other toxic pollutants from all sources at this facility shall not result in ambient air concentrations predicted by Department approved modeling that exceed the acceptable ambient air concentrations or no threat levels established for any toxic pollutant. This will be demonstrated by modeling the maximum expected emissions of the toxic metals and other hazardous air emissions which could be emitted by this facility. The demonstration that modeled rates do not result in ambient concentrations that exceed the no threat levels shall be made using the protocol in attachment 10 of the Air Construction Permit Application for Kilns 1 and 1A except where the Department's annual no threat levels are more stringent than the EPA's Risk Specific Doses or RACs. In addition, stack measurements of the pollutants tested as required by Specific Condition #20 shall be modeled and demonstrated to be below the no threat levels established for those toxic pollutants. ~~The tested emissions rate can not exceed the maximum estimated rate used to show compliance with the Department's no threat levels.~~

10. Lead emissions from Kiln No. 5 shall not exceed one-third of the emissions allowed under the Boiler and Industrial Furnace Rule (40 CFR 266.106(d)).

11. The LBM, as burned, shall not contain mercury at concentrations greater than 0.2 mg/l or the concentration allowed under 40 CFR 266, Subpart H, whichever is most restrictive. The permittee shall confirm that the LBM, as burned, does not contain mercury in excess of the most restrictive concentration by sampling and analysis for mercury as required by the Boiler and Industrial Furnace Rule (40 CFR 266, Subpart H). The Permittee may burn LBM containing mercury at concentrations greater than 0.2 mg/l only to the extent necessary during stack testing for the purpose of demonstrating BIF Rule compliance, so long as Florida DER and/or U.S. EPA have been notified.

12. The operation of this source shall not result in the emissions of air pollutants which cause or contribute to an objectionable odor pursuant to F.A.C. Rule 17-2.600(c)2.

13. Reasonable precautions shall be used to minimize unconfined emissions of particulate matter generated by this operation pursuant to F.A.C. Rule 17-2.610(3). Reasonable precautions shall be defined as the application of dust suppressants to the

EXHIBIT A

Page 6 of 10

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

SPECIFIC CONDITIONS:

material/operation listed in the following table when the visible emissions (maximum 6 minute rolling average) exceed the listed opacity:

<u>Material/Operation</u>	<u>Visible Emissions</u>
Raw Clay Feed Area	5
Coal Storage Area and Coal Handling Equipment	10
Discharges of Product from the Kiln into the Product Cooler	10
Handling and Storage of the Product	20

Also, particulate matter collected by the Kiln No. 5 dust collector shall be managed in enclosed tanks, containers, or conveyances so that it is shielded from wind and rain and shall not be placed on the ground prior to its use as a raw material or its incorporation into the aggregate product or its permitted disposal at a facility authorized to handle this material.

Operation Requirements

14. The kiln may operate continuously, 8760 hrs/yr.

15. Maximum clay input to the kiln shall not exceed 13.2 TPH (dry) or 21.3 TPH (wet). Production shall not exceed 11.0 TPH (dry). The permittee shall have calibrated instruments on site to continuously monitor the clay input or production of this kiln.

16. Maximum allowable heat input to the kiln shall not exceed 66 MMBtu/hr and 6.0 MMBtu/ton product. A fuel input rate of 5500 lbs coal/hr containing up to 2.5% sulfur (maximum) or 733 gals LBM/hr containing up to 2.0% sulfur (maximum), 475 GPH No. 2 fuel oil containing a maximum of 0.5 percent sulfur (0.3 percent sulfur annual average), and/or 725 GPH propane may be burned in this kiln provided the actual sulfur dioxide emissions standards established pursuant to Specific Condition No. 5 of this permit are not exceeded. When fuels are burned in combination, the maximum allowable heat input and sulfur dioxide emissions standards for the kiln shall not be exceeded.

17. The LBM shall not contain any hazardous waste that is listed for dioxin or derived from the dioxin-listed wastes FO20, FO21,

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

SPECIFIC CONDITIONS:

FO22, FO23, FO26, or FO27, organic cyanides, sulfide, mercaptans, insecticides, pesticides, herbicides, electroplating waste, or radioactive material above the detection level by the appropriate analytical procedure. The LBM can contain up to 5.0 ppm PCB provided all applicable requirements listed in 40 CFR 761 (July 1, 1992) are met. In addition to those conditions required by 40 CFR 761.20, the permittee shall document that the LBM contains less than 5.0 ppm PCB and has not been mixed with materials containing PCBs in concentrations of 50 ppm or greater. The LBM shall be tested for PCBs and radioactivity prior to acceptance at the facility. The permittee shall retain the manifest of each load for 3 years for Department inspection.

18. When burning LBM in kiln No. 5 at this facility, baghouse inlet temperature, carbon monoxide and oxygen concentration of the flue gas shall be continuously monitored downstream of the furnace but prior to their release to the atmosphere in the manner prescribed by the Boiler and Industrial Furnace Rule (40 CFR 266, Subpart H), and the kiln shall operate at a minimum temperature of 1800°F and at a minimum oxygen level of 6 percent, and a maximum flue gas temperature at the baghouse inlet of 450° F. The concentration of CO in the stack gases shall not exceed a maximum of 100 ppmv on an hourly rolling average basis, corrected to 7% oxygen, unless the Permittee complies with the alternative carbon monoxide and hydrocarbon standard prescribed by 40 CFR 266.104(c) and (f).

19. Kiln No. 5 shall achieve a minimum destruction and removal efficiency (DRE) of 99.99% for all organic hazardous constituents when burning hazardous LBM. Conformance with this requirement shall be demonstrated as required by 40 CFR 266.104(a).

20. Kiln No. 5 shall be tested at 90 to 100% of its permitted capacity (11.9 to 13 TPH clay input (dry)) for the following pollutants:

<u>Pollutant</u>	<u>Method*</u> (40 CFR 60, Appendix A, 7/1/91)		<u>Frequency</u>	<u>Comments**</u>
PM	5		Annually	While burning high sulfur coal or LBM
SO ₂	6		Annually	While burning high sulfur coal
NO _x	7E		Every 5 yrs	
VE	9		Annually	While burning high sulfur coal or LBM

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

VOC	25	Every 5 yrs	While burning LBM
BIF Metals	EPA Multi/-Metal sampling train	Annually	While burning LBM
Organic***	VOST	Annually	While burning LBM. Analyze by Method 8240 of SW-846

* Or other methods with DER approval.

** Annual stack tests shall be conducted on the Kiln No. 5 baghouse. If either coal or LBM is burned less than 400 hours during any year, the specified tests may be conducted while the plant is burning whichever fuel is burned for more than 400 hours during such year. Tests shall be conducted on any air pollution control system that is used more than 400 hours during any year following initial testing of the baghouse.

*** Analyze for all volatile organic constituents listed in Method 8240.

Administrative Requirements

21. Stack test results shall be submitted to the Northeast District office within 45 days of the test.

22. When the Department, after investigation, has good reason (such as complaints, increased visible emissions, or questionable maintenance of control equipment) to believe that any applicable emission standard contained in F.A.C. Chapter 17-2, or in this permit is being violated, it may require the owner or operator of the unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the source and to provide a report on the results of said tests to the Department.

23. The Northeast District office shall be notified in writing a minimum of 15 days in advance of any compliance tests to be conducted on this source.

24. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

25. An application for an operation permit must be submitted to the Northeast District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

SPECIFIC CONDITIONS:

completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this _____ day
of _____, 1993

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Howard L. Rhodes, Director
Division of Air Resources
Management

SETTLEMENT AGREEMENT
EXHIBIT "B"

1. LBM will be tested, to insure that the LBM as burned shall not contain mercury at hazardous concentrations (greater than 0.2 mg/l).
2. Lead emissions shall not exceed the lesser of either, 1.9 lbs/hr, or one-third of the emissions allowed under the BIF Rule (40 CFR 266.106(d)). (The permit attached as Exhibit A does not contain a pound per hour (lbs/hr) rate limit.)
3. Particulate matter emissions from Kiln No. 5 dust collector (baghouse) shall not exceed 0.04 gr/dscf.
4. LBM shall be tested for PCBs pre-acceptance to insure that LBM does not exceed 50 ppm PCBs. If LBM containing PCBs is accepted, the LBM shall be tested prior to burning to insure, that as burned, the LBM does not exceed 5.0 ppm PCBs.
5. Kiln No. 5 shall achieve a 99.99% DRE for organic constituents of LBM.
6. O₂ shall be continuously monitored. The kiln shall operate with a minimum oxygen level of 6%. CO shall be continuously monitored and shall be limited to 100 PPMV hourly rolling average adjusted to 7% O, unless the Permittee complies with the alternative carbon monoxide and hydrocarbon standard prescribed by 40 CFR 266.104(c) and (f).
7. Particulate matter collected by the Kiln No. 5 dust collector (baghouse) shall be managed in enclosed tanks, containers, or conveyances so that it is shielded from wind and rain and shall not be placed on the ground prior to its reuse as a raw material, incorporation into a product, or permitted disposal.
8. LBM shall be tested for radioactivity, prior to acceptance, to confirm compliance with Specific Condition 15. It is the understanding of Florida Solite that the test method required will be simple, quick and inexpensive.
9. Florida Solite will not accept or burn LBM containing dioxin wastes, more particularly the following: FO20, FO21, FO22, FO23, FO26 or FO27.
10. Baghouse inlet temperature will be continuously monitored and the maximum flue gas temperature at the baghouse will not exceed 450 degrees F.
11. Florida Solite will allow Petitioners or Petitioners' representatives to visit the facility, at reasonable times and after providing reasonable advance notice, for the purpose of

inspecting (a) manifests and waste profile sheets, (b) results of testing of LBM prior to acceptance by Oldover, (c) results of testing of LBM prior to burning, and (d) reports containing results of compliance tests and trial burns, provided that such visits do not impair the ability of facility personnel to perform their normal duties.

12. The above limits (a) apply to Kiln No. 5 only, and not to other sources at the facility, and (b) the mercury limit shall not apply during testing for the purpose of demonstrating BIF compliance of which Florida DER and/or U.S. EPA have been notified.


13. Petitioners agree not to seek more restrictive emission limits, limitations on LBM, or other limits addressed by this Settlement Agreement solely in the subsequent Kiln NO. 5 DER Operating Permit or in the pending initial facility BIF Permit. However, this does not preclude petitioners from seeking additional permit requirements relating to testing and use of the baghouse dust or additional testing for dioxins and furans in the above mentioned or any other permits that Florida Solite Company seeks to obtain.

14. This agreement applies to John Austin, Julie Hellmuth, Nelson Hellmuth, and Leslie Goller Dillingham (thereby restricting her role solely as a petitioner).

15. Each party to this proceeding shall be responsible for their respective attorney's fees and costs.

MEMORANDUM

TO: Mr. Willard Hanks
FDER, Tallahassee

FROM: Pradeep Raval 

DATE: December 3, 1992

SUBJECT: Clay Fines Handling System - Kiln 5
Florida Solite Company
Green Cove Springs, Florida

This is regarding our conversation a few weeks ago on the clay fines handling system associated with the baghouse being permitted for existing Kiln 5 at the above facility.

As discussed with you, the clay fines from the clay fines bin will be conveyed by an enclosed system to be blended either with the product (lightweight aggregate) or with raw material (clay). The enclosed conveying system will minimize, if not eliminate, dust emissions from clay fines handling. The system configuration will be submitted to FDER for approval when finalized, and will be in full compliance with the applicable air regulations.

If you have any questions, please do not hesitate to give me a call.

RECEIVED

DEC 08 1992

Division of Air
Resources Management





KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609

Mr. Willard Hanks
FDER
2600 Blair Stone Road
Tallahassee, FL 32399-2400





State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee	
To: _____	Location: _____
To: _____	Location: _____
To: _____	Location: _____
From: _____	Date: _____

Interoffice Memorandum

TO: Jeff Braswell, OGC
FROM: Willard Hanks, BAR
DATE: November 20, 1992
SUBJ: Florida Solite Company

I have reviewed the petitions on the proposed permit (AC10-197099) for the referenced company that was submitted by Mr. John Austin and Mrs. Julie Hellmuth. Following is a list of comments from the petitions and my response to them. I would like to discuss this with you in early December.

JOHN AUSTIN PETITION

1. The proposed permit allows additional air pollution.

Construction permits can authorize an increase in emissions. The permit in question will reduce the allowable emissions of particulate matter, probably result in a reduction of metal emissions (similar controls are used on hazardous waste incinerators), establishes a federally enforceable emission limit for sulfur dioxide (and probably results in a reduction in SO₂ and acid gas such as HCL emissions), and the products of combustion air pollutants are unchanged. Trace emissions of miscellaneous unregulated air pollutants may vary but we have no documentation to confirm any change.

2. 50 ppm of PCB in the LBM will adversely affect the environment.

50 ppm PCB in fuel is unregulated by EPA. The state has no PCB regulations. At the operation temperature of the kiln, I would expect most of the PCB to be destroyed. Lime injection will capture most of the HCL formed. I would expect no change in measurable HCL emissions. The burning of low levels of PCB will not adversely affect the environment.

3. Emissions contain heavy metals, dioxins, furans, VOC, and particulate matter that can injure health.

The baghouse/lime injection is a better air pollution control system for PM-including metals, SO₂, and acid gases-than the scrubber it will replace when LBM is burned. We expect the emissions to be lowered although there is no documentation of the degree of improvement. Similar systems on hazardous waste

Willard
Is this resolved?

To: Jeff Braswell, OGC
From: Willard Hanks, BAR
Date: November 20, 1992
Subject: Florida Solute Company

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2. 50 ppm of PCB in the LBM will adversely affect the environment.

50 ppm PCB in fuel is unregulated by EPA. The state has no PCB regulations. At the operation temperature of the kiln, I would expect most of the PCB to be destroyed. Lime injection will capture most of the HCL formed. I would expect no change in measurable HCL emissions. The burning of low levels of PCB will not adversely affect the environment.

3. Emissions contain heavy metals, dioxins, furans, VOC, and particulate matter that can injure health.

The baghouse/lime injection is a better air pollution control system for PM-including metals, SO₂, and acid gases-than the scrubber it will replace when LBM is burned. We expect the emissions to be lowered although there is no documentation of the degree of improvement. Similar systems on hazardous waste incinerators are expect to achieve over 99% reduction on most metals. Typical

incinerators are expected to achieve over 99% reduction on most metals. Typical removal efficiencies of a low pressure drop scrubber is 90 percent. The proposed permit requires the applicant to measure the metal emissions and prohibits their ambient air impact from exceeding an acceptable ambient air concentration. This project will lower the emissions and reduce any adverse health caused by the operation of kiln No. 5.

4. The kiln's emissions, including the lime, will be a source of ground and water pollution.

The emissions from the kiln with the baghouse in service will tend to reduce ground and water pollution. Use of the scrubber will not change the pollution potential of the existing source. The project will lower the potential of this kiln to contaminate the ground and surface water.

5. The kiln's dry scrubber system will injure air and water quality in Clay and other counties.

The dry scrubber system will reduce the emissions and the ambient air impact of the existing kiln. This project will improve the air and water quality in Clay and other counties.

6. Toxic emissions from the source will injure the economics of the area.

The dry scrubber system is expected to reduce the emissions of toxic pollutants from this source. The permit requires a test of the metal emissions and modeling analysis to show that the acceptable ambient air concentrations are not exceeded. The new dry scrubber will lessen the impact of this plant on the environment.

7. There is no reasonable assurance based on plans, test results, installation of tested air pollution control equipment or other information that the project will not violate the Department's standards and rules.

The project will be in compliance with the Department's air pollution control regulations. The permit goes beyond what the regulations specifically require.

8. The application is inadequate, incomplete and does not show compliance with the rules and laws.

The proposed permit was based on the application, is in compliance with the regulations, and will result in an improvement in the air quality associated with the operation of this plant.

9. The applicant failed to supply an analysis of the LBM and HWD fuel and provide an estimate of the emissions from the dry scrubber system, therefore the Department does not have reasonable assurance it will comply with the regulations.

The specifications for LBM are on file within the Department. The typical analysis of LBM was included in the application. A material balance assuming 99% of the metals in the LBM are captured indicated no exceedance of the acceptable ambient air concentrations. The proposed permit requires the operating plant be tested for metals periodically and prohibits the impact of these emissions from exceeding the acceptable ambient air concentrations.

10. Deny permit because following not applied:

A. LAER

Clay County is attainment for all air pollutants. LAER only applies in nonattainment area.

B. BACT

The proposed project does not increase emissions by a significant amount that would trigger PSD and require a BACT determination.

C. PSD

See above.

D. NSPS

The project does not result in a modification by definition which could subject the project to NSPS.

E. NESHAPS

There are no applicable NESHAPS for clay kilns.

F. Failure to conduct health risk analysis.

Project will lower both emissions and risk from past operations. Proposed permit requires tests and analysis to confirm acceptable ambient air levels for metals are not exceeded.

G. Environmental Impact Analysis.

This analysis not required by the regulations for minor modifications to facilities.

H. Boiler and Industrial Furnace Regulations not applied.

Proposed replacement of scrubber with lime injection/baghouse was to comply with these regulations.

I. Object to 48 month expiration date.

Applicant has asked for 18 months after permit issued to install equipment. Expiration date can be changed based on this time schedule prior to issuance of the construction permit.

J. Objected to Specific Condition No. 9 which said the combined facility emissions could not exceed the acceptable ambient air concentrations as determined through the use of Department approved modeling.

With test data from kiln No. 5, the ambient air impact can be determined through Department approved modeling.

Department approved air modeling vague.

Standard language used to refer to EPA approved modeling, see F.A.C. Rule 17-2.260.

Must specify metals/toxic emissions.

Chose to require tests and model of test results. To calculate the maximum emissions that could occur without the acceptable ambient air level being exceeded could leave the impression that the facility is emitting high levels of metals/toxic pollutants.

11. Objected to Specific Condition No. 15 because it didn't require test to show that certain prohibited compounds were not present in the LBM.

The applicant's LBM specification sheet requires a data sheet and a representative sample of LBM for analysis of each batch received. The operation permit for sources at this plant requires the applicant to retain a copy of these analysis.

Objected to PCB being burned in kiln.

At low concentrations, below 50 ppm, PCB is not subject to state or federal regulations.

12. Objected to Specific Condition No. 16 because it did not limit toxic emissions.

See J.

13. Objected to Specific Condition No. 16 because it may allow compliance test on alternate fuel.

The Department does not want an applicant to burn a fuel for testing purposes only if he has not been using the fuel during the year. We set 400 hrs/yr as the criteria of whether the test had to be done on that fuel. We believe this is a reasonable position.

14. Wanted description of fine clay dust handling system described.

Application says dust captured dust pneumatically conveyed to silo with air exhausted through a filter. The captured dust is then recycled through the plant, i.e.-fed to the kiln with the clay.

15. Asked DER to deny permit or require proper and complete tests and documentation by applicant, apply proper standards, and require emission calculations.

The Department believes it cannot deny the permit because the applicant has provided reasonable assurance that it will comply with the regulations but will consider any specific requirement or clarification of specific conditions that the petitioner proposes.

JULIE HELLMUTH PETITION

1. Change to a dry pollution control system and burning PCB will injure air and water quality.

Dry system is more efficient than the wet system it is replacing and will lower emissions. Low levels of PCB will be destroyed in the kiln and most of its products of combustion will be captured. There will be no measurable increase in emissions as a result of the PCB.

2. The application did not provide reasonable assurance that the project will comply with the regulations.

The review engineer concluded that the project will lower emissions and is in compliance with the regulations.

3. Confusion over what is involved in this project.

Project is described in the Technical Evaluation and Preliminary Determination. In summary, the project evolved from replacing the scrubber with the dry system to installing the dry system in parallel with the scrubber which would continue to be used when nonhazardous fuel is burned.

4. The Department did not document that there would be no change in emissions.

The lime injection/baghouse system will be more efficient than the existing scrubber system. Allowable emissions of PM including metals will be reduced, SO₂ limit will be the past actual emissions but are expected to be lower, the products of combustion should be the same, although the minor unregulated pollutants emissions may vary.

5. In reference to specific condition No. 9, the impact of the toxic and metal emissions from all sources by DER approved modeling was not done.

Lower emissions will lower impact. The proposed permits require the metal emissions to be measured, their impact modeled, and prohibits the impact from exceeding the acceptable ambient air concentration.

6. No estimates of the toxic pollutant emissions from the LBM were given.

Typical analysis of LBM is given in application. Temperature in the kiln is adequate to destroy organic chemicals. If all metals in the LBM are emitted from the kiln and 99% are captured in the baghouse, the emissions can be estimated.

7. Proposed permit does not list level of toxic pollutants that can be emitted.

The Department does not have a toxic regulation. The maximum emission of each chemical that can be emitted without its impact exceeding the acceptable ambient air concentration can be calculated but could misled the public into believing the kiln is emitting more pollutants than is expected.

8. How is dust captured by the dry system handled?

Captured dust is pneumatically conveyed to a silo. The air used for conveying is discharged through a filter to the atmosphere. The captured material is fed to the clay kiln.

9. Request permit be denied until inadequate, incomplete, and contradictory points resolved.

Project appears to comply with regulations and a permit should be issued. The Department is willing to clarify any point associated with this project and obtain any information required by the regulations.

John N. Austin
6356 Sundown Drive
Jacksonville, FL 32244

August 7, 1992

964-771-3090

Department of Environmental Regulation
Office of General Counsel
2600 Blair Stone Road
Twin Towers Office Building
Tallahassee, Florida 32399-2400

RECEIVED

AUG 10 1992

by fax 8-7-92 AB.
Dept. of Environmental Reg.
Office of General Counsel

Dear Sirs:

Pursuant to Section 120.57, Florida Statutes, I petition for an administrative hearing on the permit application to construct a dust collector, a fines clay bin, and a lime injection system ("dry scrubber system") by Florida Solite Company, P. O. Box 297, Green Cove Springs, Florida 32043, Permit No. AC 10-197099. The county in which the proposed project will be located is Clay.

Petitioner received notice of the Department's proposed action subsequent to publication of notice of intent to issue in Clay Today on Monday, July 27, 1992.

Petitioner is a Florida resident, is a certified asbestos lung disease victim, breathes the air and drinks the water in Florida, utilizes the natural environment of Florida and of Clay County, and therefore has a substantial interest in the air and water quality of Florida. Applicant's kiln and proposed dry scrubber system will substantially, materially, and adversely affect and injure the environment of Florida by allowing the introduction of additional air pollutants. The related change to allow 50 ppm. PCB in the liquid burnable material will also substantially, materially, and adversely affect and injure the environment of Florida by allowing the introduction of this additional source of pollutant. The emissions from applicant's Kiln and proposed dry scrubber system will contain heavy metals, dioxins, furans, volatile organic compounds, and particulate matter which will detrimentally affect, i.e. injure, the health of persons exposed, of which Petitioner is one. In fact, as a certified asbestos lung disease victim, Petitioner has a special interest, above that of the average citizen, in the air quality of his environment and in the detrimental and injurious health consequences, particularly to his susceptible pulmonary system, produced by applicant's increased and toxic air pollution. Applicant's kiln and dry scrubber system will also be a source of water and ground pollution as the ground and surface water, and eventually the drinking water of Petitioner,

additional
AP

PCB

AP

- 9rd
water
pollution

Department of Environmental Regulation
Routing and Transmittal Slip

To: (Name, Office, Location)

1.

Willard Hanks

2.

3.

ARM

4.

TT 310E

Remarks:

From

Holly Burnaman

Date

8-13-92

Phone

8-9730

which he ingests, will be contaminated by the emissions and the Lime from the proposed dry scrubber system, thereby injuring the susceptible health of the Petitioner. Petitioner alleges that the Applicant's proposed dry scrubber system will substantially, materially and adversely affect, i.e. injure, the air and water quality and the natural environment of Clay County, Duval County, and other surrounding counties and thus interfere with the reasonable use and enjoyment of these natural resources, his environment, and his property. Petitioner alleges that the toxic emissions produced by Applicant's Kiln and proposed dry scrubber system will detrimentally affect, i.e. injure, the economic value of his property by reducing its value due to its exposure to these pollutants. *emissions*

Petitioner alleges that the proposed construction permit must be denied because the standards for issuing the permit under Rule 17-4.070, Florida Administrative Code ("FAC") have not been met. Under this rule, Applicant must provide **reasonable assurance** based on plans, test results, installation of tested pollution control equipment, or other information that the **project will not contravene DER standards or rules**. In fact, Applicant's permit application is inadequate, incomplete and fails to provide reasonable assurance that construction of the proposed dry scrubber system will be in accord with all applicable rules and laws, and must be denied in accordance with Rule 17-4.070(2), FAC. Most egregiously, Applicant has failed to supply any test results of what the **chemical components** comprising the **liquid burnable material** and the H.W.D. fuel burned in the kiln are and its emissions that will be processed in the dry scrubber system. Without this data, accurate evaluation of the emissions from the dry scrubber system could not be conducted, and thus reasonable assurance that all applicable rules and regulations will be met was not provided. *reasonable assurance*
2 Project Violates Rule

Petitioner alleges that the construction permit as proposed must be denied as DER has failed to apply all relevant standards to protect the environment in reviewing this permit application.

1. Petitioner objects to the proposed permit because a **Lowest Achievable Emission Rate** has not been applied.

2. Petitioner objects to the proposed permit because a determination of **Best Available Control Technology** has not been applied to this permit application.

3. Petitioner objects to the proposed permit because the Prevention of Significant Deterioration requirement has not been applied to this source.

4. Petitioner objects to the proposed permit because Standards of Performance for New Stationary Sources has not been applied to this source.

5. Petitioner objects to the proposed permit because National Emission Standards for Hazardous Air Pollutants has not been applied to this source.

6. Petitioner objects to the issuance of the proposed permit because a Health Risk Analysis for emissions and lime contaminants has not been conducted.

7. Petitioner objects to the issuance of the proposed permit because an Environmental Impact Analysis has not been conducted.

8. Petitioner objects to the proposed permit because the conditions required by Federal Regulations pursuant to the Federal Boiler & Industrial Furnace Regulation, effective August 21, 1992 have not been applied to this permit application, even though this permit will be issued, if at all, after August 21, 1992.

9. Petitioner objects to the expiration date of 48 months, December 31, 1994, for this construction permit. This is not a reasonable time frame for a construction permit. The initial proposed permit required a six month expiration date. It is unreasonable to afford Applicant such an extended time period in which to establish compliance.

10. Petitioner objects to Specific Condition 9 as indefinite and not providing reasonable assurance that the combined emissions of metals and other toxic pollutants from all sources at this facility shall not result in ambient air concentrations exceeding applicable rules and regulations. The standard "predicted by Department air modeling" is not definite nor stated. On the face of this permit, these standards can not be determined. In fact, it is questionable whether this modeling has even been conducted, as there is not evidence of it. There must be a definite, stated emission level for identified heavy metals and toxic pollutants which this source must not exceed.

11. Petitioner objects to **Specific Condition 15** in that there is no **testing requirement** to prove that the **LBM** does not contain cyanides, sulfide, mercaptans, insecticide, pesticides, herbicides, electroplating waste, or radioactive waste above the detection level, thereby providing reasonable assurance that this condition is being met. The permit fails to specify how and how often the Applicant must document that the LBM contains less than 50 PPM PCB. Further, Petitioner objects to this source being permitted to burn PCB and process PCB emissions.

12. Petitioner objects to **Specific Condition 16** in that **specific emissions levels** for specified heavy metals, for PCB, and for any other toxic pollutants are not stated. Applicable regulations, require that toxic pollutant emissions to be restricted to a level that will not endanger the health of the public. Yet, these levels for specified toxics are not stated.

Petitioner further objects to the proposed permit in that the Technical Evaluation of this proposed permit dated July 10, 1992 specifically states that a specific condition of the proposed permit states that **toxic pollutant emissions are restricted to a level that will not endanger the health of the public**. No such specific condition exists.

In fact, as stated in the July 10, 1992 Technical Evaluation, the Applicant did not **measure the current emissions** or estimate the future emissions of these toxic pollutants. Without this test data it is obvious that reasonable assurance has not been provided.

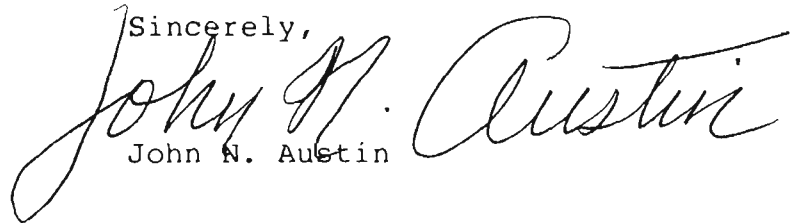
13. Petitioner objects to **Specific Condition 16** in that compliance testing could occur using alternate fuel. Just as compliance testing is required at 90 to 100% of its permitted capacity, it should also be required at the "worst case" fuel source, the LBM. Petitioner also objects to the wording "if coal or LBM is burned less than **400 hours during the year**." This language is ambiguous and open to the interpretation that if coal only is burned less than 400 hours per year, regardless of how many hours per year LBM is burned, than compliance tests can be conducted with the alternate fuel.

14. Petitioner objects to the proposed permit in that it does not address the handling of the **"dust" collected** in the lime injection system, does not address its testing, and does not address its **disposal**.

Under Rule 17-4.070(3), F.A.C., DER may issue any permit with specific conditions necessary to provide reasonable assurance that Department rules can be met.

Wherefore, I request that DER deny the proposed permit, or in the alternative, ~~require the proper and complete tests and documentation be submitted by Applicant, require the proper standards be applied, require emission calculations~~ be determined properly, defined, and stated and incorporate the above objections into the proposed permit in order to establish reasonable assurance, and if not, I request an administrative proceeding on Florida Solite's dry scrubber system permit application.

Sincerely,


John N. Austin

RECEIVED

AUG 10 1992

Department of Environmental Regulation
Office of General Counsel
2600 Blair Stone Rd.
Tallahassee, FL. 32399-2400

Dept. of Environmental Reg
Office of General Counsel

Julie Hellmuth

1205 Orange Circle North
Orange Park, FL 32073
(904) 269-5909

RE: Department Permit File No. AC10-197099 Clay County
Florida Solite Company
P.O. Box 297
Green Cove Springs, FL. 32043

In accordance with Section 120.57, Florida Statutes, I petition for an administrative hearing on the above permit application to construct a dust collector, a fines clay bin, and a lime injection system for kiln No. 5 at the Florida Solite Company, county road 209A, north of Green Cove Springs, Clay County, Florida.

I received notice of the Department's proposed action through the Legal Notice No. 008963 published July 27, 1992 in the Clay Today newspaper.

Petitioner is the mother of a 4 year old daughter, lives in Clay County with her husband and daughter, has family property just north of Green Cove Springs, enjoys boating on Black Creek, breathes the air and drinks the water in Clay County and therefore has a substantial interest in the air and water quality of Clay County. The applicant's proposed change to a dust collector, a fines clay bin, and a lime injection system for kiln No. 5 along with the change to allow 50PPM PCBs in the liquid burnable material will change the emissions from the kiln and will substantially, materially, and adversely affect and injure

the air and water quality of Clay County. With a four year old child, Petitioner has a special interest in the air and water quality of Clay County as small children are at greater risk than adults to the build up of toxic material in their tissue. Being a woman, Petitioner also has a special interest because of the recent findings published in the Florida Times Union that links breast cancer to PCBs in the breast tissue.

Petitioner alleges that the proposed permit must be denied because the standards for issuing the permit under Rule 17-4.070, Florida Administrative Code have not been met. Under this rule, the Applicant must provide reasonable assurance based on plans, test results, installation of tested pollution control equipment, or other information that the project will not contravene D.E.R. standards or rules. In fact, the Applicant's permit application is inadequate, incomplete and fails to provide reasonable assurance that the changes proposed will be in accord with all applicable rules and laws, and must be denied in accordance with Rule 17-4.070(2) Florida Administrative Code.

The proposed permit is inadequate, incomplete and contradicts on the following points:

1. The Intent to Issue letter to Florida Solite signed 7/13/9. says in the second paragraph that the new systems will replace the existing scrubber for kerosene. The legal notice does not say "replace" and the Technical Evaluation says the existing scrubber is being retained for use when non-hazardous fuel is burned. Then, the Permit says the existing scrubber may be used only when liquid burnable fuel (LBM) is not being used as a fuel. This confusion

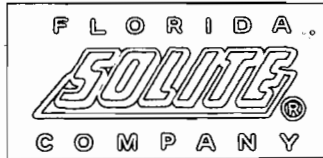
does not allow for any proper evaluation of potential emissions from the proposed changes.

2. The legal notice states "As the modification does not result in an increase in emissions of any air pollutant, the impact of the emissions on the ambient air will not increase." This is not documented and is probably untrue as going from a "wet" scrubber to a "dry" scrubber decreases some pollutants and increases others. Also the "modification" to include 50 ppm PCBs will affect the pollutants.
3. Specific Conditions #9. says "The combined emissions of metals and other toxic pollutants from all sources at this facility shall not result in ambient air concentrations predicted by Department approved modeling...". This has not been done.
4. The Technical Evaluation states in the 7th paragraph under section III "Kiln No. 5 will also emit toxic pollutants contained in the liquid bulkable fuel (LBM). The applicant did not measure the current emissions or estimate the future emissions of these toxic pollutants. ~. A specific condition of the proposed permit restricts toxic pollutant emissions to a level that will not endanger the health of the public." The proposed permit does not give emission levels of heavy metals or PCBs or any other toxic pollutants.
5. The proposed permit does not address the handling of the "dust" collected after the lime injection system. This dry "dust" may be contaminated with heavy metals and PCBs or other toxic materials. This will probably be the case, as the current scrubber water and scrubber sediment will be classified as hazardous waste according to the letter dated Nov. 25, 1991, by Kogler & Associates.

Therefore, I request that the D.E.R. deny the proposed permit until such time that all the inadequate, incomplete and contradictory points mentioned above are resolved.

I am requesting an administrative proceeding to be sure that these points are resolved.

Sincerely,
Julie Hellmuth
Julie Hellmuth



RECEIVED

AUG 07 1992

P. O. BOX 297 • GREEN COVE SPRINGS • FLORIDA 32043

AREA
CODE

904 284-9271

Division of Air
Resources Management

August 5, 1992

CERTIFIED MAIL: Return
Receipt P064 010 334

Florida Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Fl. 32399-2400

Re: Florida Solite Permit No. AC 10-197099

Dear Sirs:

Please find enclosed a copy of the proof of publication as required.

If you have any further questions please call me at 264-6121.

Sincerely,

A handwritten signature in cursive script, appearing to read "Albert Galliano".

Albert Galliano

cc: A. Hanks
A. Kutyna, NE Dist.



Printed on Recycled Paper

set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information; (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (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 Department's action or proposed action; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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 application 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 14 days of publication 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 Section 120.57, F.S., 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 28-5.207, F.A.C.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Department of Environmental Regulation
Northeast District
7825 Baymeadows Way,
Suite B200
Jacksonville, Florida 32256-7577

Any person may send written comments on the proposed action to Mr. Preston Lewis at the Department's Tallahassee address. All comments mailed within 24 days of the publication of this notice will be considered in the Department's final determination.
Legal No. 008963 published Monday, July 27, 1992, in Clay County's daily Clay Today newspaper.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NOTICE OF INTENT
TO ISSUE PERMIT

The Department of Environmental Regulation gives notice of its intent to issue a permit to Florida Solite Company, P.O. Box 297, Green Cove Springs, Florida 32043, to construct a dust collector, a fines clay bin, and a lime injection system for kiln No. 5. The kiln is located at the applicant's lightweight aggregate production facility on County Road 209A, north of Green Cove

Official Affidavit of Publication
(in accordance with Florida Statute 50.01)

CLAY TODAY
Published Daily
(except Saturday and Sunday)

Orange Park
of Clay County, Florida

STATE OF FLORIDA } SS.
COUNTY OF CLAY

Before the undersigned authority personally appeared G.D. Kosalko
who on oath says that he is Advertising Manager
of Clay Today, a daily newspaper published at Orange Park in Clay County, Florida;
that the attached copy of advertisement, being a legal notice
in the matter of Legal No. 008963, Notice of intent to issue
permit- Florida Solite Co.

in the _____ Court,
was published in said newspaper in the issues of Monday, July 27, 1992

Affiant further says that Clay Today is a newspaper published at Orange Park, in said Clay County, Florida, and that the said newspaper has heretofore been continuously published in said Clay County, Florida, each day, except Saturdays and Sundays, under the name of "Clay Today", and has been entered as second class mail matter at the post office in the Town of Orange Park, in said Clay County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement, for publication in the said newspaper.

Sworn to and Subscribed before me this 27th day of July, 1992 A.D.

(Signature)
(seal)

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXPI. OCT. 28, 1993
BUNDLED INTO GENERAL INS. UND.

COPY OF AT

Springs, Clay County, Florida. Particulate matter emissions from the kiln and associated equipment are estimated to be 11.8 lbs/hr and 51.7 TPY. Sulfur dioxide emissions from the kiln are estimated to be 227 lbs/hr and 370 TPY. The emissions of other pollutants from the kiln, primarily the products of combustion of coal and liquid burnable material containing up to 50 PPM PCBs, will not change. A determination of Best Available Control Technology (BACT) was not required. As the modification does not result in an increase in emissions of any air pollutant, the impact of the emissions on the ambient air will not increase. The department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information: (a) The name, address, and telephone number of each petitioner; the applicant's name and address, the Department Permit File Number, and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (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 Department's action or proposed action; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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.



KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 • FAX 377-7158

RECEIVED

JUL 23 1992

Division of Air
Resources Management

KA 150-91-01

July 22, 1992

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

Subject: Comments on FDER's Draft Permit for Kiln 5
Florida Solite Company
Clay County, Florida
Permit File No. AC10-197099

Dear Mr. Fancy:

The following comments are submitted on behalf of Florida Solite Company concerning FDER's draft permit for the installation of a baghouse on Kiln 5.

1. Specific Condition No. 14:

In accordance with our request of December 6, 1991 (copy attached), it is requested that FDER allow the use of propane and No. 2 fuel oil as alternate fuels. The following language is suggested.

"Maximum allowable heat input to the kiln shall not exceed 66 MMBTU/hr and 6.0 MMBTU/ton product. A fuel input rate of 5500 lbs coal/hr containing up to 2.5% sulfur (maximum) or 733 gals LBM/hr containing up to 2.0% sulfur (maximum) or 475 gals No. 2 fuel oil/hr or 725 gals propane/hr may be burned in this kiln provided the actual sulfur dioxide emissions standards established pursuant to Specific Condition No. 5 of this permit are not exceeded. When ~~coal~~ and LBM fuels are burned in combination, the maximum allowable heat input and sulfur dioxide emissions standards for the kiln shall not be exceeded."

Mr. Clair H. Fancy
Florida Department of
Environmental Regulation

July 22, 1992
Page 2

2. Specific Condition No. 16

It is requested that the test methods for VOC and metals be specified as EPA Method 25A and EPA Multi-Metals Sampling Train (EPA SW846 Method 0012), respectively.

It should be noted that as VOC concentrations (based on testing at similar facilities) are expected to be less than 20 ppm, EPA Method 25A would be the appropriate test method. It is our understanding that EPA Method 25 is recommended when the expected VOC concentrations are above 100 ppm.

If you have any questions, please do not hesitate to call me.

Very truly yours,

KOOGLER & ASSOCIATES


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

JBK:wa
Enc.

c: Mr. G. Williamson, Solite
Mr. T. Saunders, Florida Solite

H. Hanks
A. Kutyna





KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 • FAX 377-7158

KA 150-90-03

December 6, 1991

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

Subject: Comments on Draft Permit for Kiln No. 5
Florida Solite Company
Green Cove Springs, Florida
Permit File AC10-197099

Dear Mr. Fancy:

During a recent review of the draft air construction permit issued for the Florida Solite No. 5 kiln by the Department on July 26, 1991, it came to our attention that the kiln should also be permitted to be fired with virgin fuel oil and propane. Recently adopted federal regulations addressing the use of hazardous waste derived (HWD) fuel require that a facility using such fuels be brought on-line with virgin or non-hazardous fuels. Once the facility has reached normal steady-state operating conditions, HWD fuel firing can commence.

The Florida Solite Company is requesting the option to use either virgin No. 2 fuel oil or propane as alternative non-HWD fuels to be used for the start-up of Kiln No. 5. To provide the maximum anticipated heat input of 66 million BTU per hour for Kiln No. 5, the firing rate of No. 2 fuel oil would be 475 gallons per hour and the firing rate of propane would 725 gallons per hour. The expected nitrogen oxides emissions from the firing of these fuels will be less than the 24.0 pounds per hour limit currently proposed in the subject draft air construction permit. The requested firing rates and the expected nitrogen oxides emission rates for the two requested alternative fuels are summarized in the attached table.

Mr. C. H. Fancy
Florida Department
of Environmental Regulation

December 6, 1991
Page 2

Your consideration of this request is appreciated. If additional information is required, please do not hesitate to contact me.

Very truly yours,

KOOGLER & ASSOCIATES

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

JBK:wa
Enc.

c: Mr. Willard Hanks, FDER, Tallahassee
Mr. Ed Martin, Solite, Richmond
Mr. George Eure, Solite, Richmond
Mr. Bill Johnson, Solite, Cascade
Mr. George Williamson, Solite, Mobile
Mr. Tony Saunders, Florida Solite



FLORIDA SOLITE COMPANY
GREEN COVE SPRINGS, FLORIDA

KILN NO. 5
PERMIT AC10-197099

ALTERNATIVE FUEL USE

Fuel	Fuel use (gal/hr)		Max Heat Input (MMBTU/hr)	Max Expected NOx Emissions (lb/hr)(1)(2)
	Avg	Max		
No. 2 Oil(3)	400	475	66.0	9.5
Propane(4)	615	725	66.0	6.5

(1) Proposed emission limit in AC10-197099 is 24.0 lb/hr.

(2) AP-42 emission factors: No. 2 oil - 20 lb/1000 gal
Propane - 9 lb/1000 gal

(3) Heating Value - 140,000 BTU/gal

(4) Heating Value - 91,500 BTU/gal



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

July 10, 1992

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

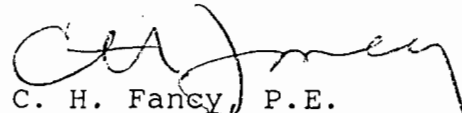
Mr. Tony Saunders, Plant Manager
Florida Solite Company
P. O. Box 297
Green Cove Springs, Florida 32043

Dear Mr. Saunders:

The Department has reviewed your comments on the July 26, 1991, Technical Evaluation and Preliminary Determination on the proposed alteration of aggregate kiln No. 5. In response, we are revising this determination along with the proposed construction permit No. AC 10-197099. Note that the Department is proposing a permit for the kiln No. 5 system, not the air pollution control device alone.

Please review the enclosed amendment and make arrangements to publish the enclosed Notice of Intent to Issue Permit or petition for an administrative hearing should you find the Department's recommendations unacceptable.

Sincerely,



C. H. Fancy, P.E.

Chief

Bureau of Air Regulation

CHF/WH/plm

Enclosure

c: Andrew Kutyna, NED
John Koogler, P.E.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

CERTIFIED MAIL

In the Matter of an
Application for Permit by:

DER File No. AC 10-197099
Clay County

Florida Solite Company
P. O. Box 297
Green Cove Springs, Florida 32043

INTENT TO ISSUE

The Department of Environmental Regulation gives notice of its intent to issue a permit (copy attached) for the proposed project as detailed in the application specified above, for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, Florida Solite Company, applied on May 17, 1991, to the Department of Environmental Regulation for a permit to construct a dust collector, a fines clay bin, and a lime injection system to replace the existing scrubber for kiln No. 5 at their lightweight aggregate production facility near Green Cove Springs, Clay County, Florida.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes and Florida Administrative Code Chapters 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that a construction permit is required for the proposed work.

Pursuant to Section 403.815, Florida Statutes and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of their receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(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 Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

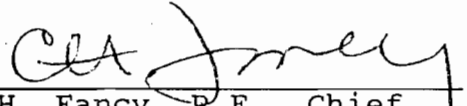
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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 intent. Persons whose substantial interests will be affected by any decision of the Department with regard to the application 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 14 days of receipt of this intent 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 Section 120.57, F.S., 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 28-5.207, F.A.C.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this INTENT TO ISSUE and all copies were mailed by certified mail before the close of business on 7-13-92 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.



Clerk

7-13-92
Date

Copies furnished to:

Andrew Kutyna, NED
John Koogler, P.E.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF INTENT TO ISSUE PERMIT

The Department of Environmental Regulation gives notice of its intent to issue a permit to Florida Solite Company, P. O. Box 297, Green Cove Springs, Florida 32043, to construct a dust collector; a fines clay bin, and a lime injection system for kiln No. 5. The kiln is located at the applicant's lightweight aggregate production facility on County Road 209A, north of Green Cove Springs, Clay County, Florida. Particulate matter emissions from the kiln and associated equipment are estimated to be 11.8 lbs/hr and 51.7 TPY. Sulfur dioxide emissions from the kiln are estimated to be 227 lbs/hr and 370 TPY. The emissions of other pollutants from the kiln, primarily the products of combustion of coal and liquid burnable material containing up to 50 PPM PCBs, will not change. A determination of Best Available Control Technology (BACT) was not required. As the modification does not result in an increase in emissions of any air pollutant, the impact of the emissions on the ambient air will not increase. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information; (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (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 Department's action or proposed action; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of

the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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 application 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 14 days of publication 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 Section 120.57, F.S., 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 28-5.207, F.A.C.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Department of Environmental Regulation
Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7577

Any person may send written comments on the proposed action to Mr. Preston Lewis at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

Replacement of July 26, 1991
Technical Evaluation
and
Preliminary Determination

Florida Solite Company
Clay County
Green Cove Springs, Florida

Aggregate Kiln No. 5 Alteration
File No. AC 10-197099

Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

July 10, 1992

I. General Information

A. Applicant

Florida Solite Company
P. O. Box 297
Green Cove Springs, Florida 32043

B. Request

On May 17, 1991, Florida Solite Company submitted an application for a permit to construct (alter) kiln No. 5 by replacing the existing wet spray scrubber with a dust collector and lime injection system. The application was revised to include a clay fines bin, and resubmitted on June 20, 1991. A Technical Evaluation and Preliminary Determination and proposed permit was distributed on July 26, 1991. As a result of the correspondence between the applicant and the Department (DER letter dated January 28, 1992, and Koogler & Associates letters dated November 25, 1991, and April 1, 1992), the project was again revised. This Technical Evaluation and Preliminary Determination and proposed permit addresses the installation of: a new baghouse to control the emissions from kiln No. 5 (the existing scrubber is being retained to control the emissions from this kiln when nonhazardous fuel is burned); a new lime injection system; a new fines clay bin; increasing the existing air flow through the kiln; and allowing up to 50 PPM polychlorinated biphenyls (PCB) to be in the liquid burnable material (LBM) used as fuel. The kiln No. 5 is located at the lightweight aggregate production facility (SIC 3295) on County Road 209A, north of Green Cove Springs, Clay County, Florida 32043. The UTM coordinates of this site are Zone 17, 427.3 km E and 3326.5 km N.

C. Emissions

Particulate matter (PM) emissions from the kiln No. 5 will be reduced from 19.6 lbs/hr to a design rate of 11.8 lbs/hr (51.7 TPY). The applicant estimates that the clay fines bin dust collector will emit 0.12 lbs/hr (0.5 TPY) PM and the lime bin dust collector will emit 0.23 lbs/hr (1.0 TPY) PM.

Sulfur dioxide emission can be controlled with a lime injection system. The lime injection system is designed to remove at least 40% of the uncontrolled SO₂ emissions. Allowable sulfur dioxide emissions will be equal to the previous actual emissions. The emissions of other air pollutants from kiln No. 5 should not increase as a result of this project. The emissions of other pollutants from kiln No. 5 have not been documented. Based on similar kiln operations and other data, the applicant's engineer estimates the emissions of other pollutants to be the following:

Pollutant	lbs/hr	TPY
SO ₂	227*	370
NOx	24.0	105.3
CO	3.7	16.4
VOC	6.7	29.6

*84.5 lbs/hr, 30 day rolling average

II. Rule Applicability

The proposed project, adding a dust collector, clay fines bin, and lime injection system to kiln No. 5, is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code.

The facility is in an area designated attainment for all criteria pollutants (F.A.C. Rule 17-2.420).

The facility (SIC 3295) is at a major source of particulate matter, sulfur dioxide, and nitrogen oxides because the allowable emissions of each of these pollutants exceed 100 TPY.

The project will not result in an increase in emissions of any criteria pollutant. Therefore, the project is not subject to the Prevention of Significant Deterioration (PSD) regulations (F.A.C. Rule 17-2.500).

The project is subject to F.A.C. Rule 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements. The particulate matter and nitrogen oxides emission standards shall be set at the rate requested by the applicant. The sulfur dioxide emissions standards shall be set at rates documented for a similar kiln at this facility. Any emissions of toxic pollutants must comply with the Department's air toxic guidance.

III. Technical Evaluation

No significant operational changes (raw material, production, or fuel usage) to kiln No. 5 is associated with this project. Therefore, the uncontrolled emissions of all air pollutants should not change.

The proposed kiln dust collector is more efficient at removing particulate matter (PM) than the existing wet spray scrubber it will replace. Based on a standard of 0.08 gr/dscf @ 7% oxygen, the kiln's dust collector would be allowed to emit 11.8 lbs/hr PM. The concentration of PM in the flue gas can be achieved with a dust collector.

Dust collectors will also be employed to control the PM emissions from the clay fines bin and the lime bin. The applicant used an emission concentration of 0.04 gr/dscf to estimate the PM

emissions from these bins. The PM emission concentration from dust collectors on similar sources in Florida are less than 0.02 gr/dscf. The Department believes a properly designed, operated, and maintained dust collector will meet a PM emission standard of 0.02 gr/dscf.

The uncontrolled sulfur dioxide (SO_2) emissions from a 7 TPH kiln in identical service as kiln No. 5 at this facility was documented to be 226 lbs/hr (max. 1 hour) and 75.8 lbs/hr (30 day average). The Department believes the uncontrolled SO_2 emissions from kiln 5 at 11 TPH production should be proportional, 227 lbs/hr (1 hr. max.) and 84.5 lbs/hr (30 day average). The applicant estimates the lime injection system will reduce the SO_2 emissions by 40 percent. Based on this, the Department believes the SO_2 emissions from kiln 5 will be lower than the current actual emissions. The kiln will be permitted at its current actual sulfur dioxide emission rate and the applicant will be required to document this rate through a material balance on a kiln at this site.

The estimated nitrogen oxides (NO_x) emission for kiln No. 5 is also based on tests on the similar 7 TPH kiln. Based on the production ratio of the proposed kiln and the 7 TPH kiln, NO_x emissions from kiln No. 5 are estimated to be 24.0 lbs/hr. No air pollution controls for NO_x are used on either kiln.

The estimated carbon monoxide (CO) and volatile organic compounds (VOC) emissions of 3.7 lbs/hr and 6.7 lbs/hr, respectively, are based on concentrations of these pollutants measured in tests on similar sources. No air pollution controls for CO and VOC are used on the proposed kiln.

Kiln No. 5 will also emit toxic pollutants contained in the liquid burnable material (LBM). The applicant did not measure the current emissions or estimate the future emissions of these toxic pollutants. The Department will require tests to establish what happens to the toxic pollutants, including heavy metals and PCB, as a condition to any permit to construct issued for this kiln. A specific condition of the proposed permit restricts toxic pollutant emissions to a level that will not endanger the health of the public.

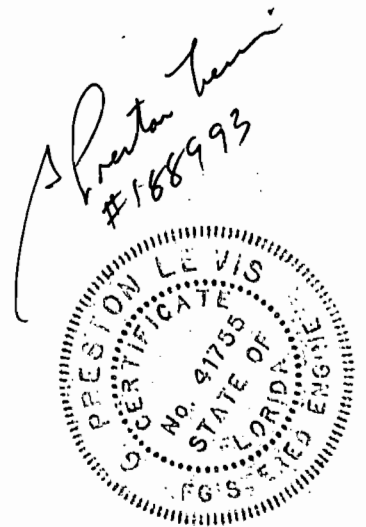
Higher emissions could subject the plant to other regulations.

IV. Air Quality Analysis

As the proposed project does not result in an increase in emissions of any pollutant, the impact of the emissions on the ambient air quality should be the same or, for particulate matter and sulfur dioxides, reduced.

V. Conclusion

Based on the information provided by Florida Solite Company, the Department has reasonable assurance that the addition of a baghouse, clay fines bin, and lime rejection system, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any state or national ambient air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code, on property accessible to the public.



Best Available Copy

V. Conclusion

Based on the information provided by Florida Solite Company, the Department has reasonable assurance that the addition of a baghouse, clay fines bin, and lime rejection system, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any state or national ambient air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code, on property accessible to the public.

[Handwritten signature]
#188993



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:

Florida Solite Company

P. O. Box 297

Green Cove Springs, FL 32043

Permit Number: AC 10-197099

Expiration Date: May 1, 1994*

County: Clay

Latitude/Longitude: 30°04'07"N

81°45'17"W

Project: Kiln No. 5 Modification

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Authorization to install a Fuller dust collector (or equivalent) and lime injection system on kiln No. 5. Also included in this project is a clay fines bin controlled with a Fuller Model 9-DS-8 dust collector (or equivalent) and a lime bin controlled by a Fuller Model 9-DS-8 dust collector (or equivalent). The existing scrubber may be used to control the emissions from kiln No. 5 only when liquid burnable material (LBM) is not being used as fuel in this kiln. This kiln is located at the permittee's lightweight aggregate manufacturing facility (SIC 3295) on County Road 209A, north of Green Cove Springs, Clay County, Florida 32043. The UTM coordinates of this site are Zone 17, 427.3 km E and 3326.5 km N.

*This permit is void if construction does not commence within 18 months of its issuance, if construction is discontinued for more than 18 months, or if construction is not completed and the plant is not placed in operation within a reasonable time.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Application received May 17, 1991.
2. Revised application received June 19, 1991.
3. Koogler & Associates' letter dated November 25, 1991.
4. DER letter dated January 28, 1992.
5. Koogler & Associates letter dated April 1, 1992.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

GENERAL CONDITIONS:

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

- a. a description of and cause of non-compliance; and
- b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

GENERAL CONDITIONS:

records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

14. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

Construction Requirements

1. The construction of the dust collectors, lime injection system, and clay fines bin shall reasonably conform to the plans in the application. A programmable logic controller shall be installed on kiln No. 5 that will allow LBM to be burned only when all of the flue gas from the kiln pass through the kiln's dust collector.

2. The permittee shall evaluate the overall sulfur balance of a kiln system at this facility prior to the expiration of this permit. The evaluation shall be based on the test protocol attached to Koogler & Associates' April 1, 1992, letter. The sulfur material balance shall include sulfur analysis of the clay feed, fuels, aggregate product, and stack emissions as determined from the continuous emissions monitor. The emission factors established shall be used to calculate the sulfur dioxide emissions from kiln No. 5.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

SPECIFIC CONDITIONS:

3. The dust collector serving kiln No. 5 shall be equipped with instruments that continuously record the pressure drop when the unit is in operation. The instrument shall be properly calibrated and maintained.

Emission Restrictions

4. Particulate matter emissions from kiln No. 5 dust collector shall not exceed any of the following: 0.08 gr/dscf corrected to 7% oxygen, 11.8 lbs/hr, 51.7 TPY, and 15% opacity.

5. Sulfur dioxide emissions shall not exceed 227 lbs/hr (1 hr. max.), 84.5 lbs/hr (30 day avg.), and 370 TPY.

6. Nitrogen oxides emissions shall not exceed 24.0 lbs/hr and 105 TPY.

7. Particulate matter emissions from the lime bin dust collector shall not exceed any of the following: 0.02 gr/dscf, 0.12 lbs/hr, 0.5 TPY, or 5% opacity.

8. Particulate matter emissions from the clay fines bin dust collector shall not exceed any of the following: 0.02 gr/dscf, 0.06 lbs/hr, 0.3 TPY, or 5% opacity.

9. The combined emissions of metals and other toxic pollutants from all sources at this facility shall not result in ambient air concentrations predicted by Department approved modeling that exceed the acceptable ambient air concentrations or no threat levels established for any toxic pollutant.

10. The operation of this source shall not result in the emissions of air pollutants which cause or contribute to an objectionable odor pursuant to F.A.C. Rule 17-2.600(c)2.

11. Reasonable precautions shall be used to minimize unconfined emissions of particulate matter generated by this operation pursuant to F.A.C. Rule 17-2.610(3). Reasonable precautions shall be defined as the application of dust suppressants to the material/operation listed in the following table when the visible emissions (maximum 6 minute rolling average) exceed the listed opacity:

Material/Operation

Visible Emissions

Raw Clay Feed Area

5

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

SPECIFIC CONDITIONS:

<u>Material/Operation</u>	<u>Visible Emissions</u>
Coal Storage Area and Coal Handling Equipment	10
Discharges of Product from the Kiln into the Product Cooler	10
Handling and Storage of the Product	20

Operation Requirements

12. The kiln may operate continuously, 8760 hrs/yr.

13. Maximum clay input to the kiln shall not exceed 13.2 TPH (dry) or 21.3 TPH (wet). Production shall not exceed 11.0 TPH (dry). The permittee shall have calibrated instruments on site to continuously monitor the clay input or production of this kiln.

14. Maximum allowable heat input to the kiln shall not exceed 66 MMBtu/hr and 6.0 MMBtu/ton product. A fuel input rate of 5500 lbs coal/hr containing up to 2.5% sulfur (maximum) or 733 gals LBM/hr containing up to 2.0% sulfur (maximum) may be burned in this kiln provided the actual sulfur dioxide emissions standards established pursuant to Specific Condition No. 5 of this permit are not exceeded. When coal and LBM are burned in combination, the maximum allowable heat input and sulfur dioxide emissions standards for the kiln shall not be exceeded.

15. The LBM shall not contain any organic cyanides, sulfide, mercaptans, insecticides, pesticides, herbicides, electroplating waste, or radioactive material above the detection level by the appropriate analytical procedure. The LBM can contain up to 50 PPM PCB provided all applicable requirements listed in 40 CFR 761 (July 1, 1991) are met. In addition to those conditions required by 40 CFR 761.20, the permittee shall document that the LBM contains less than 50 PPM PCB and has not been mixed with materials containing PCBs in concentrations of 50 PPM or greater. The permittee shall retain the manifest of each load for 2 years for Department inspection.

16. Kiln No. 5 shall be tested at 90 to 100% of its permitted capacity (11.9 to 13 TPH clay input (dry)) for the following pollutants:

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

SPECIFIC CONDITIONS:

<u>Pollutant</u>	Method* (40 CFR 60, <u>Appendix A, 7/1/91</u>)	<u>Frequency</u>	<u>Comments**</u>
PM	5	Annually	While burning high sulfur coal
SO ₂	6	Annually	While burning high sulfur coal
NOx	7E	Every 5 yrs	
VE	9	Annually	While burning high sulfur coal
VOC	25	Every 5 yrs	While burning LBM
Heavy Metals	filter/impinger analysis	Every 5 yrs	While burning LBM
PCB	18	Every 5 yrs	While burning LBM containing up to 50 PPM PCB.

* Or other methods with DER approval.

** If coal or LBM is burned less than 400 hours during any year, the specified tests may be conducted while the plant is burning the alternate fuel. Tests shall be conducted on both the new baghouse and existing scrubber if the control device is used more than 400 hours during any year.

Administrative Requirements

17. Stack test results shall be submitted to the Northeast District office within 45 days of the test.

18. When the Department, after investigation, has good reason (such as complaints, increased visible emissions, or questionable maintenance of control equipment) to believe that any applicable emission standard contained in F.A.C. Chapter 17-2, or in this permit is being violated, it may require the owner or operator of the unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the source and to provide a report on the results of said tests to the Department.

19. The Northeast District office shall be notified in writing a minimum of 15 days in advance of any compliance tests to be conducted on this source.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: May 1, 1994

SPECIFIC CONDITIONS:

20. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

21. An application for an operation permit must be submitted to the Northeast District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this _____ day
of _____, 1991

**STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION**

Howard L. Rhodes, Interim Director
Division of Air Resources
Management

P 710 058 507



Certified Mail Receipt

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PS Form 3800, June 1990

Sent to Tony Saunders	
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P.O., State & ZIP Code Green Cove Spr., FL	
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Return Receipt Showing to Whom & Date Delivered	
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Postmark or Date	7-13-92 AC 10-197899

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece next to the article number.

I also wish to receive the following services (for an extra fee):

- ☐ Addressee's Address
- ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Tony Saunders, Plant Mgr
Fla. Solite Co
PO Box 297
Green Cove Springs, FL
32043

4a. Article Number

P 710 058 507

4b. Service Type

- ☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery

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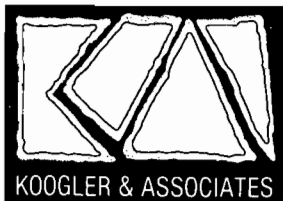
5. Signature (Addressee)

6. Signature (Agent)

PS Form 3811, October 1990

☆ U.S. GPO: 1990-273-861

DOMESTIC RETURN RECEIPT



KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 • FAX 377-7158

KA 150-91-01

April 1, 1992

RECEIVED

APR 2 1992

Division of Air
Resources Management

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

Subject: Permit Application for Kiln 5
Florida Solite Company
Green Cove Springs, Florida
Permit File No. AC10-197099

Dear Mr. Fancy:

This is in response to your letter dated January 28, 1992, requesting additional information and clarification on the above project. The response is in the order of issues discussed in your letter. Florida Solite proposes to retain the existing scrubber as a backup system to the baghouse while burning non-hazardous fuels. The proposed project (FDER File No. AC10-197099) involves the installation of a baghouse to control emissions while Kiln 5 is fired with hazardous waste derived fuel to comply with Boiler and Industrial Furnace Regulations.

Expiration Date Comment

Construction permits are issued for the time necessary to install the equipment, place it in service, conduct the compliance test, and submit an application for permit to operate. The application proposed to start construction in May 1991 and complete construction in August 1991. An expiration date until December 31, 1994, is excessive for a project that was initially projected to be completed within 4 months. If the applicant is ready to install the proposed or an equivalent baghouse, the Department will extend the expiration date and change the project description (allow the installation of an equivalent baghouse) of the proposed construction permit to allow a reasonable time to install the new air pollution control equipment.

Best Available Copy

FEDERAL EXPRESS QUESTIONS? CALL 800-238-5355 TOLL FREE		AIRBILL PACKAGE TRACKING NUMBER 2229318582	
2069M 2229318582		RECIPIENT'S COPY	
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Your Phone Number (Very Important) 804-377-5821		Recipient's Phone Number (Very Important) 	
Company ILR & ASSOC		Company FAER	
Street Address NW 13TH ST		Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.) 2600 BLAIR STONE RD	
City SVILLE FL		City TALLAHASSEE FL	
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4 SERVICES (Check only one box)		5 DELIVERY AND SPECIAL HANDLING (Check services required)	
Priority Overnight (Delivery by next business morning) 11 <input type="checkbox"/> YOUR PACKAGING 16 <input checked="" type="checkbox"/> FEDEX LETTER 12 <input type="checkbox"/> FEDEX PAK 13 <input type="checkbox"/> FEDEX BOX 14 <input type="checkbox"/> FEDEX TUBE Economy Two-Day (Delivery by second business day) 30 <input type="checkbox"/> ECONOMY Standard Overnight (Delivery by next business afternoon) 51 <input type="checkbox"/> YOUR PACKAGING 56 <input type="checkbox"/> FEDEX LETTER 52 <input type="checkbox"/> FEDEX PAK 53 <input type="checkbox"/> FEDEX BOX 54 <input type="checkbox"/> FEDEX TUBE Government Overnight (Restricted for authorized users only) 46 <input type="checkbox"/> GOVT LETTER 41 <input type="checkbox"/> GOVT PACKAGE Freight Service (For Extra Large or any package over 150 lbs.) 70 <input type="checkbox"/> OVERNIGHT FREIGHT 80 <input type="checkbox"/> TWO-DAY FREIGHT		1 <input type="checkbox"/> HOLD FOR PICK-UP (Fill in Box H) 2 <input type="checkbox"/> DELIVER WEEKDAY 3 <input type="checkbox"/> DELIVER SATURDAY (Extra charge) 4 <input type="checkbox"/> DANGEROUS GOODS (Extra charge) 5 <input type="checkbox"/> 6 <input type="checkbox"/> DRY ICE 7 <input type="checkbox"/> OTHER SPECIAL SERVICE 8 <input type="checkbox"/> 9 <input type="checkbox"/> SATURDAY PICK-UP (Extra charge) 10 <input type="checkbox"/> 11 <input type="checkbox"/> DESCRIPTION 12 <input type="checkbox"/> HOLIDAY DELIVERY (if offered) (Extra charge)	
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RESPONSE:

It is now recognized from experience at other Solite facilities that the construction time frame in the initial permit application was unrealistic. Therefore, it is requested that the expiration date be changed in the draft permit to October 31, 1993. This would allow about six months for engineering design, six months for delivery, and six months for construction, compliance testing and submittal of an application for an air operation permit. Alternatively, a period of 18 months from the date of permit issuance is acceptable to Florida Solite.

Specific Condition No. 2

The proposed permit included a 30-day average sulfur dioxide emission standard and requires a continuous emissions monitor to determine compliance with that standard. This condition was placed in the permit to provide reasonable assurance that the existing sulfur dioxide emissions, even with lime injection, are not increased. The Bureau does not have assurance that the proposed sulfur material balance will give an accurate indication of the sulfur dioxide emissions. Such a balance would have to include the sulfur that is in the product. We do not see how the proposed calculations account for the sulfur removed by the lime injection system.

For this permit, the Department is willing to consider a modified sulfur material balance approach provided the proposal includes calibration of the material balance approach on Kiln 1A with its continuous emissions monitor. If your client is agreeable to this study, please provide an outline of the modified procedure that can be incorporated into the proposed permit. A continuous emission monitor could still be required in the future.

RESPONSE:

Florida Solite has a current operation permit for Kiln 5 (A010-198326, expiring August 19, 1996) which allows the use of both coal and LBM. As explained in past correspondence, Florida Solite proposes to install a baghouse as a direct consequence of RCRA regulations, effective August 21, 1991, which pertain to the use of the hazardous waste derived fuel. Florida Solite may continue to use the existing scrubber to control emissions when coal and other non-hazardous fuels are used in Kiln 5.

It is well documented that the sulfur content of the LBM (for which the baghouse is proposed) is less than that of coal. The resulting sulfur dioxide emissions from firing LBM will therefore be less than emissions resulting from coal firing. On this basis alone, FDER would have issued a permit amendment for the proposed project had it not been for the fact that the baghouse would constitute new construction. As the sulfur dioxide emissions resulting from burning LBM will be no greater with the proposed baghouse than with the existing scrubber and as these emissions will certainly be less than sulfur dioxide emissions resulting from burning coal and controlling emissions with the existing scrubber as presently permitted, sulfur dioxide emissions should not be a factor in the issuance of a permit to allow the installation of a baghouse.

The issue of the lime injection system into the proposed baghouse system and the appropriate lime injection rate also become irrelevant in view of the above analysis because the lime injection will only serve to reduce sulfur dioxide emissions during the firing of LBM. And, as stated above, the emissions are already lower than the sulfur dioxide emissions from coal burning which is allowed under the current permit.

To further alleviate FDER concerns on sulfur dioxide emissions from Kiln No. 5, Florida Solite will evaluate the overall sulfur balance of the kiln system at the time of initial compliance testing. A test protocol is attached for FDER review.

Based on the above discussion, it is anticipated that the sulfur dioxide emission limits proposed by Florida Solite in our letter dated November 25, 1991, of 84.5 lbs/hr, 30-day average, will be acceptable. It is also anticipated that, based on the study of the overall sulfur balance of the kiln system, the FDER will have reasonable assurance that the sulfur dioxide emission limits will not be violated.

Specific Condition No. 4

Doubling the air flow and allowable particulate matter emissions from the kiln can be addressed in this application. The Department does not believe a particulate emission of 0.08 grains/dscf @ 50% EA would have 15% opacity. If your client will not accept the 5% opacity standard, the Department can use the visible emission that exists during the compliance test to monitor the operation of this source.

RESPONSE:

No correlation has been developed for the relationship between particulate matter loading and visible emissions. If some basis is required by FDER to justify a visible emission limit greater than five percent opacity when the allowable particulate matter emission limit is 0.08 grains/dscf, the following examples from the Federal New Source Performance Standards (NSPS) provide reasonable examples of corresponding particulate matter and opacity limits. There are 16 examples of NSPS that require a particulate matter concentration in the stack gas of less than 0.08 grains per dry standard cubic foot and allow an opacity of 20 percent or greater.

Source	NSPS Subpart	Particulate Matter Standard (gr/dscf)	Opacity Standard (%)
Fossil Fuel Steam Electric Generators	D	0.061*	20
	Da	0.018*	20
	Db	0.061*	20
	Dc	0.031*	20
Portland Cement Plants	F	0.03**	20
Asphalt Plants	I	0.04	20
Secondary Lead Smelter	L	0.022	20
Secondary Brass and Bronze Ingot Production	M	0.022	20
BOF (steel)	N	0.022	20

(Continued)

Source	NSPS Subpart	Particulate Matter Standard (gr/dscf)	Opacity Standard (%)
Primary Copper Smelter	P	0.022	20
Primary Zinc Smelter	Q	0.022	20
Primary Lead Smelter	R	0.022	20
Coal Preparation Plants	Y	0.031 0.018	20 20
Steel Plants (EAF)	AA	0.0052	20
Kraft Pulp Mill	BB	0.044***	35
Grain Elevators	DD	0.01	0
Metallic Mineral Processing	LL	0.022	7
Non-metallic Mineral Processing	000	0.022	7

* Approximate particulate matter concentration: Stack gas flow rate estimated from F factor.

** Approximate particulate matter limit from cement kilns: Gas flow rate estimated from test data.

*** Particulate matter emission limit for recovery furnaces.

Specific Condition No. 5

For this permit, the uncontrolled sulfur dioxide emissions you calculated are acceptable. How will the sulfur dioxide emissions removed by the lime injection be accounted for? If the sulfur material balance procedure you will propose does not estimate the actual emission accurately, another procedure or continuous emissions monitoring may be needed to determine compliance with the 30 day rolling average standard.



RESPONSE:

See response to Specific Condition No. 2.

Specific Condition No. 11

Unless the coal area is permitted separately, the Department believes it is appropriate to have a standards for the coal storage area in the proposed permit if Kiln No. 5 burns coal from that area. We note that you are doubling the flow through Kiln No. 5 to control fugitive emissions. Because of the added emphasis on fugitive emissions, we believe the proposed permit should be revised to emphasize the reasonable precautions needed to minimize the emissions from the handling of the product. We request this area be re-examined and that you provide a list of the steps that will be taken to minimize the fugitive emissions. We think these steps should include a better enclosure of the product discharge area of the kiln, minimize product drop, ducts to capture any dust generated at the kiln discharge, wetting agents, etc.

RESPONSE:

As addressed in other sections of this response, the subject permit has been requested by Florida Solite only to construct a baghouse that is required to control emissions when Kiln 5 is fired with LBM (a hazardous waste derived fuel). No change in the operations currently permitted for Kiln 5 is expected other than the installation of the baghouse. The control of fugitive emissions addressed by the subject permit include the following operations:

1. the raw clay feed area,
2. the coal storage area and coal handling equipment,
3. the kiln, and
4. the discharge of product from the kiln into the product cooler.

A reasonable opacity limit for fugitive emissions from the wet clay storage area is five percent. If the opacity of fugitive particulate emissions from the clay storage area exceeds five percent, Florida Solite will employ reasonable precautions, such as the application of water, to reduce the opacity of emissions from this area.

Fugitive emissions from the kiln (from the raw feed chute and from the burner face) are prohibited by federal regulations addressing the use of LBM as a fuel. Thus, when the kiln is fired with LBM, fugitive emissions from the kiln must be prohibited. When the kiln is fired with coal or other non-hazardous fuels, the opacity limit should be 20 percent.

The clinker that is produced in the kiln is discharged at a temperature of approximately 2000°F into a clinker cooling pit. To be consistent with limitations placed on Kiln 1A by Permit AC10-125262, the opacity of fugitive particulate matter emissions resulting from the discharge of clinker into the cooling pit should be limited to a maximum of 10 percent.

Also, to be consistent with permit AC10-125262 for Kiln 1A, the fugitive particulate matter opacity limit from the coal storage area and coal handling equipment should be 10 percent.

Although the transportation of product from the clinker cooling pit to the product sizing and storage area is not a function of firing the kiln with LBM, an opacity limit of 20 percent is appropriate for this activity to be consistent with limitations included in Permit AC10-125262 issued for Kiln 1A.

All of the opacity limits proposed herein will be determined in accordance with EPA or DER Method 9 and should be specified as a maximum 6-minute rolling average opacity.

Specific Condition No. 13

You note that your client will continuously monitor the feed or production by August 21, 1992. Your proposal of using a scale on the front-end loader during the intern period is acceptable to the Department.

RESPONSE:

It is apparent at this time that the August 21, 1992, completion of construction date will not be met. Florida Solite therefore requests that the August 21, 1992, date specified in this paragraph be changed to the new expiration date proposed in the "Expiration Date Comment" on Page 2 of this response.

Specific Condition No. 14

The Department will accept your proposal that increasing the quantity of fuel burned will not increase the emissions of any pollutant above the allowable standards. The proposed permit can be amended to reflect the higher fuel consumption rates and authorize a combination of fuels to be burned.

RESPONSE:

No further comment.

Specific Condition No. 15

The request to allow LBM containing less than 50 PPM PCB to be burned in Kiln 1A has been referred to our General Counsel. The decision for the maximum allowable PCB in the fuel for Kiln No. 5 will be consistent with the ruling for Kiln No. 1A request.

RESPONSE:

No further comment at this time.

Specific Condition No. 16

The Department is willing to waive testing requirements on any type fuel burned less than 400 hours per year provided a test on each authorized fuel is obtained during the life of the operation permit (every 5 years). However, to determine compliance with our toxic policy, the Department will need the VOC and heavy metals analysis. This condition may be amended in the future if this kiln becomes subject to any new standards based on the hazardous waste regulations.

RESPONSE:

No further comment at this time.

Specific Condition No. 20

Refer to previous Expiration Date Comment on page 1.

Other Matters

In principal, the Department has no objection to a single baghouse controlling several kilns. We do have problems with a kiln being able to switch from a baghouse to a scrubber unless some physical safety device can be installed that would prevent hazardous waste from being burned in the kiln when the scrubber is in operation.

Mr. Clair Fancy
Florida Department
of Environmental Regulation

April 1, 1992
Page 11

RESPONSE:

A computer (programmable logic controller) will be installed to comply with BIF regulations. The controller will tie in the main fuel feed line to the diversion damper between the baghouse and scrubber. The controller will not allow HWD fuel to flow to the kiln unless the damper is directing all exhaust gas flow to the baghouse.

If you have any questions, please do not hesitate to contact me.

Very truly yours,

KOOGLER & ASSOCIATES


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

JBK:PAR:wa
Enc.

c: Mr. Willard Hanks, FDER, Tallahassee
Mr. Ed Martin, Solite, Richmond
Mr. George Eure, Solite, Richmond
Mr. George Williamson, Solite
Mr. Tony Saunders, Florida Solite
Mr. Jon Jewett, McGuire, Woods & Battle

A. Kutyra, NE Dist
CHF/BA/PL



TEST PROTOCOL FOR DETERMINING SULFUR BALANCE
LIGHTWEIGHT AGGREGATE KILN 5

FLORIDA SOLITE COMPANY
GREEN COVE SPRINGS, FLORIDA

INTRODUCTION

It is proposed that Florida Solite will provide FDER with the necessary reasonable assurance of complying with the sulfur dioxide emission limitations in Permit AC10-197099 by submitting a report on the study of the sulfur mass balance for Kiln 5.

OBJECTIVE

The objective of the study of the overall sulfur balance for Kiln 5 would be to demonstrate that the analysis of the sulfur content of the raw clay mined in the quarry would be adequate, when combined with the sulfur content of fuels and the feed rates of clay and fuels, to provide FDER with reasonable assurance that the permitted sulfur dioxide limit for Kiln 5 will not be exceeded.

PROPOSED STUDY

The sulfur dioxide emissions from the kiln result from the combustion of sulfur in fuels and the processing of clay containing sulfur. The sulfur content of the coal, No. 2 fuel oil, propane and LBM can be readily determined from each shipment of fuel received by using the following fuel analysis methods.

Coal: ASTM 2492



No. 2 fuel oil: ASTM 2492

LBM: ASTM 2492

It is proposed that the sulfur content of the raw clay be determined by the method presented below.

Florida Solite will analyze clay samples taken from the face of the wall of the quarry being mined in order to geographically define the sulfur content of the clay at the mine. Individual samples will be taken every 10 feet and composited over 50 foot intervals along the clay face. The composite samples will be obtained and analyzed using a ASTM-D4239 (Sulfur in Samples of Coal and Coke using High-Temperature Tube Furnace) prior to the commencement of mining operations in the sampled area. The clay mined from the sampled area will be tracked and identified within the clay storage area.

The time and rate of the clay fed into the kiln will be logged. The fuel type and firing rate to the kiln will be monitored and recorded. A calibrated and certified continuous emission monitor will be installed for a temporary period (duration of this study) to monitor and record the sulfur dioxide emissions from Kiln 5. The recorded CEM data will be identified by the same tracking system used for logging the fuel and clay feed to the kiln.

The performance of the lime injection system (in controlling sulfur dioxide emissions) will also be evaluated as part of this study. The lime

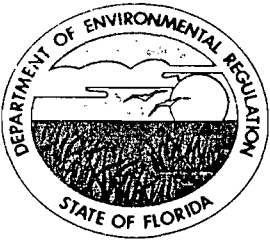
injection rate will be stepped up from zero pounds per hour to the optimum level of the system. The lime injection rate will be recorded for the performance analysis.

A single sample of lightweight aggregate produced by the kiln will be obtained and analyzed using a ASTM-D4239 method during the course of the study to verify the absence of sulfur in the product.

RESULTS

The sulfur balance study will be conducted for a period of 45 days excluding start up, shutdown and upset conditions. This time period will allow the compilation of a number of 30-day rolling averages for the sulfur dioxide emissions to compare with the permitted emission limits. A report on the findings of the study will be submitted to FDER within 45 days of the completion of the testing.

It is expected that the above study will provide FDER with reasonable assurance that Kiln 5 will be able to operate in full compliance with the permitted sulfur dioxide emission limits and that compliance can reasonably be demonstrated by use of a sulfur balance rather than by continuously monitoring sulfur dioxide emissions from the kiln.



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

January 28, 1992

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John B. Koogler, Ph.D., P.E.
Koogler & Associates
4014 NW Thirteenth Street
Gainesville, Florida 32609

Dear Mr. Koogler:

Re: File No. AC 10-197099, Florida Solite Company

The Bureau has reviewed your November 25, 1991, letter commenting on the proposed construction permit for a baghouse to control kiln No. 5 at Florida Solite Company's lightweight aggregate plant near Green Cove Springs, Clay County, Florida. The proposed permit distributed with the Technical Evaluation and Preliminary Determination approved the applicant's request to replace the existing scrubber with a new baghouse. It included specific conditions to monitor the production and emissions from the operation and to provide reasonable assurance that the Department's current rules and policies would be complied with.

Our response to your comments follow.

Expiration Date Comment

Constructin permits are issued for the time necessary to install the equipment, place it in service, conduct the compliance test, and submit an application for permit to operate. The application proposed to start construction in May, 1991, and complete construction in August, 1991. An expiration date until December 31, 1994, is excessive for a project that was initially projected to be completed within 4 months. If the applicant is ready to install the proposed or an equivalent baghouse, the Department will extend the expiration date and change the project description (allow the installation of an equivalent baghouse) of the proposed construction permit to allow a reasonable time to install the new air pollution control equipment.

Specific Condition No. 2

The proposed permit included a 30 day average sulfur dioxide emission standard and requires a continuous emissions monitor to determine compliance with that standard. This condition was

placed in the permit to provide reasonable assurance that the existing sulfur dioxide emissions, even with lime injection, are not increased. The Bureau does not have assurance that the proposed sulfur material balance will give an accurate indication of the sulfur dioxide emissions. Such a balance would have to include the sulfur that is in the product. We do not see how the proposed calculations account for the sulfur removed by the lime injection system.

For this permit, the Department is willing to consider a modified sulfur material balance approach provided the proposal includes calibration of the material balance approach on kiln 1A with its continuous emissions monitor. If your client is agreeable to this study, please provide an outline of the modified procedure that can be incorporated into the proposed permit. A continuous emission monitor could still be required in the future.

Specific Condition No. 4

Doubling the air flow and allowable particulate matter emissions from the kiln can be addressed in this application. The Department does not believe a particulate emission of 0.08 grains/dscf @ 50% EA would have 15% opacity. If your client will not accept the 5% opacity standard, the Department can use the visible emission that exists during the compliance test to monitor the operation of this source.

Specific Condition No. 5

For this permit, the uncontrolled sulfur dioxide emissions you calculated are acceptable. How will the sulfur dioxide emissions removed by the lime injection be accounted for? If the sulfur material balance procedure you will propose does not estimate the actual emission accurately, another procedure or continuous emissions monitoring may be needed to determine compliance with the 30 day rolling average standard.

Specific Condition No. 11

Unless the coal area is permitted separately, the Department believes it is appropriate to have a standards for the coal storage area in the proposed permit if kiln No. 5 burns coal from that area. We note that you are doubling the flow through kiln No. 5 to control fugitive emissions. Because of the added emphasis on fugitive emissions, we believe the proposed permit should be revised to emphasize the reasonable precautions needed to minimize the emissions from the handling of the product. We

request this area be re-examined and that you provide a list of the steps that will be taken to minimize the fugitive emissions. We think these steps should include a better enclosure of the product discharge area of the kiln, minimize product drop, ducts to capture any dust generated at the kiln discharge, wetting agents, etc.

Specific Condition No. 13

You note that your client will continuously monitor the feed or production by August 21, 1992. Your proposal of using a scale on a front-end loader during the intern period is acceptable to the Department.

Specific Condition No. 14

The Department will accept your proposal that increasing the quantity of fuel burned will not increase the emissions of any pollutant above the allowable standards. The proposed permit can be amended to reflect the higher fuel consumption rates and authorize a combination of fuels to be burned.

Specific Condition No. 15

The request to allow LBM containing less than 50 PPM PCB to be burned in kiln 1A has been referred to our General Counsel. The decision for the maximum allowable PCB in the fuel for kiln No. 5 will be consistent with the ruling for kiln No. 1A request.

Specific Condition No. 16

The Department is willing to waive testing requirements on any type fuel burned less than 400 hours per year provided a test on each authorized fuel is obtained during the life of the operation permit (every 5 years). However, to determine compliance with our toxic policy, the Department will need the VOC and heavy metals analysis. This condition may be amended in the future if this kiln becomes subject to any new standards based on the hazardous waste regulations.

Specific Condition No. 20

Refer to previous Expiration Date Comment on page 1.

Mr. John B. Koogler
Page 4 of 4

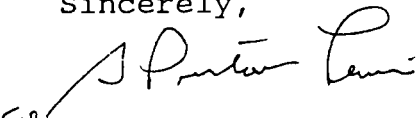
Other Matters

In principal, the Department has no objection to a single baghouse controlling several kilns. We do have problems with a kiln being able to switch from a baghouse to a scrubber unless some physical safety device can be installed that would prevent hazardous waste from being burned in the kiln when the scrubber is in operation.

In conclusion, we believe Florida Solite Company needs to decide whether they still want to install the baghouse proposed in the May 17, 1991, application at this time. If not, we recommend they withdraw this application and, after deciding on their future needs, submit a new application for that system.

Please write to me or call Willard Hanks at (904) 488-1344 when your client has reached a decision on this project.

Sincerely,


For C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/WH/plm

c: Andrew Kutyna, NED
Tony Saunders, FSC

P 617 884 141



Certified Mail Receipt

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(See Reverse)

PS Form 3800, June 1990

Sent to John Koogler	
Street & No. Koogler & Assoc.	
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Postage	\$
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Return Receipt Showing to Whom & Date Delivered	
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TOTAL Postage & Fees	\$
Postmark or Date 1-28-92 AC 10-197099	

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece next to the article number.

I also wish to receive the following services (for an extra fee):

- ☐ Addressee's Address
- ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

John B. Koogler, P.E.
Koogler & Assoc.
4014 NW 13th Street
Gainesville, FL 32609

4a. Article Number

P 617 884 141

4b. Service Type

- | | |
|---|---|
| <input type="checkbox"/> Registered | <input type="checkbox"/> Insured |
| <input checked="" type="checkbox"/> Certified | <input type="checkbox"/> COD |
| <input type="checkbox"/> Express Mail | <input type="checkbox"/> Return Receipt for Merchandise |

7. Date of Delivery

1/20

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

Marion A. Bayle

PS Form 3811, October 1990

☆ U.S. GPO: 1990-273-861

DOMESTIC RETURN RECEIPT

To: Clair Fancy

Through: Gary Smallridge

From: Gary Early *GE*

Re: Florida Solite/PCB Permit mod.

Date: January 15, 1992

I have reviewed the proposal of Florida Solite to modify its existing permit to allow it to burn LBM with a PCB concentration of up to 50 ppm. It appears that under certain controlled conditions it is acceptable for FS to burn PCB containing LBM, as long as the facility is authorized to burn LBM and the conditions for burning the PCB component as found in 40 CFR 761 are met.

If the material proposed to be burned by FS is an "excluded PCB product" as defined in 40 CFR 761.3, or contains less than 50 ppm PCBs (with exceptions to be discussed later) then it is lawful for it to be burned in a qualified incinerator as defined in 40 CFR 761.3, which includes a 40 CFR 761.70 incinerator, a high efficiency boiler which complies with 40 CFR 761.60(a)(2)(iii), a RCRA incinerator, or an industrial furnace or boiler identified in 40 CFR 260.10 and 266.41. The definition of an "excluded material" provided by FS is incomplete. In order for a PCB bearing material to be excluded, an affirmative demonstration must be made by the facility that it meets the restrictions contained in the definition. This is not a case, as you have with determining "on-spec" and "off-spec" categories for used oils, of basing the applicability of the exemption on the

Department of Environmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)

1.

CLAIRE FANCY

2.

GARY SMALLRIDGE *gp* 1-15-92

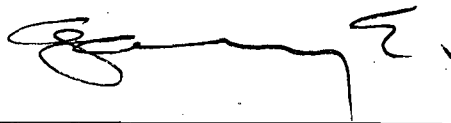
3.

WILLARD HAWKS

4.

Remarks:

From:



Date

Phone

level of a certain contaminant (see 40 CFR 266.40). If FS receives LBM from a number of different sources, I do not see how it can demonstrate that the PCB material was legally manufactured, processed, distributed or used, or that the PCB concentration was not a result of dilution or leaks and spills of PCB material of greater than 50 ppm.

In addition, 40 CFR 761.20(e)(2), entitled Testing of used oil fuel, provides that "if any PCBs at a concentration of 50 ppm or greater have been added to the container or equipment, then the total container contents must be considered as having a PCB concentration of 50 ppm or greater for purposes of complying with the disposal requirements of this part." If it is determined that a mixing has occurred, then the PCB material must be disposed of in an incinerator meeting 40 CFR 761.70 standards. see 40 CFR 761.60(a). If it is ultimately determined that a permit modification should be approved, then I believe that a condition of the permit should include, in addition to those conditions required by 40 CFR 761.20, a requirement that FS provide some objective method of demonstrating that no mixing has occurred.

PART 761—POLYCHLORINATED BIPHENYLS (PCBs) MANUFACTURING, PROCESSING, DISTRIBUTION IN COMMERCE, AND USE PROHIBITIONS

Subpart A—General

Sec.

- 761.1 Applicability.
- 761.3 Definitions.
- 761.19 References.

Subpart B—Manufacturing, Processing, Distribution in Commerce, and Use of PCBs and PCB Items

- 761.20 Prohibitions.
- 761.30 Authorizations.

Subpart C—Marking of PCBs and PCB Items

- 761.40 Marking requirements.
- 761.45 Marking formats.

Subpart D—Storage and Disposal

- 761.60 Disposal requirements.
- 761.65 Storage for disposal.
- 761.70 Incineration.
- 761.75 Chemical waste landfills.
- 761.79 Decontamination.

Subpart E—Exemptions

- 761.80 Manufacturing, processing, and distribution in commerce exemptions.

Subpart F—[Reserved]

Subpart G—PCB Spill Cleanup Policy

- 761.120 Scope.
- 761.123 Definitions.
- 761.125 Requirements for PCB spill clean-up.
- 761.130 Sampling requirements.
- 761.135 Effect of compliance with this policy and enforcement.

Subparts H—I [Reserved]

Subpart J—General Records and Reports

- 761.180 Records and monitoring.
- 761.185 Certification program and retention or records by importers and persons generating PCBs in excluded manufacturing processes.
- 761.187 Reporting importers and by persons generating PCBs in excluded manufacturing processes.

Sec.

- 761.193 Maintenance of monitoring records by persons who import, manufacture, process, distribute in commerce, or use chemicals containing inadvertently generated PCBs.

Subpart K—PCB Waste Disposal Records and Reports

- 761.202 EPA identification numbers.
- 761.205 Notification of PCB waste activity (EPA Form 7710-53).
- 761.207 The manifest—general requirements.
- 761.208 Use of the manifest.
- 761.209 Retention of manifest records.
- 761.210 Manifest discrepancies.
- 761.211 Unmanifested waste report.
- 761.215 Exception reporting.
- 761.218 Certificate of Disposal.

AUTHORITY: 15 U.S.C. 2605, 2607, 2611, 2614, and 2616.

Subpart A—General

§ 761.1 Applicability.

(a) This part establishes prohibitions of, and requirements for, the manufacture, processing, distribution in commerce, use, disposal, storage, and marking of PCBs and PCB Items.

(b) This part applies to all persons who manufacture, process, distribute in commerce, use, or dispose of PCBs or PCB Items. Substances that are regulated by this rule include, but are not limited to, dielectric fluids, contaminated solvents, oils, waste oils, heat transfer fluids, hydraulic fluids, paints, sludges, slurries, dredge spoils, soils, materials contaminated as a result of spills, and other chemical substances or combination of substances, including impurities and by-products and any byproduct, intermediate or impurity manufactured at any point in a process. Most of the provisions of this part apply to PCBs only if PCBs are present in concentrations above a specified level. For example, subpart D applies generally to materials at concentrations of 50 parts per million (ppm) and above. Also certain provisions of subpart B apply to PCBs inadvertently generated in manufacturing processes at concentrations specified in the definition of "PCB" under § 761.3. No provision specifying

a PCB concentration may be avoided as a result of any dilution, unless otherwise specifically provided.

(c) Definitions of the terms used in these regulations are in subpart A. The basic requirements applicable to disposal and marking of PCBs and PCB Items are set forth in subpart D—Disposal of PCBs and PCB Items and in subpart C—Marking of PCBs and PCB Items. Prohibitions applicable to PCB activities are set forth in subpart B—Manufacture, Processing, Distribution in Commerce, and Use of PCBs and PCB Items. Subpart B also includes authorizations from the prohibitions. Subparts C and D set forth the specific requirements for disposal and marking of PCBs and PCB Items.

(d) Section 15 of the Toxic Substances Control Act (TSCA) states that failure to comply with these regulations is unlawful. Section 16 imposes liability for civil penalties upon any person who violates these regulations, and the Administrator can establish appropriate remedies for any violations subject to any limitations included in section 16 of TSCA. Section 16 also subjects a person to criminal prosecution for a violation which is knowing or willful. In addition, section 17 authorizes Federal district courts to enjoin activities prohibited by these regulations, compel the taking of actions required by these regulations, and issue orders to seize PCBs and PCB Items manufactured, processed or distributed in violation of these regulations.

(e) These regulations do not preempt other more stringent Federal statutes and regulations.

(f) Unless and until superseded by any new more stringent regulations issued under EPA authorities, or any permits or any pretreatment requirements issued by EPA, a state or local government that affect release of PCBs to any particular medium:

(1) Persons who inadvertently manufacture or import PCBs generated as unintentional impurities in excluded manufacturing processes, as defined in § 761.3, are exempt from the requirements of subpart B of this part, provided that such persons comply with subpart J of this part, as applicable.

(2) Persons who process, distribute in commerce, or use products containing PCBs generated in excluded manufacturing processes defined in § 761.3 are exempt from the requirements of subpart B provided that such persons comply with subpart J of this part, as applicable.

(3) Persons who process, distribute in commerce, or use products containing recycled PCBs defined in § 761.3, are exempt from the requirements of subpart B of this part, provided that such persons comply with subpart J of this part, as applicable.

(4) Except as provided in § 761.20 (d) and (e), persons who process, distribute in commerce, or use products containing excluded PCB products as defined in § 761.3, are exempt from the requirements of subpart B of this part.

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2605))

[44 FR 31542, May 31, 1979, as amended at 49 FR 28189, July 10, 1984; 53 FR 24220, June 27, 1988]

§ 761.3 Definitions.

For the purpose of this part:

"Administrator" means the Administrator of the Environmental Protection Agency, or any employee of the Agency to whom the Administrator may either herein or by order delegate his authority to carry out his functions, or any person who shall by operation of law be authorized to carry out such functions.

"Agency" means the United States Environmental Protection Agency.

"Annual document log" means the detailed information maintained at the facility on the PCB waste handling at the facility.

"Annual report" means the written document submitted each year by each disposer and commercial storer of PCB waste to the appropriate EPA Regional Administrator. The annual report is a brief summary of the information included in the annual document log.

"Byproduct" means a chemical substance produced without separate commercial intent during the manufacturing or processing of another chemical substance(s) or mixture(s).

"Capacitor" means a device for accumulating and holding a charge of electricity and consisting of conducting surfaces separated by a dielectric. Types of capacitors are as follows:

(1) "Small capacitor" means a capacitor which contains less than 1.36 kg (3 lbs.) of dielectric fluid. The following assumptions may be used if the actual weight of the dielectric fluid is unknown. A capacitor whose total volume is less than 1,639 cubic centimeters (100 cubic inches) may be considered to contain less than 1.36 kgs (3 lbs.) of dielectric fluid and a capacitor whose total volume is more than 3,278 cubic centimeters (200 cubic inches) must be considered to contain more than 1.36 kg (3 lbs.) of dielectric fluid. A capacitor whose volume is between 1,639 and 3,278 cubic centimeters may be considered to contain less than 1.36 kg (3 lbs.) of dielectric fluid if the total weight of the capacitor is less than 4.08 kg (9 lbs.).

(2) "Large high voltage capacitor" means a capacitor which contains 1.36 kg (3 lbs.) or more of dielectric fluid and which operates at 2,000 volts (a.c. or d.c.) or above.

(3) "Large low voltage capacitor" means a capacitor which contains 1.36 kg (3 lbs.) or more of dielectric fluid and which operates below 2,000 volts (a.c. or d.c.).

"Certification" means a written statement regarding a specific fact or representation that contains the following language:

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

"Chemical substance", (1) except as provided in paragraph (2) of this definition, means any organic or inorganic substance of a particular molecular identity, including: Any combination of such substances occurring in whole or part as a result of a chemical reac-

tion or occurring in nature, and any element or uncombined radical.

(2) Such term does not include: Any mixture; any pesticide (as defined in the Federal Insecticide, Fungicide, and Rodenticide Act) when manufactured, processed, or distributed in commerce for use as a pesticide; tobacco or any tobacco product; any source material, special nuclear material, or byproduct material (as such terms are defined in the Atomic Energy Act of 1954 and regulations issued under such Act); any article the sale of which is subject to the tax imposed by section 4181 of the Internal Revenue Code of 1954 (determined without regard to any exemptions from such tax provided by section 4182 or section 4221 or any provisions of such Code); and any food, food additive, drug, cosmetic, or device (as such terms are defined in section 201 of the Federal Food, Drug, and Cosmetic Act) when manufactured, processed, or distributed in commerce for use as a food, food additive, drug, cosmetic, or device.

"Chemical waste landfill" means a landfill at which protection against risk of injury to health or the environment from migration of PCBs to land, water, or the atmosphere is provided from PCBs and PCB Items deposited therein by locating, engineering, and operating the landfill as specified in § 761.75.

"Commerce" means trade, traffic, transportation, or other commerce:

(1) Between a place in a State and any place outside of such State, or

(2) Which affects trade, traffic, transportation, or commerce described in paragraph (1) of this definition.

"Commercial storer of PCB waste" means the owner or operator of each facility which is subject to the PCB storage facility standards of § 761.65, and who engages in storage activities involving PCB waste generated by others, or PCB waste that was removed while servicing the equipment owned by others and brokered for disposal. The receipt of a fee or any other form of compensation for storage services is not necessary to qualify as a commercial storer of PCB waste. It is sufficient under this definition that the facility stores PCB waste generated by others or the facility re-

moved the PCB waste while servicing equipment owned by others. A generator who stores only the generator's own waste is subject to the storage requirements of § 761.65, but is not required to seek approval as a commercial storer. If a facility's storage of PCB waste at no time exceeds 500 liquid gallons of PCBs, the owner or operator is not required to seek approval as a commercial storer of PCB waste.

"Designated facility" means the off-site disposer or commercial storer of PCB waste designated on the manifest as the facility that will receive a manifested shipment of PCB waste.

"Disposal" means intentionally or accidentally to discard, throw away, or otherwise complete or terminate the useful life of PCBs and PCB Items. Disposal includes spills, leaks, and other uncontrolled discharges of PCBs as well as actions related to containing, transporting, destroying, degrading, decontaminating, or confining PCBs and PCB Items.

"Disposer of PCB waste," as the term is used in subparts J and K of this part, means any person who owns or operates a facility approved by EPA for the disposal of PCB waste which is regulated for disposal under the requirements of subpart D of this part.

"Distribute in commerce" and "Distribution in Commerce" when used to describe an action taken with respect to a chemical substance, mixture, or article containing a substance or mixture means to sell, or the sale of, the substance, mixture, or article in commerce; to introduce or deliver for introduction into commerce, or the introduction or delivery for introduction into commerce of the substance, mixture, or article; or to hold or the holding of, the substance, mixture, or article after its introduction into commerce.

"Emergency Situation" for continued use of a PCB Transformer exists when:

(1) Neither a non-PCB Transformer nor a PCB-Contaminated transformer is currently in storage for reuse or readily available (i.e., available within 24 hours) for installation.

(2) Immediate replacement is necessary to continue service to power users.

"EPA identification number" means the 12-digit number assigned to a facility by EPA upon notification of PCB waste activity under § 761.205.

"Excluded manufacturing process" means a manufacturing process in which quantities of PCBs, as determined in accordance with the definition of inadvertently generated PCBs, calculated as defined, and from which releases to products, air, and water meet the requirements of paragraphs (1) through (5) of this definition, or the importation of products containing PCBs as unintentional impurities, which products meet the requirements of paragraphs (1) and (2) of this definition.

(1) The concentration of inadvertently generated PCBs in products leaving any manufacturing site or imported into the United States must have an annual average of less than 25 ppm, with a 50 ppm maximum.

(2) The concentration of inadvertently generated PCBs in the components of detergent bars leaving the manufacturing site or imported into the United States must be less than 5 ppm.

(3) The release of inadvertently generated PCBs at the point at which emissions are vented to ambient air must be less than 10 ppm.

(4) The amount of inadvertently generated PCBs added to water discharged from a manufacturing site must be less than 100 micrograms per resolvable gas chromatographic peak per liter of water discharged.

(5) Disposal of any other process wastes above concentrations of 50 ppm PCB must be in accordance with subpart D of this part.

"Excluded PCB products" means PCB materials which appear at concentrations less than 50 ppm, including but not limited to:

(1) Non-Aroclor inadvertently generated PCBs as a byproduct or impurity resulting from a chemical manufacturing process.

(2) Products contaminated with Aroclor or other PCB materials from historic PCB uses (investment casting waxes are one example).

(3) Recycled fluids and/or equipment contaminated during use involving the products described in paragraphs (1) and (2) of this definition (heat transfer and hydraulic fluids and equipment and other electrical equipment components and fluids are examples).

(4) Used oils, provided that in the cases of paragraphs (1) through (4) of this definition:

(i) The products or source of the products containing < 50 ppm concentration PCBs were legally manufactured, processed, distributed in commerce, or used before October 1, 1984.

(ii) The products or source of the products containing < 50 ppm concentrations PCBs were legally manufactured, processed, distributed in commerce, or used, i.e., pursuant to authority granted by EPA regulation, by exemption petition, by settlement agreement, or pursuant to other Agency-approved programs;

(iii) The resulting PCB concentration (i.e. below 50 ppm) is not a result of dilution, or leaks and spills of PCBs in concentrations over 50 ppm.

"Fluorescent light ballast" means a device that electrically controls fluorescent light fixtures and that includes a capacitor containing 0.1 kg or less of dielectric.

"Generator of PCB waste" means any person whose act or process produces PCBs that are regulated for disposal under subpart D of this part, or whose act first causes PCBs or PCB Items to become subject to the disposal requirements of subpart D of this part, or who has physical control over the PCBs when a decision is made that the use of the PCBs has been terminated and therefore is subject to the disposal requirements of subpart D of this part. Unless another provision of this part specifically requires a site-specific meaning, "generator of PCB waste" includes all of the sites of PCB waste generation owned or operated by the person who generates PCB waste.

"Impurity" means a chemical substance which is unintentionally present with another chemical substance.

"In or Near Commercial Buildings" means within the interior of, on the

roof of, attached to the exterior wall of, in the parking area serving, or within 30 meters of a non-industrial non-substation building. Commercial buildings are typically accessible to both members of the general public and employees, and include: (1) Public assembly properties, (2) educational properties, (3) institutional properties, (4) residential properties, (5) stores, (6) office buildings, and (7) transportation centers (e.g., airport terminal buildings, subway stations, bus stations, or train stations).

"Incinerator" means an engineered device using controlled flame combustion to thermally degrade PCBs and PCB Items. Examples of devices used for incineration include rotary kilns, liquid injection incinerators, cement kilns, and high temperature boilers.

"Industrial building" means a building directly used in manufacturing or technically productive enterprises. Industrial buildings are not generally or typically accessible to other than workers. Industrial buildings include buildings used directly in the production of power, the manufacture of products, the mining of raw materials, and the storage of textiles, petroleum products, wood and paper products, chemicals, plastics, and metals.

"Laboratory" means a facility that analyzes samples for PCBs and is unaffiliated with any entity whose activities involve PCBs.

"Leak" or "leaking" means any instance in which a PCB Article, PCB Container, or PCB Equipment has any PCBs on any portion of its external surface.

"Manifest" means the shipping document EPA form 8700-22 and any continuation sheet attached to EPA form 8700-22, originated and signed by the generator of PCB waste in accordance with the instructions included with the form and subpart K of this part.

"Manned Control Center" means an electrical power distribution control room where the operating conditions of a PCB Transformer are continuously monitored during the normal hours of operation (of the facility), and, where the duty engineers, electricians, or other trained personnel have the capability to deenergize a PCB Transformer completely within 1 minute of

the receipt of a signal indicating abnormal operating conditions such as an overtemperature condition or overpressure condition in a PCB Transformer.

"Manufacture" means to produce, manufacture, or import into the customs territory of the United States.

"Manufacturing process" means all of a series of unit operations operating at a site, resulting in the production of a product.

"Mark" means the descriptive name, instructions, cautions, or other information applied to PCBs and PCB Items, or other objects subject to these regulations.

"Marked" means the marking of PCB Items and PCB storage areas and transport vehicles by means of applying a legible mark by painting, fixation of an adhesive label, or by any other method that meets the requirements of these regulations.

"Market/Marketers" means the processing or distributing in commerce, or the person who processes or distributes in commerce, used oil fuels to burners or other marketers, and may include the generator of the fuel if it markets the fuel directly to the burner.

"Mineral Oil PCB Transformer" means any transformer originally designed to contain mineral oil as the dielectric fluid and which has been tested and found to contain 500 ppm or greater PCBs.

"Mixture" means any combination of two or more chemical substances if the combination does not occur in nature and is not, in whole or in part, the result of a chemical reaction; except that such term does include any combination which occurs, in whole or in part, as a result of a chemical reaction if none of the chemical substances comprising the combination is a new chemical substance and if the combination could have been manufactured for commercial purposes without a chemical reaction at the time the chemical substances comprising the combination were combined.

"Municipal solid wastes" means garbage, refuse, sludges, wastes, and other discarded materials resulting from residential and non-industrial operations and activities, such as house-

hold activities, office functions, and commercial housekeeping wastes.

"Non-PCB Transformer" means any transformer that contains less than 50 ppm PCB; except that any transformer that has been converted from a PCB Transformer or a PCB-Contaminated transformer cannot be classified as a non-PCB Transformer until reclassification has occurred, in accordance with the requirements of § 761.30(a)(2)(v).

"On site" means within the boundaries of a contiguous property unit.

"PCB" and "PCBs" means any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contains such substance. Refer to § 761.1(b) for applicable concentrations of PCBs. PCB and PCBs as contained in PCB items are defined in § 761.3. For any purposes under this part, inadvertently generated non-Aroclor PCBs are defined as the total PCBs calculated following division of the quantity of monochlorinated biphenyls by 50 and dichlorinated biphenyls by 5.

"PCB Article" means any manufactured article, other than a PCB Container, that contains PCBs and whose surface(s) has been in direct contact with PCBs. "PCB Article" includes capacitors, transformers, electric motors, pumps, pipes and any other manufactured item (1) which is formed to a specific shape or design during manufacture, (2) which has end use function(s) dependent in whole or in part upon its shape or design during end use, and (3) which has either no change of chemical composition during its end use or only those changes of composition which have no commercial purpose separate from that of the PCB Article.

"PCB Article Container" means any package, can, bottle, bag, barrel, drum, tank, or other device used to contain PCB Articles or PCB Equipment, and whose surface(s) has not been in direct contact with PCBs.

"PCB Container" means any package, can, bottle, bag, barrel, drum, tank, or other device that contains PCBs or PCB Articles and whose

surface(s) has been in direct contact with PCBs.

"PCB-Contaminated Electrical Equipment" means any electrical equipment, including but not limited to transformers (including those used in railway locomotives and self-propelled cars), capacitors, circuit breakers, reclosers, voltage regulators, switches (including sectionalizers and motor starters), electromagnets, and cable, that contain 50 ppm or greater PCB, but less than 500 ppm PCB. Oil-filled electrical equipment other than circuit breakers, reclosers, and cable whose PCB concentration is unknown must be assumed to be PCB-Contaminated Electrical Equipment. (See § 761.30(a) and (h) for provisions permitting reclassification of electrical equipment containing 500 ppm or greater PCBs to PCB-Contaminated Electrical Equipment).

"PCB Equipment" means any manufactured item, other than a PCB Container or a PCB Article Container, which contains a PCB Article or other PCB Equipment, and includes microwave ovens, electronic equipment, and fluorescent light ballasts and fixtures.

"PCB Item" is defined as any PCB Article, PCB Article Container, PCB Container, or PCB Equipment, that deliberately or unintentionally contains or has a part of it any PCB or PCBs.

"PCB Transformer" means any transformer that contains 500 ppm PCB or greater.

"PCB waste(s)" means those PCBs and PCB Items that are subject to the disposal requirements of subpart D of this part.

"Person" means any natural or judicial person including any individual, corporation, partnership, or association; any State or political subdivision thereof; any interstate body; and any department, agency, or instrumentality of the Federal Government.

"Posing an exposure risk to food or feed" means being in any location where human food or animal feed products could be exposed to PCBs released from a PCB Item. A PCB Item poses an exposure risk to food or feed if PCBs released in any way from the PCB Item have a potential pathway to human food or animal feed. EPA con-

siders human food or animal feed to include items regulated by the U.S. Department of Agriculture or the Food and Drug Administration as human food or animal feed; this includes direct additives. Food or feed is excluded from this definition if it is used or stored in private homes.

"Process" means the preparation of a chemical substance or mixture, after its manufacture, for distribution in commerce.

(1) In the same form or physical state as, or in a different form or physical state from, that in which it was received by the person so preparing such substance or mixture, or

(2) As part of an article containing the chemical substance or mixture.

"Qualified incinerator" means one of the following:

(1) An incinerator approved under the provisions of § 761.70. Any level of PCB concentration can be destroyed in an incinerator approved under § 761.70.

(2) A high efficiency boiler which complies with the criteria of § 761.60(a)(2)(iii)(A), and for which the operator has given written notice to the appropriate EPA Regional Administrator in accordance with the notification requirements for the burning of mineral oil dielectric fluid under § 761.60(a)(2)(iii)(B).

(3) An incinerator approved under section 3005(c) of the Resource Conservation and Recovery Act (42 U.S.C. 6925(c)) (RCRA).

(4) Industrial furnaces and boilers which are identified in 40 CFR 260.10 and 40 CFR 266.41(b) when operating at their normal operating temperatures (this prohibits feeding fluids, above the level of detection, during either startup or shutdown operations).

"Quantifiable Level/Level of Detection" means 2 micrograms per gram from any resolvable gas chromatographic peak, i.e. 2 ppm.

"Recycled PCBs" means those PCBs which appear in the processing of paper products or asphalt roofing materials from PCB-contaminated raw materials. Processes which recycle PCBs must meet the following requirements:

(1) There are no detectable concentrations of PCBs in asphalt roofing material products leaving the processing site.

(2) The concentration of PCBs in paper products leaving any manufacturing site processing paper products, or in paper products imported into the United States, must have an annual average of less than 25 ppm with a 50 ppm maximum.

(3) The release of PCBs at the point at which emissions are vented to ambient air must be less than 10 ppm.

(4) The amount of Aroclor PCBs added to water discharged from an asphalt roofing processing site must at all times be less than 3 micrograms per liter ($\mu\text{g/L}$) for total Aroclors (roughly 3 parts per billion (3 ppb)). Water discharges from the processing of paper products must at all times be less than 3 micrograms per liter ($\mu\text{g/L}$) for total Aroclors (roughly 3 ppb), or comply with the equivalent mass-based limitation.

(5) Disposal of any other process wastes at concentrations of 50 ppm or greater must be in accordance with subpart D of this part.

"Retrofill" means to remove PCB or PCB-contaminated dielectric fluid and to replace it with either PCB, PCB-contaminated, or non-PCB dielectric fluid.

"Rupture of a PCB Transformer" means a violent or non-violent break in the integrity of a PCB Transformer caused by an overtemperature and/or overpressure condition that results in the release of PCBs.

"Sale for purposes other than resale" means sale of PCBs for purposes of disposal and for purposes of use, except where use involves sale for distribution in commerce. PCB Equipment which is first leased for purposes of use any time before July 1, 1979, will be considered sold for purposes other than resale.

"Small quantities for research and development" means any quantity of PCBs (1) that is originally packaged in one or more hermetically sealed containers of a volume of no more than five (5.0) milliliters, and (2) that is used only for purposes of scientific experimentation or analysis, or chemical research on, or analysis of, PCBs, but

not for research or analysis for the development of a PCB product.

"Storage for disposal" means temporary storage of PCBs that have been designated for disposal.

"Transfer facility" means any transportation-related facility including loading docks, parking areas, and other similar areas where shipments of PCB waste are held during the normal course of transportation. Transport vehicles are not transfer facilities under this definition, unless they are used for the storage of PCB waste, rather than for actual transport activities. Storage areas for PCB waste at transfer facilities are subject to the storage facility standards of § 761.65, but such storage areas are exempt from the approval requirements of § 761.65(d) and the recordkeeping requirements of § 761.180, unless the same PCB waste is stored there for a period of more than 10 consecutive days between destinations.

"Transporter of PCB waste" means, for the purposes of subpart K of this part, any person engaged in the transportation of regulated PCB waste by air, rail, highway, or water for purposes other than consolidation by a generator.

"Transport vehicle" means a motor vehicle or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (e.g., trailer, railroad freight car) is a separate transport vehicle.

"Totally enclosed manner" means any manner that will ensure no exposure of human beings or the environment to any concentration of PCBs.

"Waste Oil" means used products primarily derived from petroleum, which include, but are not limited to, fuel oils, motor oils, gear oils, cutting oils, transmission fluids, hydraulic fluids, and dielectric fluids.

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2605))

[49 FR 25239, June 20, 1984, as amended at 49 FR 28189, July 10, 1984; 49 FR 29066, July 18, 1984; 49 FR 44638, Nov. 8, 1984; 50 FR 29199, July 17, 1985; 50 FR 32176, Aug. 9, 1985; 53 FR 24220, June 27, 1988; 53 FR 27327, July 19, 1988; 54 FR 52745, Dec. 21, 1989; 55 FR 26205, June 27, 1990]

§ 761.19 References.

(a) [Reserved]

(b) *Incorporations by reference.* The following material is incorporated by reference, and is available for inspection at the Office of the Federal Register Information Center, Rm. 8301, 1100 L St. NW., Washington, DC 20408. These incorporations by reference were approved by the Director of the Office of the Federal Register. These materials are incorporated as they exist on the date of approval and a notice of any change in these materials will be published in the FEDERAL REGISTER. Copies of the incorporated material may be obtained from the TSCA Public Docket Office (TS-793), Rm. NE-G004, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, or from the American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, PA 19103.

References	CFR Citation
ASTM D-93-85 Standard Test Method for Flash Point by Pensky-Martens Closed Tester.	§ 761.60(a)(3)(iii)(B)(6); § 761.75(b)(8)(iii).
ASTM D-129-64 (Reapproved 1978) Standard Test Method for Sulfur in Petroleum Products (General Bomb Method).	§ 761.60(a)(3)(iii)(B)(6).
ASTM D-240-87 (Reapproved 1980) Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuel by Bomb Calorimeter.	§ 761.60(a)(3)(iii)(B)(6).
ASTM D-482-80 Standard Test Method for Ash from Petroleum Products.	§ 761.60(a)(3)(iii)(B)(6).
ASTM D-524-81 Standard Test Method for Ramsbottom Carbon Residue of Petroleum Products.	§ 761.60(a)(3)(iii)(B)(6).
ASTM D-808-81 Standard Test Method for Chlorine in New and Used Petroleum Products (Bomb Method).	§ 761.60(a)(3)(iii)(B)(6).
ASTM D-923-86 Standard Test Method for Sampling Electrical Insulating Liquids.	§ 761.60(g)(1)(ii); § 761.60(g)(2)(ii).
ASTM D-1266-80 (Reapproved 1981) Standard Test Method for Sulfur in Petroleum Products (Lamp Method).	§ 761.60(a)(3)(iii)(B)(6).
ASTM D-1756-83 (Reapproved 1977) Methods for Water and Sediment in Crude Oils and Fuel Oils by Centrifuge.	§ 761.60(a)(3)(iii)(B)(6).
ASTM D-2158-85 Standard Test Method for Residues in Liquefied Petroleum (LP) Gas.	§ 761.60(a)(3)(iii)(B)(6).
ASTM D-2709-68 (Reapproved 1982) Standard Test Method for Water and Sediment in Distillate Fuel by Centrifuge.	§ 761.60(a)(3)(iii)(B)(6).

References	CFR Citation
ASTM D-2784-80 Standard Test Method for Sulfur in Liquefied Petroleum Gases (Oxyhydrogen Burner or Lamp).	§ 761.60(a)(3)(iii)(B)(6).
ASTM D-3178-84 (Reapproved 1979) Standard Test Methods for Carbon and Hydrogen in the Analysis Sample of Coke and Coal.	§ 761.60(a)(3)(iii)(B)(6).
ASTM D-3278-78 (Reapproved 1982) Standard Test Methods for Flash Point of Liquid by Setflash Closed Tester.	§ 761.75(b)(8)(iii).
ASTM E-258-67 (Reapproved 1987) Standard Test Method for Total Nitrogen Inorganic Material by Modified Kjeldahl Method.	§ 761.60(a)(3)(iii)(B)(6).

[47 FR 22098, May 21, 1982, as amended at 49 FR 29067, July 18, 1984; 49 FR 36648, Sept. 19, 1984; 53 FR 10391, Mar. 31, 1988; 53 FR 12524, Apr. 15, 1988; 53 FR 21641, June 9, 1988]

Subpart B—Manufacturing, Processing, Distribution in Commerce, and Use of PCBs and PCB Items

§ 761.20 Prohibitions.

Except as authorized in § 761.30, the activities listed in paragraphs (a) and (d) of this section are prohibited pursuant to section 6(e)(2) of TSCA. The requirements set forth in paragraphs (b) and (c) of this section concerning export and import of PCBs for purposes of disposal and PCB Items for purposes of disposal are established pursuant to section 6(e)(1) of TSCA. Subject to any exemptions granted pursuant to section 6(e)(3)(B) of TSCA, the activities listed in paragraphs (b) and (c) of this section are prohibited pursuant to section (6)(e)(3)(A) of TSCA. In addition, the Administrator hereby finds, under the authority of section 12(a)(2) of TSCA, that the manufacture, processing, and distribution in commerce of PCBs at concentrations of 50 ppm or greater and PCB Items with PCB concentrations of 50 ppm or greater present an unreasonable risk of injury to health within the United States. This finding is based upon the well-documented human health and environmental hazard of PCB exposure, the high probability of human and environmental exposure to PCBs and PCB Items from manufacturing, processing, or

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distribution activities; the potential hazard of PCB exposure posed by the transportation of PCBs or PCB Items within the United States; and the evidence that contamination of the environment by PCBs is spread far beyond the areas where they are used. In addition, the Administrator hereby finds, for purposes of section 6(e)(2)(C) of TSCA, that any exposure of human beings or the environment to PCBs, as measured or detected by any scientifically acceptable analytical method, may be significant, depending on such factors as the quantity of PCBs involved in the exposure, the likelihood of exposure to humans and the environment, and the effect of exposure. For purposes of determining which PCB Items are totally enclosed, pursuant to section 6(e)(2)(C) of TSCA, since exposure to such Items may be significant, the Administrator further finds that a totally enclosed manner is a manner which results in no exposure to humans or the environment to PCBs. The following activities are considered totally enclosed: distribution in commerce of intact, nonleaking electrical equipment such as transformers (including transformers used in railway locomotives and self-propelled cars), capacitors, electromagnets, voltage regulators, switches (including sectionalizers and motor starters), circuit breakers, reclosers, and cable that contain PCBs at any concentration and processing and distribution in commerce of PCB Equipment containing an intact, nonleaking PCB Capacitor. See paragraph (c)(1) of this section for provisions allowing the distribution in commerce of PCBs and PCB Items.

(a) No persons may use any PCB, or any PCB Item regardless of concentration, in any manner other than in a totally enclosed manner within the United States unless authorized under § 761.30, except that:

(1) An authorization is not required to use those PCBs or PCB Items which consist of excluded PCB products as defined in § 761.3.

(2) An authorization is not required to use those PCBs or PCB Items resulting from an excluded manufacturing process or recycled PCBs as de-

fined in § 761.3, provided all applicable conditions of § 761.1(f) are met.

(3) An authorization is not required to use those PCB Items which contain or whose surfaces have been in contact with excluded PCB products as defined in § 761.3.

(4) An authorization is not required to apply sewage sludges, contaminated with PCBs below 50 ppm, to land when regulated by authorities under the Clean Water Act and the Resource Conservation and Recovery Act.

(b) No person may manufacture PCBs for use within the United States or manufacture PCBs for export from the United States without an exemption except that:

(1) No person may manufacture PCBs for use within the United States or manufacture PCBs for export from the United States without an exemption, except that an exemption is not required for PCBs manufactured in an excluded manufacturing process as defined in § 761.3, provided that all applicable conditions of § 761.1(f) are met.

(2) PCBs at concentrations less than 50 ppm may be imported or exported for purposes of disposal.

(c) No persons may process or distribute in commerce any PCB, or any PCB Item regardless of concentration for use within the United States or for export from the United States without an exemption, except that an exemption is not required to process or distribute in commerce PCBs or PCB Items resulting from an excluded manufacturing process as defined in § 761.3, or to process or distribute in commerce recycled PCBs as defined in § 761.3, or to process or distribute in commerce excluded PCB products as defined in § 761.3, provided that all applicable conditions of § 761.1(f) are met. In addition, the activities described in paragraphs (c) (1) through (5) of this section may also be conducted without an exemption, under the conditions specified therein.

(1) PCBs at concentrations of 50 ppm or greater, or PCB Items with PCB concentrations of 50 ppm or greater, sold before July 1, 1979 for purposes other than resale may be distributed in commerce only in a totally enclosed manner after that date.

(2) PCBs at concentrations of 50 ppm or greater, or PCB Items with PCB concentrations of 50 ppm or greater may be processed and distributed in commerce in compliance with the requirements of this Part for purposes of disposal in accordance with the requirements of § 761.60.

(3) PCBs or PCB Items may be exported for disposal until May 1, 1980, if an export notice is submitted at least thirty (30) days before the first shipment in any calendar year leaves the customs territory of the United States. Export notices must be submitted to the TSCA Document Processing Center (TS-790), Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. The generator of the PCB waste material intended for disposal, or an agent acting on his behalf, must certify to the best of his knowledge and belief that the information is complete and accurate. Each notice should contain the following information:

(i) Name, company name, address, and telephone number of the owner of the PCB waste material to be exported and the name and address of any person or agent acting on his behalf;

(ii) Estimated quantity of wastes to be shipped during the calendar year and the estimated number of shipments to be made and the dates when such shipments are expected to leave the customs territory of the United States;

(iii) Description of the PCBs or PCB Items being exported;

(iv) Country(s) of destination for the shipments;

(v) Name and address of facility(s) receiving the shipment and person(s) responsible for receiving the shipment(s).

(vi) Method(s) of disposal and precautions taken to control release into the environment.

(vii) No less than 30 days after the end of each calendar quarter (March 31, June 30, September 30, and December 31) during which PCBs were exported for disposal, each person exporting the PCBs must submit a report to the TSCA Document Processing Center (TS-790), Rm. L-100, Office of Toxic Substances, Environ-

mental Protection Agency, 401 M St., SW., Washington, DC 20460. The report shall list the quantity of PCB wastes in each shipment made during the quarter and include the date when each shipment left the customs territory of the United States and the information specified in paragraphs (c)(3)(i) and (iii) through (vi) of this section. If the quantity of wastes shipped during the calendar year exceeds by 25 percent or more the estimated quantities reported in paragraph (c)(3)(ii) of this section, a special export notice must be submitted to the TSCA Document Processing Center (TS-790) at the address given in paragraph (c)(3) of this section, at least 30 days before any additional shipments leave the customs territory of the United States and the notice shall include the information specified in paragraphs (c)(3)(i) through (vi) of this section.

(viii) Any person expecting to export PCB wastes for disposal in calendar year 1980 must submit an export notice at least thirty (30) days before the first shipment leaves the customs territory of the United States to the TSCA Document Processing Center (TS-790) at the address given in paragraph (c)(3) of this section, and the notice shall contain the information listed in paragraphs (c)(3)(i) through (vi) of this section.

(4) PCBs, at concentrations of less than 50 ppm, or PCB Items, with concentrations of less than 50 ppm, may be processed and distributed in commerce for purposes of disposal.

(5) Equipment, structures, or other materials that were contaminated with PCBs because of spills from, or proximity to, a PCB Item >50 ppm, and which are not otherwise authorized for use or distribution in commerce under this part, may be distributed in commerce, provided that these materials were decontaminated in accordance with applicable EPA PCB spill cleanup policies in effect at the time of the decontamination or, if not previously decontaminated, at the time of the distribution in commerce.

(d) The use of waste oil that contains any detectable concentration of PCB as a sealant, coating, or dust control agent is prohibited. Prohibited

uses include, but are not limited to, road oiling, general dust control, use as a pesticide or herbicide carrier, and use as a rust preventative on pipes.

(e) In addition to any applicable requirements under 40 CFR Part 266, subpart E, marketers and burners of used oil who market (process or distribute in commerce) for energy recovery, used oil containing any quantifiable level of PCBs are subject to the following requirements:

(1) *Restrictions on marketing.* Used oil containing any quantifiable level of PCBs (2 ppm) may be marketed only to:

(i) Qualified incinerators as defined in 40 CFR 761.3.

(ii) Other marketers identified in 40 CFR 266.41(a)(1).

(iii) Burners identified in 40 CFR 266.41(b). Only burners in the automotive industry may burn used oil generated from automotive sources in used oil-fired space heaters provided the provisions of 40 CFR 266.41(b)(2)(iii) (A), (B) and (C) are met. The Regional Administrator may grant a variance for a boiler that does not meet the 40 CFR 266.41(b) criteria after considering the criteria listed in 40 CFR 260.32 (a) through (f). The applicant must address the relevant criteria contained in 40 CFR 260.32 (a) through (f) in an application to the Regional Administrator.

(2) *Testing of used oil fuel.* Used oil to be burned for energy recovery is presumed to contain quantifiable levels (2 ppm) of PCB unless the marketer obtains analyses (testing) or other information that the used oil fuel does not contain quantifiable levels of PCBs.

(i) The person who first claims that a used oil fuel does not contain quantifiable level (2 ppm) PCB must obtain analyses or other information to support that claim.

(ii) Testing to determine the PCB concentration in used oil may be conducted on individual samples, or in accordance with the testing procedures described in § 761.60(g)(2). However, for purposes of this part, if any PCBs at a concentration of 50 ppm or greater have been added to the container or equipment, then the total container contents must be considered as having

a PCB concentration of 50 ppm or greater for purposes of complying with the disposal requirements of this part.

(iii) Other information documenting that the used oil fuel does not contain quantifiable levels (2 ppm) of PCBs may consist of either personal, special knowledge of the source and composition of the used oil, or a certification from the person generating the used oil claiming that the oil contains no detectable PCBs.

(3) *Restrictions on burning.* (i) Used oil containing any quantifiable levels of PCB may be burned for energy recovery only in the combustion facilities identified in paragraph (e)(1) of this section when such facilities are operating at normal operating temperatures (this prohibits feeding these fuels during either startup or shutdown operations). Owners and operators of such facilities are "burners" of used oil fuels.

(ii) Before a burner accepts from a marketer the first shipment of used oil fuel containing detectable PCBs (2 ppm), the burner must provide the marketer a one-time written and signed notice certifying that:

(A) The burner has complied with any notification requirements applicable to "qualified incinerators" (§ 761.3) or to "burners" regulated under 40 CFR Part 266, subpart E.

(B) The burner will burn the used oil only in a combustion facility identified in paragraph (e)(1) of this section, and identify the class of burner he qualifies.

(4) *Recordkeeping requirements.* The following recordkeeping requirements are in addition to the recordkeeping requirements for marketers found in 40 CFR 266.43(b)(6) (i) and (ii), and for burners found in 40 CFR 266.44(e).

(i) *Marketers.* Marketers who first claim that the used oil fuel contains no detectable PCBs must include among the records required by 40 CFR 266.43(b)(6)(i), copies of the analysis or other information documenting his claim, and he must include among the records required by 40 CFR 266.43(b)(6)(ii), a copy of each certification notice received or prepared relating to transactions involving PCB-containing used oil.

(ii) *Burners.* Burners must include among the records required by 40 CFR 266.44(e), a copy of each certification notice required by paragraph (e)(3)(iii) of this section that he sends to a marketer.

(Approved by the office of Management of Budget under OMB control number 2050-0047)

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020, (15 U.S.C. 2605)

[44 FR 31542, May 31, 1979. Redesignated at 47 FR 19527, May 6, 1982, and amended at 49 FR 25241, June 20, 1984; 49 FR 28190, July 10, 1984; 49 FR 44638, Nov. 8, 1984; 53 FR 12524, Apr. 15, 1988; 53 FR 24220, June 27, 1988]

§ 761.30 Authorizations.

The following non-totally enclosed PCB activities are authorized pursuant to section 6(e)(2)(B) of TSCA:

(a) *Use in and servicing of transformers (other than railroad transformers).* PCBs at any concentration may be used in transformers (other than in railroad locomotives and self-propelled railroad cars) and may be used for purposes of servicing including rebuilding these transformers for the remainder of their useful lives, subject to the following conditions:

(1) *Use conditions.* (i) As of October 1, 1985, the use and storage for reuse of PCB Transformers that pose an exposure risk to food or feed is prohibited.

(ii) As of October 1, 1990, the use of network PCB Transformers with higher secondary voltages (secondary voltages equal to or greater than 480 volts, including 480/277 volt systems) in or near commercial buildings is prohibited. Network PCB Transformers with higher secondary voltages which are removed from service in accordance with this requirement must either be reclassified to PCB Contaminated or non PCB status, placed into storage for disposal, or disposed.

(iii) Except as otherwise provided, as of October 1, 1985, the installation of PCB Transformers, which have been placed into storage for reuse or which have been removed from another location, in or near commercial buildings is prohibited.

(A) The installation of PCB Transformers on or after October 1, 1985,

however, and their use thereafter, is permitted either in an emergency situation, as defined in § 761.3, or in situations where the transformer has been retrofilled and is being placed into service in order to qualify for reclassification under paragraph (a)(2)(v) of this section.

(B) Installation of a PCB Transformer in an emergency situation is permitted when done in accordance with the following:

(1) Documentation to support the reason for the emergency installation of a PCB Transformer must be maintained at the owner's facility and completed within 30 days after installation of the PCB Transformer. The documentation must include, but is not limited to:

(i) The type of transformer, i.e., radial or lower or higher network, that requires replacement.

(ii) The type(s) of transformers, i.e., radial or lower or higher network, that must be used for replacement.

(iii) The date of transformer failure.

(iv) The date of subsequent replacement.

(v) The type of transformer, i.e., radial or lower or higher network, installed as a replacement.

(vi) A statement describing actions taken to locate a non-PCB or PCB-Contaminated transformer replacement.

(2) Such emergency installation is permitted until October 1, 1990, and the use of any PCB Transformer installed on such an emergency basis is permitted for 1 year from the date of installation or until October 1, 1990, whichever is earlier.

(3) PCB Transformers installed for emergency purposes may be subsequently reclassified; however, the transformer must be effectively reclassified to a non-PCB or PCB-Contaminated status within 1 year after installation or by October 1, 1990, whichever is earlier because the transformer was initially installed in an emergency situation.

(C) Installation of a retrofilled PCB Transformer for reclassification purposes is permitted when it is done in accordance with the following:

(1) Those who installed transformers for reclassification purposes must

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maintain on the owner's premises, completed within 30 days of installation, the following information:

(i) The date of installation.

(ii) The type of transformer, i.e., radial or lower or higher network, installed.

(iii) The PCB concentration, if known, at the time of installation.

(iv) The retrofill and reclassification schedule.

(2) For purposes of this paragraph, the installation of retrofilled PCB Transformers for purposes of reclassification under paragraph (a)(2)(v) of this section is permitted until October 1, 1990.

(i) However, the use of a retrofilled PCB Transformer installed for reclassification purposes is limited to 18 months after installation or until October 1, 1990, whichever is earlier.

(ii) Retrofilled mineral oil PCB Transformers may be installed for reclassification purposes indefinitely after October 1, 1990.

(iii) Once a retrofilled transformer has been installed for reclassification purposes, it must be tested 3 months after installation to ascertain the concentration of PCBs. If the PCB concentration is below 50 ppm, the transformer can be reclassified as a non-PCB Transformer. If the PCB concentration is between 50 and 500 ppm, the transformer can be reclassified as a PCB-Contaminated transformer. If the PCB concentration remains at 500 ppm or greater, the entire process must either be repeated until the transformer has been reclassified to a non-PCB or PCB-Contaminated transformer in accordance with paragraph (a)(2)(v) of this section or the transformer must be removed from service.

(D) Owners who installed PCB Transformers in emergency situations or for reclassification purposes between October 1, 1985 and September 1, 1988 must notify the Regional Administrator in writing by October 3, 1988 of such installation. The notification for emergency installation must include the information in paragraph (a)(1)(iii)(B)(1)(i) through (vi) of this section. The notification for reclassification must include the information in paragraph (a)(1)(iii)(C)(1)(i) through (iv) of this section. All PCB Trans-

formers installed in an emergency situation or installed for reclassification purposes are subject to the requirements of this Part 761.

(iv) As of October 1, 1990, all radial PCB Transformers, in use in or near commercial buildings, and lower secondary voltage network PCB Transformers not located in sidewalk vaults in or near commercial buildings (network transformers with secondary voltages below 480 volts) that have not been removed from service as provided in paragraph (a)(1)(iv)(B) of this section, must be equipped with electrical protection to avoid transformer ruptures caused by high current faults.

(A) Current-limiting fuses or other equivalent technology must be used to detect sustained high current faults and provide for complete deenergization of the transformer (within several hundredths of a second in the case of radial PCB Transformers and within tenths of a second in the case of lower secondary voltage network PCB Transformers), before transformer rupture occurs. The installation, setting, and maintenance of current-limiting fuses or other equivalent technology to avoid PCB Transformer ruptures from sustained high current faults must be completed in accordance with good engineering practices.

(B) All lower secondary voltage network PCB Transformers not located in sidewalk vaults (network transformers with secondary voltages below 480 volts), in use in or near commercial buildings, which have not been protected as specified in paragraph (a)(1)(iv)(A) of this section by October 1, 1990, must be removed from service by October 1, 1993.

(C) As of October 1, 1990, owners of lower secondary voltage network PCB Transformers, in use in or near commercial buildings which have not been protected as specified in paragraph (a)(1)(iv)(A) of this section and which are not located in sidewalk vaults, must register in writing those transformers with the EPA Regional Administrator in the appropriate region. The information required to be provided in writing to the Regional Administrator includes:

(1) The specific location of the PCB Transformer(s).

§ 761.60 Disposal requirements.

(a) **PCBs.** (1) Except as provided in paragraphs (a)(2), (3), (4), and (5) of this section, PCBs at concentrations of 50 ppm or greater must be disposed of in an incinerator which complies with § 761.70.

(2) Mineral oil dielectric fluid from PCB-Contaminated Electrical Equipment containing a PCB concentration of 50 ppm or greater, but less than 500 ppm, must be disposed of in one of the following:

(i) In an incinerator that complies with § 761.70;

(ii) In a chemical waste landfill that complies with § 761.75 if information is provided to the owner or operator of the chemical waste landfill that shows that the mineral oil dielectric fluid does not exceed 500 ppm PCB and is not an ignitable waste as described in § 761.75(b)(8)(iii);

(iii) In a high efficiency boiler provided that:

(A) The boiler complies with the following criteria:

(1) The boiler is rated at a minimum of 50 million BTU hours;

(2) If the boiler uses natural gas or oil as the primary fuel, the carbon monoxide concentration in the stack is 50 ppm or less and the excess oxygen is at least three (3) percent when PCBs are being burned;

(3) If the boiler uses coal as the primary fuel, the carbon monoxide concentration in the stack is 100 ppm or less and the excess oxygen is at least three (3) percent when PCBs are being burned;

(4) The mineral oil dielectric fluid does not comprise more than ten (10) percent (on a volume basis) of the total fuel feed rate;

(5) The mineral oil dielectric fluid is not fed into the boiler unless the boiler is operating at its normal operating temperature (this prohibits feeding these fluids during either start up or shut down operations);

(6) The owner or operator of the boiler:

(i) Continuously monitors and records the carbon monoxide concentration and excess oxygen percentage in the stack gas while burning mineral oil dielectric fluid; or

(ii) If the boiler will burn less than 30,000 gallons of mineral oil dielectric fluid per year, measures and records the carbon monoxide concentration and excess oxygen percentage in the stack gas at regular intervals of no longer than 60 minutes while burning mineral oil dielectric fluid.

(7) The primary fuel feed rates, mineral oil dielectric fluid feed rates, and total quantities of both primary fuel and mineral oil dielectric fluid fed to the boiler are measured and recorded at regular intervals of no longer than 15 minutes while burning mineral oil dielectric fluid.

(8) The carbon monoxide concentration and the excess oxygen percentage are checked at least once every hour that mineral oil dielectric fluid is burned. If either measurement falls below the levels specified in this rule, the flow of mineral oil dielectric fluid to the boiler shall be stopped immediately.

(B) Thirty days before any person burns mineral oil dielectric fluid in the boiler, the person gives written notice to the EPA Regional Administrator for the EPA Region in which the boiler is located and that the notice contains the following information:

(1) The name and address of the owner or operator of the boiler and the address of the boiler;

(2) The boiler rating in units of BTU/hour;

(3) The carbon monoxide concentration and the excess oxygen percentage in the stack of the boiler when it is operated in a manner similar to the manner in which it will be operated when mineral oil dielectric fluid is burned; and

(4) The type of equipment, apparatus, and procedures to be used to control the feed of mineral oil dielectric fluid to the boiler and to monitor and record the carbon monoxide concentration and excess oxygen percentage in the stack.

(C) When burning mineral oil dielectric fluid, the boiler must operate at a level of output no less than the output at which the measurements required under paragraph (a)(2)(iii)(B)(3) of this section were taken.

(D) Any person burning mineral oil dielectric fluid in a boiler obtains the

following information and retains the information for five years at the boiler location:

(1) The data required to be collected under paragraphs (a)(2)(A) (6) and (7) of this section; and

(2) The quantity of mineral oil dielectric fluid burned in the boiler each month;

(iv) In a facility that is approved in accordance with § 761.60(e). For the purpose of burning mineral oil dielectric fluid, an applicant under § 761.60(e) must show that his combustion process destroys PCBs as efficiently as does a high efficiency boiler, as defined in paragraph (a)(2)(iii) of this section, or a § 761.70 approved incinerator.

(3) Liquids, other than mineral oil dielectric fluid, containing a PCB concentration of 50 ppm or greater, but less than 500 ppm, shall be disposed of:

(i) In an incinerator which complies with § 761.70;

(ii) In a chemical waste landfill which complies with § 761.75 if information is provided to the owner or operator of the chemical waste landfill that shows that the waste does not exceed 500 ppm PCB and is not an ignitable waste as described in § 761.75(b)(8)(iii);

(iii) In a high efficiency boiler provided that.

(A) The boiler complies with the following criteria:

(1) The boiler is rated at a minimum of 50 million BTU/hour;

(2) If the boiler uses natural gas or oil as the primary fuel, the carbon monoxide concentration in the stack is 50 ppm or less and the excess oxygen is at least three (3) percent when PCBs are being burned;

(3) If the boiler uses coal as the primary fuel, the carbon monoxide concentration in the stack is 100 ppm or less and the excess oxygen is at least three (3) percent when PCBs are being burned;

(4) The waste does not comprise more than ten (10) percent (on a volume basis) of the total fuel feed rate;

(5) The waste is not fed into the boiler unless the boiler is operating at its normal operating temperature (this

prohibits feeding these fluids during either start up or shut down operations);

(6) The owner or operator of the boiler must:

(i) Continuously monitor and record the carbon monoxide concentration and excess oxygen percentage in the stack gas while burning waste fluid; or

(ii) If the boiler will burn less than 30,000 gallons of waste fluid per year, measure and record the carbon monoxide concentration and excess oxygen percentage in the stack gas at regular intervals of no longer than 60 minutes while burning waste fluid;

(7) The primary fuel feed rate, waste fluid feed rate, and total quantities of both primary fuel and waste fluid fed to the boiler must be measured and recorded at regular intervals of no longer than 15 minutes while burning waste fluid; and

(8) The carbon monoxide concentration and the excess oxygen percentage must be checked at least once every hour that the waste is burned. If either measurement falls below the levels specified in this rule, the flow of waste to the boiler shall be stopped immediately.

(B) Prior to any person burning these liquids in the boiler, approval must be obtained from the EPA Regional Administrator for the EPA Region in which the boiler is located and any persons seeking such approval must submit to the EPA Regional Administrator a request containing at least the following information:

(1) The name and address of the owner or operator of the boiler and the address of the boiler;

(2) The boiler rating in units of BTU/hour;

(3) The carbon monoxide concentration and the excess oxygen percentage in the stack of the boiler when it is operated in a manner similar to the manner in which it will be operated when low concentration PCB liquid is burned;

(4) The type of equipment, apparatus, and procedures to be used to control the feed of mineral oil dielectric fluid to the boiler and to monitor and record the carbon monoxide concentration and excess oxygen percentage in the stack;

(5) The type of waste to be burned (e.g., hydraulic fluid, contaminated fuel oil, heat transfer fluid, etc.);

(6) The concentration of PCBs and of any other chlorinated hydrocarbon in the waste and the results of analyses using the American Society of Testing and Materials (ASTM) methods as follows: Carbon and hydrogen content using ASTM D-3178-84, nitrogen content using ASTM E-258-67 (Reapproved 1987), sulfur content using ASTM D-2784-80, D-1266-80, or D-129-64, chlorine content using ASTM D-808-81, water and sediment content using either ASTM D-2709-68 or D-1796-83, ash content using D-482-80, calorific value using ASTM D-240-87, carbon residue using either ASTM D-2158-85 or D-524-81, and flash point using ASTM D-93-85.

(7) The quantity of wastes estimated to be burned in a thirty (30) day period;

(8) An explanation of the procedures to be followed to insure that burning the waste will not adversely affect the operation of the boiler such that combustion efficiency will decrease.

(C) On the basis of the information in paragraph (a)(3)(iii)(B) of this section and any other available information, the Regional Administrator may, at his discretion, find that the alternate disposal method will not present an unreasonable risk of injury to health or the environment and approve the use of the boiler;

(D) When burning PCB wastes, the boiler must operate at a level of output no less than the output at which the measurements required under paragraph (a)(3)(iii)(B)(3) of this section were taken; and

(E) Any person burning liquids in boilers approved as provided in paragraph (a)(3)(iii)(C) of this section, must obtain the following information and retain the information for five years at the boiler location:

(1) The data required to be collected in paragraphs (a)(3)(iii)(A) (6) and (7) of this section;

(2) The quantity of low concentration PCB liquid burned in the boiler each month.

(3) The analysis of the waste required by paragraph (a)(3)(iii)(B)(6) of this section taken once a month for

each month during which low concentration PCB liquid is burned in the boiler.

(iv) In a facility that is approved in accordance with § 761.60(e). For the purpose of burning liquids, other than mineral oil dielectric fluid, containing 50 ppm or greater PCB, but less than 500 ppm PCB, an applicant under § 761.60(e) must show that his combustion process destroys PCBs as efficiently as does a high efficiency boiler, as defined in § 761.60(a)(2)(iii), or a § 761.70 incinerator.

(4) Any non-liquid PCBs at concentrations of 50 ppm or greater in the form of contaminated soil, rags, or other debris shall be disposed of:

(i) In an incinerator which complies with § 761.70; or

(ii) In a chemical waste landfill which complies with § 761.75.

NOTE: Except as provided in § 761.75(b)(8)(ii), liquid PCBs shall not be processed into non-liquid forms to circumvent the high temperature incineration requirements of § 761.60(a).

(5) All dredged materials and municipal sewage treatment sludges that contain PCBs at concentrations of 50 ppm or greater shall be disposed of:

(i) In an incinerator which complies with § 761.70,

(ii) In a chemical waste landfill which complies with § 761.75; or

(iii) Upon application, using a disposal method to be approved by the Agency's Regional Administrator in the EPA Region in which the PCBs are located. Applications for disposal in a manner other than prescribed in paragraph (a)(5) (i) or (ii) of this section must be made in writing to the Regional Administrator. The application must contain information that, based on technical, environmental, and economic considerations, indicates that disposal in an incinerator or chemical waste landfill is not reasonable and appropriate, and that the alternate disposal method will provide adequate protection to health and the environment. The Regional Administrator may request other information that he or she believes to be necessary for evaluation of the alternate disposal method. Any approval by the Regional Administrator shall be in writing and

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may contain any appropriate limitations on the approved alternate method for disposal. In addition to these regulations, the Regional Administrator shall consider other applicable Agency guidelines, criteria, and regulations to ensure that the discharges of dredged material and sludges that contain PCBs and other contaminants are adequately controlled to protect the environment. The person to whom such approval is issued must comply with all limitations contained in the approval.

(6) When storage is desired prior to disposal, PCBs at concentrations of 50 ppm or greater shall be stored in a facility which complies with § 761.65.

(b) *PCB Articles*—(1) *Transformers*.

(i) PCB Transformers shall be disposed of in accordance with either of the following:

(A) In an incinerator that complies with § 761.70; or

(B) In a chemical waste landfill which complies with § 761.75; *Provided*, That the transformer is first drained of all free flowing liquid, filled with solvent, allowed to stand for at least 18 hours, and then drained thoroughly. PCB liquids that are removed shall be disposed of in accordance with paragraph (a) of this section. Solvents may include kerosene, xylene, toluene and other solvents in which PCBs are readily soluble. Precautionary measures should be taken, however, that the solvent flushing procedure is conducted in accordance with applicable safety and health standards as required by Federal or State regulations.

(ii) [Reserved]

(2) *PCB Capacitors*. (i) The disposal of any capacitor shall comply with all requirements of this subpart unless it is known from label or nameplate information, manufacturer's literature (including documented communications with the manufacturer), or chemical analysis that the capacitor does not contain PCBs.

(ii) Any person may dispose of PCB Small Capacitors as municipal solid waste, unless that person is subject to the requirements of paragraph (b)(2)(iv) of this section.

(iii) Any PCB Large High or Low Voltage Capacitor which contains 500 ppm or greater PCBs, owned by any

person, shall be disposed of in accordance with either of the following:

(A) Disposal in an incinerator that complies with § 761.70; or

(B) Until March 1, 1981, disposal in a chemical waste landfill that complies with § 761.75.

(iv) Any PCB Small Capacitor owned by any person who manufactures or a any time manufactured PCB Capacitors or PCB Equipment and acquired the PCB Capacitors in the course of such manufacturing shall be disposed of in accordance with either of the following:

(A) Disposal in an incinerator which complies with § 761.70; or

(B) Until March 1, 1981, disposal in a chemical waste landfill which complies with § 761.75.

(v) Notwithstanding the restrictions imposed by paragraph (b)(2)(iii)(B) or (b)(2)(iv)(B) of this section, PCB capacitors may be disposed of in PCB chemical waste landfills that comply with § 761.75 subsequent to March 1, 1981, if the Assistant Administrator for Pesticides and Toxic Substances publishes a notice in the FEDERAL REGISTER declaring that those landfills are available for such disposal and explaining the reasons for the extension or reopening. An extension or reopening for disposal of PCB capacitors that is granted under this subsection shall be subject to such terms and conditions as the Assistant Administrator may prescribe and shall be in effect for such period as the Assistant Administrator may prescribe. The Assistant Administrator may permit disposal of PCB capacitors in EPA approved chemical waste landfills after March 1, 1981, if in his opinion,

(A) Adequate incineration capability for PCB capacitors is not available, or

(B) The incineration of PCB capacitors will significantly interfere with the incineration of liquid PCBs, or

(C) There is other good cause shown

As part of this evaluation, the Assistant Administrator will consider the impact of his action on the incentives to construct or expand PCB incinerators.

(vi) Prior to disposal in a § 761.75 chemical waste landfill, all large PCB capacitors, and all small PCB capaci-

tors described in paragraph (b)(2)(iv) of this section, shall be placed in one of the Department of Transportation specification containers identified in § 761.65(c)(6) or in containers that comply with 49 CFR 178.118 (specification 17H containers). Large PCB capacitors which are too big to fit inside one of these containers shall be placed in a container with strength and durability equivalent to the DOT specification containers. In all cases, interstitial space in the container shall be filled with sufficient absorbent material (such as sawdust or soil) to absorb any liquid PCBs remaining in the capacitors.

(3) *PCB hydraulic machines.* PCB hydraulic machines containing PCBs at concentrations of 50 ppm or greater such as die casting machines may be disposed of as municipal solid waste or salvage provided that the machines are drained of all free-flowing liquid and the liquid is disposed of in accordance with the provisions of paragraph (a) of this section. If the PCB liquid contains 1000 ppm PCB or greater, then the hydraulic machine must be flushed prior to disposal with a solvent containing less than 50 ppm PCB under transformer solvents at paragraph (b)(1)(i)(B) of this section and the solvent disposed of in accordance with paragraph (a) of this section.

(4) *PCB-Contaminated Electrical Equipment.* All PCB-Contaminated Electrical Equipment except capacitors shall be disposed of by draining all free flowing liquid from the electrical equipment and disposing of the liquid in accordance with paragraph (a)(2) or (3) of this section. The disposal of the drained electrical equipment is not regulated by this rule. Capacitors that contain between 50 and 500 ppm PCBs shall be disposed of in an incinerator that complies with § 761.70 or in a chemical waste landfill that complies with § 761.75.

(5) *Other PCB Articles.* (i) PCB articles with concentrations at 500 ppm or greater must be disposed of:

(A) In an incinerator that complies with § 761.70; or

(B) In a chemical waste landfill that complies with § 761.75, provided that all free-flowing liquid PCBs have been thoroughly drained from any articles

before the articles are placed in the chemical waste landfill and that the drained liquids are disposed of in an incinerator that complies with § 761.70.

(ii) PCB Articles with a PCB concentration between 50 and 500 ppm must be disposed of by draining all free flowing liquid from the article and disposing of the liquid in accordance with paragraph (a)(2) or (3) of this section. The disposal of the drained article is not regulated by this rule.

(6) *Storage of PCB Articles.* Except for a PCB Article described in paragraph (b)(2)(ii) of this section and hydraulic machines that comply with the municipal solid waste disposal provisions described in paragraph (b)(3) of this section, any PCB Article, with PCB concentrations at 50 ppm or greater, shall be stored in accordance with § 761.65 prior to disposal.

(c) *PCB Containers.* (1) Unless decontaminated in compliance with § 761.79 or as provided in paragraph (c)(2) of this section, a PCB container with PCB concentrations at 500 ppm or greater shall be disposed of:

(i) In an incinerator which complies with § 761.70, or

(ii) In a chemical waste landfill that complies with § 761.75; provided that if there are PCBs in a liquid state, the PCB container shall first be drained and the PCB liquid disposed of in accordance with paragraph (a) of this section.

(2) Any PCB Container used to contain only PCBs at a concentration less than 500 ppm shall be disposed of as municipal solid wastes; provided that if the PCBs are in a liquid state, the PCB Container shall first be drained and the PCB liquid shall be disposed of in accordance with paragraph (a) of this section.

(3) Prior to disposal, a PCB container with PCB concentrations at 50 ppm or greater shall be stored in a facility which complies with § 761.65.

(d) *Spills.* (1) Spills and other uncontrolled discharges of PCBs at concentrations of 50 ppm or greater constitute the disposal of PCBs.

(2) PCBs resulting from the clean-up and removal of spills, leaks, or other uncontrolled discharges, must be

stored and disposed of in accordance with paragraph (a) of this section.

(3) These regulations do not exempt any person from any actions or liability under other statutory authorities, including but not limited to the Clean Water Act, the Resource Conservation and Recovery Act, and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

(e) Any person who is required to incinerate any PCBs and PCB Items under this subpart and who can demonstrate that an alternative method of destroying PCBs and PCB Items exists and that this alternative method can achieve a level of performance equivalent to § 761.70 incinerators or high efficiency boilers as provided in paragraphs (a)(2)(iv) and (a)(3)(iv) of this section, may submit a written request to either the Regional Administrator or the Director, Exposure Evaluation Division for an exemption from the incineration requirements of § 761.70 or § 761.60. Requests for approval of alternate methods that will be operated in more than one region must be submitted to the Director, Exposure Evaluation Division except for research and development involving less than 500 pounds of PCB material (see paragraph (i)(2) of this section). Requests for approval of alternate methods that will be operated in only one region must be submitted to the appropriate Regional Administrator. The applicant must show that his method of destroying PCBs will not present an unreasonable risk of injury to health or the environment. On the basis of such information and any available information, the Regional Administrator or the Director, Exposure Evaluation Division may, in his discretion, approve the use of the alternate method if he finds that the alternate disposal method provides PCB destruction equivalent to disposal in a § 761.70 incinerator or a § 761.60 high efficiency boiler and will not present an unreasonable risk of injury to health or the environment. Any approval must be stated in writing and may contain such conditions and provisions as the Regional Administrator or Director, Exposure Evaluation Division deems appropriate. The person to whom such

waiver is issued must comply with all limitations contained in such determination.

(f)(1) Each operator of a chemical waste landfill, incinerator, or alternative to incineration approved under paragraph (e) of this section shall give the following written notices to the state and local governments within whose jurisdiction the disposal facility is located:

(i) Notice at least thirty (30) days before a facility is first used for disposal of PCBs required by these regulations; and

(ii) At the request of any state or local government, annual notice of the quantities and general description of PCBs disposed of during the year. This annual notice shall be given no more than thirty (30) days after the end of the year covered.

(iii) The Regional Administrator may reduce the notice period required by paragraph (f)(1)(i) of this section from thirty days to a period of no less than five days in order to expedite interim approval of the chemical waste landfill located in Sedgwick County, Kansas.

(2) Any person who disposes of PCBs under a paragraph (a)(5)(iii) of this section incineration or chemical waste landfilling waiver shall give written notice at least thirty (30) days prior to conducting the disposal activities to the state and local governments within whose jurisdiction the disposal is to take place.

(g) *Testing procedures.* (1) Owners or users of mineral oil dielectric fluid electrical equipment may use the following procedures to determine the concentration of PCBs in the dielectric fluid:

(i) Dielectric fluid removed from mineral oil dielectric fluid electrical equipment may be collected in a common container, provided that no other chemical substances or mixtures are added to the container. This common container option does not permit dilution of the collected oil. Mineral oil that is assumed or known to contain at least 50 ppm PCBs must not be mixed with mineral oil that is known or assumed to contain less than 50 ppm PCBs to reduce the concentration of PCBs in the common contain-

er. If dielectric fluid from untested, oil-filled circuit breakers, reclosers, or cable is collected in a common container with dielectric fluid from other oil-filled electrical equipment, the entire contents of the container must be treated as PCBs at a concentration of at least 50 ppm, unless all of the fluid from the other oil-filled electrical equipment has been tested and shown to contain less than 50 ppm PCBs.

(ii) For purposes of complying with the marking and disposal requirements, representative samples may be taken from either the common containers or the individual electrical equipment to determine the PCB concentration, except that if any PCBs at a concentration of 500 ppm or greater have been added to the container or equipment then the total container contents must be considered as having a PCB concentration of 500 ppm or greater for purposes of complying with the disposal requirements of this subpart. For purposes of this subparagraph, representative samples of mineral oil dielectric fluid are either samples taken in accordance with ASTM D 923-86 or samples taken from a container that has been thoroughly mixed in a manner such that any PCBs in the container are uniformly distributed throughout the liquid in the container.

(2) Owners or users of waste oil may use the following procedures to determine the PCB concentration of waste oil:

(i) Waste oil from more than one source may be collected in a common container, provided that no other chemical substances or mixtures, such as non-waste oils, are added to the container.

(ii) For purposes of complying with the marking and disposal requirements, representative samples may be taken from either the common containers or the individual electrical equipment to determine the PCB concentration. *Except*, That if any PCBs at a concentration of 500 ppm or greater have been added to the container or equipment then the total container contents must be considered as having a PCB concentration of 500 ppm or greater for purposes of complying with the disposal requirements

of this subpart. For purposes of this paragraph, representative samples of mineral oil dielectric fluid are either samples taken in accordance with ASTM D 923-86 or samples taken from a container that has been thoroughly mixed in a manner such that any PCBs in the container are uniformly distributed throughout the liquid in the container.

(h) Requirements for export and import of PCBs for purposes of disposal and PCB Items for purposes of disposal are found in § 761.20.

(i) *Approval authority for disposal methods.* (1) The officials (the Director, Exposure Evaluation Division and the Regional Administrators) designated in §§ 761.60(e) and 761.70(a) and (b) to receive requests for approval of PCB disposal activities are the primary approval authorities for these activities. Notwithstanding, the Director, Exposure Evaluation Division may, at his/her discretion, assign the authority to review and approve any aspect of a disposal system to the Office of Pesticides and Toxic Substances or to a Regional Administrator.

(2) Except for activity authorized under § 761.30(j), research and development (R and D) into PCB disposal methods using a total of less than 500 pounds of PCB material (regardless of PCB concentration) will be reviewed and approved by the appropriate EPA Regional Administrator and research and development using 500 pounds or more of PCB material (regardless of PCB concentration) will be reviewed by the approval authorities set out in §§ 761.60(e) and 761.70(a) and (b).

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2605)

[44 FR 31542, May 31, 1979, as amended at 44 FR 54297, Sept. 19, 1979; 45 FR 20475, Mar. 28, 1980. Redesignated at 47 FR 19527, May 6, 1982, and amended at 47 FR 37359, Aug. 25, 1982; 48 FR 5730, Feb. 8, 1983; 48 FR 13185, Mar. 30, 1983; 48 FR 15125, Apr. 7, 1983; 49 FR 28191, July 10, 1984; 49 FR 36648, Sept. 19, 1984; 53 FR 10391, Mar. 31, 1988; 53 FR 12524, Apr. 15, 1988; 53 FR 21641, June 9, 1988; 54 FR 22595, May 25, 1989]

§ 761.65 Storage for disposal.

This section applies to the storage for disposal of PCBs at concentrations of 50 ppm or greater and PCB Items with PCB concentrations of 50 ppm or greater.

(a) Any PCB Article or PCB Container stored for disposal before January 1, 1983, shall be removed from storage and disposed of as required by this part before January 1, 1984. Any PCB Article or PCB Container stored for disposal after January 1, 1983, shall be removed from storage and disposed of as required by subpart D of this part within one year from the date when it was first placed into storage.

(b) Except as provided in paragraph (c) of this section, after July 1, 1978, owners or operators of any facilities used for the storage of PCBs and PCB Items designated for disposal shall comply with the following requirements:

(1) The facilities shall meet the following criteria:

(i) Adequate roof and walls to prevent rain water from reaching the stored PCBs and PCB Items;

(ii) An adequate floor which has continuous curbing with a minimum six inch high curb. The floor and curbing must provide a containment volume equal to at least two times the internal volume of the largest PCB Article or PCB Container stored therein or 25 percent of the total internal volume of all PCB Articles or PCB Containers stored therein, whichever is greater;

(iii) No drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to flow from the curbed area;

(iv) Floors and curbing constructed of continuous smooth and impervious materials, such as Portland cement concrete or steel, to prevent or minimize penetration of PCBs; and

(v) Not located at a site that is below the 100-year flood water elevation.

(2) [Reserved]

(c)(1) The following PCB Items may be stored temporarily in an area that does not comply with the requirements of paragraph (b) of this section for up to thirty days from the date of their removal from service, provided that a notation is attached to the PCB

Item or a PCB Container (containing the item) indicating the date the item was removed from service:

(i) Non-leaking PCB Articles and PCB Equipment;

(ii) Leaking PCB Articles and PCB Equipment if the PCB Items are placed in a non-leaking PCB Container that contains sufficient sorbent materials to absorb any liquid PCBs remaining in the PCB Items;

(iii) PCB Containers containing non-liquid PCBs such as contaminated soil, rags, and debris; and

(iv) PCB Containers containing liquid PCBs at a concentration between 50 and 500 ppm, provided a Spill Prevention, Control and Countermeasure Plan has been prepared for the temporary storage area in accordance with 40 CFR Part 112. In addition, each container must bear a notation that indicates that the liquids in the drum do not exceed 500 ppm PCB.

(2) Non-leaking and structurally undamaged PCB Large High Voltage Capacitors and PCB-Contaminated Electrical Equipment that have not been drained of free flowing dielectric fluid may be stored on pallets next to a storage facility that meets the requirements of paragraph (b) of this section. PCB-Contaminated Electrical Equipment that has been drained of free flowing dielectric fluid is not subject to the storage provisions of § 761.65. Storage under this subparagraph will be permitted only when the storage facility has immediately available unfilled storage space equal to 10 percent of the volume of capacitors and equipment stored outside the facility. The capacitors and equipment temporarily stored outside the facility shall be checked for leaks weekly.

(3) Any storage area subject to the requirements of paragraph (b) or paragraph (c)(1) of this section shall be marked as required in subpart C—§ 761.40(a)(10).

(4) No item of movable equipment that is used for handling PCBs and PCB Items in the storage facilities and that comes in direct contact with PCBs shall be removed from the storage facility area unless it has been decontaminated as specified in § 761.79.

(5) All PCB Articles and PCB Containers in storage shall be checked for

the sample collector who must then properly dispose of the sample. If the laboratory returns the sample to the sample collector, the laboratory must comply with the shipping requirements set forth in paragraph (i)(3)(i) through (i)(3)(iii) of this section.

(j) *States and the Federal Government.* States and the Federal Government are exempt from the requirements of paragraphs (f) and (g) of this section.

(Approved by the Office of Management and Budget under control number 2070-0112)

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2605)

[44 FR 31542, May 31, 1979. Redesignated at 47 FR 19527, May 6, 1982, and amended at 47 FR 37359, Aug. 8, 1982; 49 FR 28191, July 10, 1984; 53 FR 12524, Apr. 15, 1988; 54 FR 52746, Dec. 21, 1989; 55 FR 695, Jan. 8, 1990; 55 FR 26205, June 27, 1990]

§ 761.70 Incineration.

This section applies to facilities used to incinerate PCBs required to be incinerated by this part.

(a) *Liquid PCBs.* An incinerator used for incinerating PCBs shall be approved by an EPA Regional Administrator or the Director, Exposure Evaluation Division pursuant to paragraph (d) of this section. Requests for approval of incinerators to be used in more than one region must be submitted to the Director, Exposure Evaluation Division, except for research and development involving less than 500 pounds of PCB material (see § 761.60(i)(2)). Requests for approval of incinerators to be used in only one region must be submitted to the appropriate Regional Administrator. The incinerator shall meet all of the requirements specified in paragraphs (a) (1) through (9) of this section, unless a waiver from these requirements is obtained pursuant to paragraph (d)(5) of this section. In addition, the incinerator shall meet any other requirements which may be prescribed pursuant to paragraph (d)(4) of this section.

(1) Combustion criteria shall be either of the following:

(i) Maintenance of the introduced liquids for a 2-second dwell time at 1200°C(±100°C) and 3 percent excess oxygen in the stack gas; or

(ii) Maintenance of the introduced liquids for a 1½ second dwell time at 1600°C(±100°C) and 2 percent excess oxygen in the stack gas.

(2) Combustion efficiency shall be at least 99.9 percent computed as follows:

Combustion efficiency =

$(Cco_2 / (Cco_2 + Cco))100$

where

Cco₂ = Concentration of carbon dioxide.

Cco = Concentration of carbon monoxide.

(3) The rate and quantity of PCBs which are fed to the combustion system shall be measured and recorded at regular intervals of no longer than 15 minutes.

(4) The temperatures of the incineration process shall be continuously measured and recorded. The combustion temperature of the incineration process shall be based on either direct (pyrometer) or indirect (wall thermocouple-pyrometer correlation) temperature readings.

(5) The flow of PCBs to the incinerator shall stop automatically whenever the combustion temperature drops below the temperatures specified in paragraph (a)(1) of this section.

(6) Monitoring of stack emission products shall be conducted:

(i) When an incinerator is first used for the disposal of PCBs under the provisions of this regulation;

(ii) When an incinerator is first used for the disposal of PCBs after the incinerator has been modified in a manner which may affect the characteristics of the stack emission products; and

(iii) At a minimum such monitoring shall be conducted for the following parameters:

(a) O₂; (b) CO; (c) CO₂; (d) Oxides of Nitrogen (NO_x); (e) Hydrochloric Acid (HCl); (f) Total Chlorinated Organic Content (RCI); (g) PCBs; and (h) Total Particulate Matter.

(7) At a minimum monitoring and recording of combustion products and incineration operations shall be conducted for the following parameters whenever the incinerator is incinerating PCBs:

(i) O₂; (ii) CO; and (iii) CO₂. The monitoring for O₂ and CO shall be continuous. The monitoring for CO₂ shall be periodic, at a frequency speci-

fied by the Regional Administrator or Director, Exposure Evaluation Division.

(8) The flow of PCBs to the incinerator shall stop automatically when any one or more of the following conditions occur, unless a contingency plan is submitted by the incinerator owner or operator and approved by the Regional Administrator or Director, Exposure Evaluation Division. The contingency plan indicates what alternative measures the incinerator owner or operator would take if any of the following conditions occur:

(i) Failure of monitoring operations specified in paragraph (a)(7) of this section;

(ii) Failure of the PCB rate and quantity measuring and recording equipment specified in paragraph (a)(3) of this section; or

(iii) Excess oxygen falls below the percentage specified in paragraph (a)(1) of this section.

(9) Water scrubbers shall be used for HCl control during PCB incineration and shall meet any performance requirements specified by the appropriate EPA Regional Administrator or the Director, Exposure Evaluation Division. Scrubber effluent shall be monitored and shall comply with applicable effluent or pretreatment standards, and any other State and Federal laws and regulations. An alternate method of HCl control may be used if the alternate method has been approved by the Regional Administrator or the Director, Exposure Evaluation Division. (The HCl neutralizing capability of cement kilns is considered to be an alternate method.)

(b) *Nonliquid PCBs.* An incinerator used for incinerating nonliquid PCBs, PCB Articles, PCB Equipment, or PCB Containers shall be approved by the appropriate EPA Regional Administrator or the Director, Exposure Evaluation Division pursuant to paragraph (d) of this section. Requests for approval of incinerators to be used in more than one region must be submitted to the Director, Exposure Evaluation Division, except for research and development involving less than 500 pounds of PCB material (see § 761.60(i)(2)). Requests for approval of incinerators to be used in only one

region must be submitted to the appropriate Regional Administrator. The incinerator shall meet all of the requirements specified in paragraphs (b)(1) and (2) of this section unless a waiver from these requirements is obtained pursuant to paragraph (d)(5) of this section. In addition, the incinerator shall meet any other requirements that may be prescribed pursuant to paragraph (d)(4) of this section.

(1) The mass air emissions from the incinerator shall be no greater than 0.001g PCB/kg of the PCB introduced into the incinerator.

(2) The incinerator shall comply with the provisions of paragraphs (a)(2), (3), (4), (6), (7), (8)(i) and (iii) and (9) of this section.

(c) *Maintenance of data and records.* All data and records required by this section shall be maintained in accordance with § 761.180, Records and monitoring.

(d) *Approval of incinerators.* Prior to the incineration of PCBs and PCB Articles the owner or operator of an incinerator shall receive the written approval of the Agency Regional Administrator for the region in which the incinerator is located, or the Director, Exposure Evaluation Division. Approval from the Director, Exposure Evaluation Division may be effective in all ten EPA regions. Such approval shall be obtained in the following manner:

(1) *Application.* The owner or operator shall submit to the Regional Administrator or the Director, Exposure Evaluation Division an application which contains:

(i) The location of the incinerator;

(ii) A detailed description of the incinerator including general site plans and design drawings of the incinerator;

(iii) Engineering reports or other information on the anticipated performance of the incinerator;

(iv) Sampling and monitoring equipment and facilities available;

(v) Waste volumes expected to be incinerated;

(vi) Any local, State, or Federal permits or approvals; and

(vii) Schedules and plans for complying with the approval requirements of this regulation.

(2) *Trial burn.* (i) Following receipt of the application described in paragraph (d)(1) of this section, the Regional Administrator or the Director, Exposure Evaluation Division shall determine if a trial burn is required and notify the person who submitted the report whether a trial burn of PCBs and PCB Items must be conducted. The Regional Administrator or the Director, Exposure Evaluation Division may require the submission of any other information that the Regional Administrator or the Director, Exposure Evaluation Division finds to be reasonably necessary to determine the need for a trial burn. Such other information shall be restricted to the types of information required in paragraphs (d)(1)(i) through (vii) of this section.

(ii) If the Regional Administrator or the Director, Exposure Evaluation Division determines that a trial burn must be held, the person who submitted the report described in paragraph (d)(1) of this section shall submit to the Regional Administrator or the Director, Exposure Evaluation Division a detailed plan for conducting and monitoring the trial burn. At a minimum, the plan must include:

(A) Date trial burn is to be conducted;

(B) Quantity and type of PCBs and PCB Items to be incinerated;

(C) Parameters to be monitored and location of sampling points;

(D) Sampling frequency and methods and schedules for sample analyses; and

(E) Name, address, and qualifications of persons who will review analytical results and other pertinent data, and who will perform a technical evaluation of the effectiveness of the trial burn.

(iii) Following receipt of the plan described in paragraph (d)(2)(ii) of this section, the Regional Administrator or the Director, Exposure Evaluation Division will approve the plan, require additions or modifications to the plan, or disapprove the plan. If the plan is disapproved, the Regional Administrator or the Director, Exposure Evaluation Division will notify the person who submitted the plan of such disapproval, together with the reasons why it is disapproved. That person may

thereafter submit a new plan in accordance with paragraph (d)(2)(ii) of this section. If the plan is approved (with any additions or modifications which the Regional Administrator or the Director, Exposure Evaluation Division may prescribe), the Regional Administrator or the Director, Exposure Evaluation Division will notify the person who submitted the plan of the approval. Thereafter, the trial burn shall take place at a date and time to be agreed upon between the Regional Administrator or the Director, Exposure Evaluation Division and the person who submitted the plan.

(3) *Other information.* In addition to the information contained in the report and plan described in paragraphs (d)(1) and (2) of this section, the Regional Administrator or the Assistant Administrator for Pesticides and Toxic Substances may require the owner or operator to submit any other information that the Regional Administrator or the Assistant Administrator for Pesticides and Toxic Substances finds to be reasonably necessary to determine whether an incinerator shall be approved.

NOTE: The Regional Administrator will have available for review and inspection an Agency manual containing information on sampling methods and analytical procedures for the parameters required in § 761.70(a) (3), (4), (6), and (7) plus any other parameters he/she may determine to be appropriate. Owners or operators are encouraged to review this manual prior to submitting any report required in § 761.70.

(4) *Contents of approval.* (i) Except as provided in paragraph (d)(5) of this section, the Regional Administrator or the Director, Exposure Evaluation Division may not approve an incinerator for the disposal of PCBs and PCB Items unless he finds that the incinerator meets all of the requirements of paragraphs (a) and/or (b) of this section.

(ii) In addition to the requirements of paragraphs (a) and/or (b) of this section, the Regional Administrator or the Director, Exposure Evaluation Division may include in an approval any other requirements that the Regional Administrator or the Director, Exposure Evaluation Division finds are necessary to ensure that operation of the

incinerator does not present an unreasonable risk of injury to health or the environment from PCBs. Such requirements may include a fixed period of time for which the approval is valid.

(5) *Waivers.* An owner or operator of the incinerator may submit evidence to the Regional Administrator or the Director, Exposure Evaluation Division that operation of the incinerator will not present an unreasonable risk of injury to health or the environment from PCBs, when one or more of the requirements of paragraphs (a) and/or (b) of this section are not met. On the basis of such evidence and any other available information, the Regional Administrator or the Director, Exposure Evaluation Division may in his/her discretion find that any requirement of paragraphs (a) and (b) of this section is not necessary to protect against such a risk, and may waive the requirements in any approval for that incinerator. Any finding and waiver under this paragraph must be stated in writing and included as part of the approval.

(6) *Persons approved.* An approval will designate the persons who own and who are authorized to operate the incinerator, and will apply only to such persons, except as provided in paragraph (d)(8) of this section.

(7) *Final approval.* Approval of an incinerator will be in writing and signed by the Regional Administrator or the Director, Exposure Evaluation Division. The approval will state all requirements applicable to the approved incinerator.

(8) *Transfer of property.* Any person who owns or operates an approved incinerator must notify EPA at least 30 days before transferring ownership in the incinerator or the property it stands upon, or transferring the right to operate the incinerator. The transferor must also submit to EPA, at least 30 days before such transfer, a notarized affidavit signed by the transferee which states that the transferee will abide by the transferor's EPA incinerator approval. Within 30 days of receiving such notification and affidavit, EPA will issue an amended approval substituting the transferee's name for the transferor's name, or EPA may require the transferee to apply for a new

incinerator approval. In the latter case, the transferee must abide by the transferor's EPA approval until EPA issues the new approval to the transferee.

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020, 15 U.S.C. 2605)

[44 FR 31542, May 31, 1979. Redesignated at 47 FR 19527, May 6, 1982, and amended at 48 FR 13185, Mar. 30, 1983; 49 FR 28191, July 10, 1984; 53 FR 12524, Apr. 15, 1988]

§ 761.75 Chemical waste landfills.

This section applies to facilities used to dispose of PCBs in accordance with the part.

(a) *General.* A chemical waste landfill used for the disposal of PCBs and PCB Items shall be approved by the Agency Regional Administrator pursuant to paragraph (c) of this section. The landfill shall meet all of the requirements specified in paragraph (b) of this section, unless a waiver from these requirements is obtained pursuant to paragraph (c)(4) of this section. In addition, the landfill shall meet any other requirements that may be prescribed pursuant to paragraph (c)(3) of this section.

(b) *Technical requirements.* Requirements for chemical waste landfills used for the disposal of PCBs and PCB Items are as follows:

(1) *Soils.* The landfill site shall be located in thick, relatively impermeable formations such as large-area clay pans. Where this is not possible, the soil shall have a high clay and silt content with the following parameters:

(i) In-place soil thickness, 4 feet or compacted soil liner thickness, 3 feet;

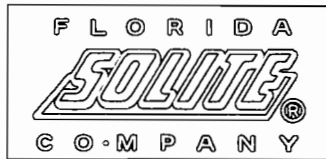
(ii) Permeability (cm/sec), equal to or less than 1×10^{-7} ;

(iii) Percent soil passing No. 200 Sieve, >30;

(iv) Liquid Limit, >30; and

(v) Plasticity Index >15.

(2) *Synthetic membrane liners.* Synthetic membrane liners shall be used when, in the judgment of the Regional Administrator, the hydrologic or geologic conditions at the landfill require such a liner in order to provide at least a permeability equivalent to the soils in paragraph (b)(1) of this section. Whenever a synthetic liner is used at a landfill site, special precautions shall



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DECEMBER 18, 1991

Ms. PATTI ADAMS
FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION
2600 BLAIRSTONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

RE: PERMIT 1A

DEAR Ms. ADAMS:

ENCLOSED IS THE CHECK NUMBER 1688 IN THE AMOUNT OF
\$250.00 FOR PERMIT MODIFICATION ON KILN 1A.

PERMIT NUMBER IS AC-10-125262;

THIS HAS BEEN FORWARDED PER WILLARD HANKS INSTRUCTIONS.

CORDIALLY,

A handwritten signature in cursive script that reads "Tony Saunders".

TONY SAUNDERS,
PLANT MANAGER

ENCL: CHECK

601031

TS/MR



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FLORIDA SOLITE CO. 12-73
PETTY CASH ACCOUNT
P. O. BOX 297
GREEN COVE SPRINGS, FL 32043

Best Available Copy

1688

~~63-2~~ 29
630

12-18

19 91

PAY TO THE ORDER OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

\$ 250.00

TWO HUNDRED FIFTY AND 00-100----- DOLLARS

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UNION

First Union National Bank
of Florida
Green Cove Springs, Florida 32043

FOR PERMIT #1A

Miriam Robertson

FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION
2600 BLAIRSTONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

RE: PERMIT 1A

DEAR MS. ADAMS:

ENCLOSED IS THE CHECK NUMBER 1688 IN THE AMOUNT OF
\$250.00 FOR PERMIT MODIFICATION ON KILN 1A.

PERMIT NUMBER IS AC-10-125262;

THIS HAS BEEN FORWARDED PER WILLARD HANKS INSTRUCTIONS.

CORDIALLY,

Tony Saunders

TONY SAUNDERS,
PLANT MANAGER

ENCL: CHECK

601031

TS/MR



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ENVIRONMENTAL SERVICES

4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 • FAX 377-7158

KA 150-90-07

December 11, 1991

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

Subject: Clay County - AP
Florida Solite Company
Kiln 1A, Permit AC10-125262
Permit Modification Request

Dear Mr. Fancy:

On July 15, 1991, the Florida Solite Company requested a change in the definition of the liquid fuels, burned in Kiln 1A, in the above referenced permit.

The definition of the liquid burnable material (LBM) proposed by Solite would have allowed for a polychlorinated biphenyls (PCBs) content in the fuel up to 50 ppm. The FDER response (permit amendment dated November 5, 1991) allows for a PCB content up to 2 ppm only. Consequently, Solite is hereby requesting that Specific Condition 16 in the above referenced permit be changed to allow a PCB content in the LBM of up to 50 ppm given the information below.

PCBs are regulated by federal laws under the Toxics Substance Control Act in 40CFR761. Included in this rule is a definition of excluded PCB products.

EXCLUDED PCB PRODUCTS - means PCB materials which appear at concentrations less than 50 ppm, including but not limited to

Solite is proposing the 50 ppm PCB concentration limit for LBM in line with the above provisions of 40CFR761. Background information on this subject is presented in Attachment 1.

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Division of Air
Resources Management

The proposed increase in PCBs burned will result in an increase in the products of PCB combustion including carbon dioxide, carbon monoxide, hydrogen chloride (HCl) and water vapor. Of consequence would be the HCl emissions and are therefore estimated below:

Increase in PCBs burned

$$\begin{aligned} &= 476 \text{ gal LBM/hr} \times 8.0 \text{ lb/gal} \times (50-2) \times 10^{-6} \text{ lb PCB/lb LBM} \\ &= 0.18 \text{ lb PCB/hr} \end{aligned}$$

Increase in HCl emissions

$$\begin{aligned} &= 0.18 \text{ lb PCB/hr} \times 0.55 \text{ lb Cl/lb PCB} \times 36.5 \text{ lb HCl/35.5 lb Cl} \\ &= 0.10 \text{ lb HCl/hr} \times 7600 \text{ hrs/yr} \times \text{ton/2000 lb} \\ &= 0.40 \text{ tpy HCl} \end{aligned}$$

Increase in HCl concentrations

$$\begin{aligned} &= [0.1 \text{ lb HCl/hr} \times 385 \text{ ft}^3/\text{mole} \times \text{mole}/36.5 \text{ lb HCl}] / \\ &\quad [30,000 \text{ ft}^3 \text{ flue gas/min} \times 60 \text{ min/hr}] \times 10^6 \\ &= 0.60 \text{ ppm} \end{aligned}$$

The above calculations are based on:

- A. Currently permitted LBM feed rate of 476 gallons per hour.
- B. Thermal destruction of all PCBs (See Attachment 2).
- C. Cl content in PCB of 55% (See Attachment 3).
- D. Flue gas flow rate of 30,000 cubic feet per minute (See Attachment 4).

Considering that the estimated increase in HCl emissions is not significant and that the increase in HCl concentration in the exit gas stream is far below even the error margin associated with HCl concentration measurements, it is requested that Specific Condition 16 be amended by letter.

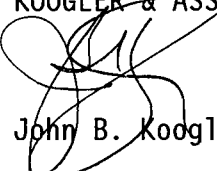
Mr. C. H. Fancy
Florida Department
of Environmental Regulation

December 11, 1991
Page 3

If you have any questions, please do not hesitate to give me a call.

Very truly yours,

KOOGLER & ASSOCIATES


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

JBK:wa
Enc.

c: Mr. E. Martin, Solite
Mr. G. Williamson, Solite
Mr. T. Saunders, Florida Solite
Mr. A. Galliano, Florida Solite

J. Hanks
A. Kutzma, NE Dist.
CHF/BA/PL



ATTACHMENT 1

ATTACHMENT 1

Polychlorinated Biphenyls (PCBs) are regulated by federal laws codified at 40CFR761. The rules of this section are included under the Toxics Substance Control Act. Rules established under the Resource Conservation and Recovery Act (RCRA), codified at 40CFR261, 264, 265, 266 and 271, address PCBs but reference rules of 40CFR761. In Rule 40CFR761.1(a), the following definitions are given:

EXCLUDED PCB PRODUCTS - means PCB materials which appear at concentrations less than 50 ppm, including but not limited to ...

AND QUANTIFIABLE LEVEL/LEVEL OF DETECTION - means 2 micrograms per gram from any resolvable gas chromatographic peak, i.e. 2 ppm.

Thus, by definition, materials with less than 50 ppm PCBs are excluded from most rules of 40CFR761 and materials with less than 2 ppm PCBs are considered to have undetectable quantities of that compound.

In promulgating rules for the burning of used oil for energy recovery (as finally promulgated at 40CFR266.40 on November 29, 1985), EPA had originally considered establishing a limit of 50 ppm for PCBs. In the preamble to the final rule, the following reason for not including the limit is stated by EPA:

PCBs are not included in the final specification promulgated today (11/29/85), however, because commentators indicated that cross-reference (with 40CFR761) caused confusion.

2

On November 6, 1987, the Florida Department of Environmental Regulation, Bureau of Air Quality Management, issued a policy statement regulating used oil burning. That memo expanded upon a Department memo of January 5, 1987, and was based upon information developed by the Department and presented in September 1987 in a paper entitled, "A Proposal to Regulate the Emissions from the Burning of Used Oil" (presented at the 1987 Annual Conference, Florida Section, Air Pollution Control Association by Barry D. Andrews, FDER, Tallahassee, Florida). In the referenced paper, it is stated that the Department study was based upon a report entitled, "A Technical Study of Regulatory Options for Used Oil Management in Florida." Data from the referenced study are presented showing the results of PCBs analyses in 61 samples of used oil from Florida. The data show a mean concentration of 21.8 ppm of PCBs with a range of 7.6-26.0 ppm. The limited detection for PCBs is listed as 5.0 ppm.

The January 5, 1987, Department memo on used oil as a fuel states that:

It is our (FDER) position as well as that of EPA, that the burning for energy recovery of used oil containing any concentration of PCBs was prohibited as of October 1, 1984. This conclusion is based on 40CFR761.20(a)

The Department memo of January 5, 1987 continues:

...EPA Headquarters had indicated to Department staff that EPA is considering amending federal PCB regulations to allow the burning for energy recovery of used oil containing less than 50 ppm PCBs.

3

On June 28, 1988, EPA did amend 40CFR761 to include Section 761.20(e); a rule addressing the burning of fuels with less than 50 ppm PCBs. The rule requires that fuels with less than 50 ppm PCBs can be burned in industrial furnaces and other qualified burners and further, exempts from the rules fuels with less than quantifiable levels (less than 2 ppm) of PCBs.

As the Department policy of January 5, 1987 was based on 40CFR761 and as the memo anticipated the change in 40CFR761 related to the burning of fuels containing less than 50 ppm PCBs, the current Department policy should reflect the clarification to 40CFR761, promulgated on June 28, 1988. Regardless, 40CFR761 identified the quantifiable level/level of detection of PCBs at 2 ppm even prior to the date of the referenced Department memo.

A review of federal policies and regulations regarding PCBs at low levels is clear. It was EPA's original intent to include a limit of 50 ppm for PCBs in on-specification used oil fuel. This limit was not included, however, to eliminate possible confusion resulting from cross-referencing federal regulations. This limit was incorporated into the rules, however, by the amendment to 40CFR761 on June 28, 1988. This inclusion was prudent as it is apparent, based upon the study referenced herein, that PCBs are commonly found in used oil (ranging from 7.6 to 26.0 ppm in 61 samples of used oil collected in Florida).

Most explicit in the rules is the definition in 40CFR761 that establishes a limit of detection for PCBs of 2 ppm. Regardless of regulation or FDER policy, it would be difficult to argue that a compound present at levels below the detectable limit should be regulated.

ATTACHMENT 2

FIELD EVALUATION OF HAZARDOUS WASTE DISPOSAL IN INDUSTRIAL PROCESS KILNS

by

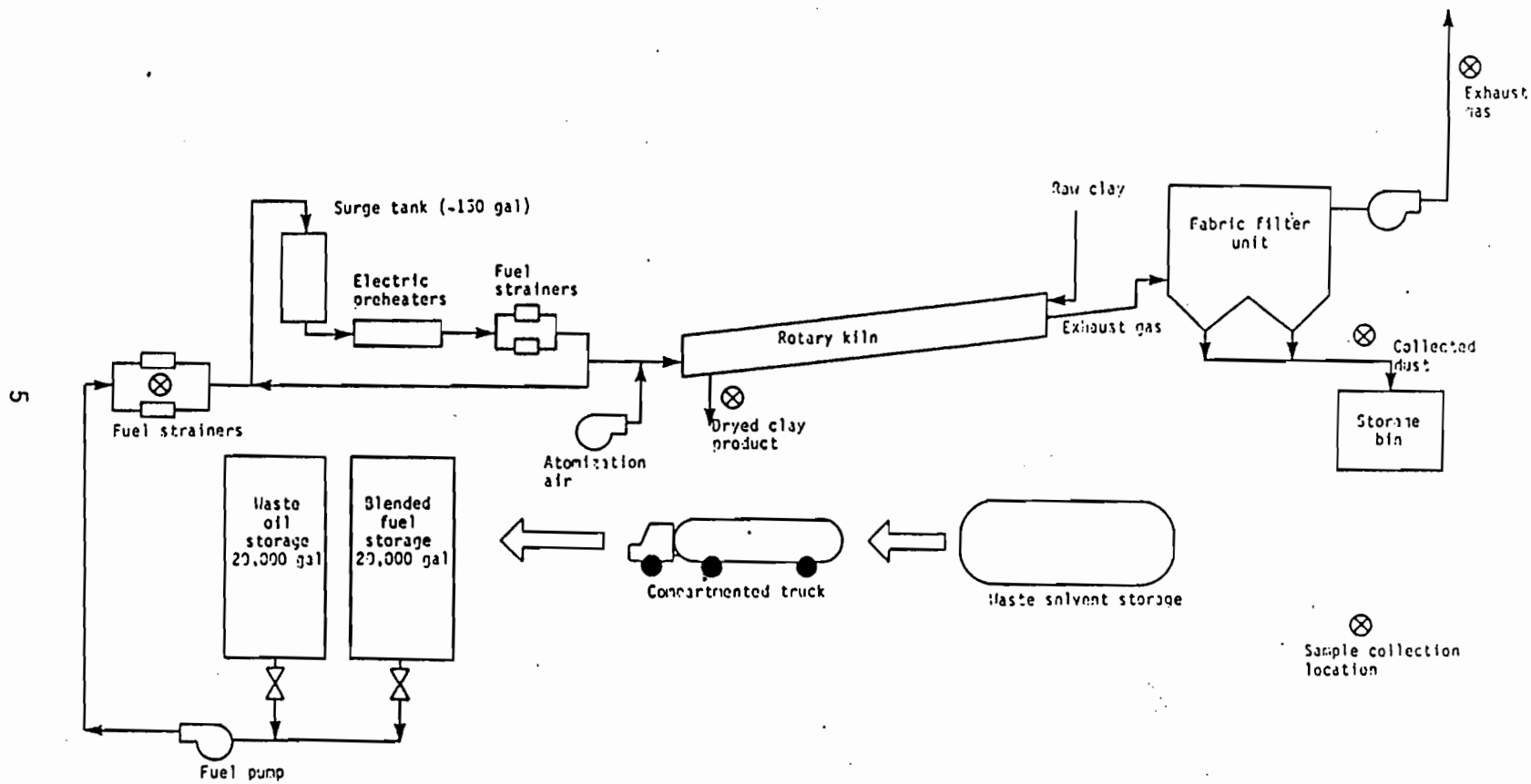
A. W. Wyss, C. Castaldini, and M. M. Murray
Acurex Corporation
Energy & Environmental Division
555 Clyde Avenue
P. O. Box 7555
Mountain View, California 94039

Contract No. 68-02-3176

Project Officer: Robert E. Mournighan
Thermal Destruction Branch
Alternative Technologies Division
Hazardous Waste Engineering Research Laboratory
Cincinnati, Ohio 45268

for

HAZARDOUS WASTE ENVIRONMENTAL RESEARCH LABORATORY
OFFICE OF RESEARCH AND DEVELOPMENT
U. S. ENVIRONMENTAL PROTECTION AGENCY
CINCINNATI, OHIO 45268



A84-0558

Figure 1. Process flow schematic and sample collection locations -- site I.

TABLE 1-6. SUMMARY OF VOLATILE POHC DRE'S -- SITE I

Compound	Firing rate (mg/s)	Emission rate (µg/s)	Test average ^b DRE, (%)
1,1,1-trichloroethane	74-81 (79)	<0.5-89 (35)	99.88-99.98 (99.95)
Trichloroethylene	7.1-8.5 (7.8)	<0.5-19 (5.1)	99.8-99.994 (99.93)
Benzene	7.6-13.5 (10.5)	110-3,800 (563)	82.5-98.5 (94.6)
Tetrachloroethylene	27.1-35.2 (31)	1.5-77 (16.5)	99.87-99.989 (99.95)
Toluene	184-215 (197)	170-1,250 (330)	99.7-99.90 (99.8)
Chlorobenzene	2.5-3.0 (2.7)	11-26 (17)	99.3-99.4 (99.3)
2-butanone (MEK)	70-90 (81)	1.8-176 (39.1)	99.93-99.98 (99.95)
1,1,2-trichloro-2,2,1- trifluoroethane (Freon 113) ^a	1,220-1,400 (1,340)	6.2-257 (62)	99.988-99.998 (99.995)

^aNot a RCRA Appendix VIII compound. Freon 113 was added to the fuel feed for these performance tests.

^b"Test average" represents an average of three runs obtained each test day. Number in parentheses is the average of all DRE measurements.

ATTACHMENT 3

Disposal of Polychlorinated Biphenyls (PCBs)
and PCB-Contaminated Materials
Volume 1

FP-1207, Volume 1
Research Project 1263-1

Final Report, October 1979

Prepared by

STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC.
4014 Long Beach Boulevard
Long Beach, California 90807

Prepared for

Electric Power Research Institute
3412 Hillview Avenue
Palo Alto, California 94304

EPRI Project Manager
Dean M. Golden
Fossil Fuel and Advanced Systems Division

Table 3-1
EMPIRICAL FORMULATION, MOLECULAR WEIGHTS,
AND CHLORINE PERCENTAGE IN PCBs*

Empirical Formula Chlorobiphenyls	Molecular Weight**	Percent Chlorine**	Number of Isomers
$C_{12}H_{10}$	154	0	1
$C_{12}H_9Cl$	188	18.6	3
$C_{12}H_8Cl_2$	222	31.5	12
$C_{12}H_7Cl_3$	256	41.0	24
$C_{12}H_6Cl_4$	290	48.3	42
$C_{12}H_5Cl_5$	324	54.0	46
$C_{12}H_4Cl_6$	358	58.7	42
$C_{12}H_3Cl_7$	392	62.5	24
$C_{12}H_2Cl_8$	426	65.7	12
$C_{12}HCl_9$	460	68.5	3
$C_{12}Cl_{10}$	494	79.9	1

*Ref. 29

**Based on Cl^{35}

Table 6-8

PROPERTIES OF PCB INCINERATOR DESIGN FEED

<u>Wastes</u>	<u>Wt Percent</u>	<u>% Chlorine</u>	<u>Properties of Waste Types</u> <u>Sp Gravity</u>	<u>LHV,Btu/lb</u>	<u>HHV,Btu/lb</u>
Capacitors					
PCBs (1016 or 1242)	25	42.5	1.40	8,950	9,430
Paper	33	0.0	--	7,570	8,200
Ash	42*	0.0	--	0	0
Subtotal, Capacitor Components		10.5	--	4,740	5,060
Liquid PCBs from Transformers		54.0	1.50	7,100	7,500
Wash Solvents		0.0	0.88	17,700	18,500
Total Feed to Incinerator†		21.5#	--	9,847	10,353

*Equals 14 percent of the total feed

†Assumes equal weights of capacitors, liquid PCBs, and wash solvents

#Equals 25.0 percent of the combustibles in the total feed

ATTACHMENT 4

PARTICULATE MATTER,
SULFUR DIOXIDE AND NITROGEN OXIDES
EMISSION MEASUREMENTS

KILN NO. 1A

FLORIDA SOLITE COMPANY
GREEN COVE SPRINGS, FLORIDA

Permit No. AC10-125262
(Expires June 30, 1989)

April 22, 1989

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 N.W. 13TH STREET
GAINESVILLE, FLORIDA 32609
(904) 377-5822



KOOGLER & ASSOCIATES, ENVIRONMENTAL SERVICES

Source Sampling Calculations

Plant: FLA. SOLITE / GREEN COVE SPRINGS, FLA
 Stack: NO.1A KILN
 Weather: CLEAR

Date: 4/28/89
 Run 1 From 0914 - 1030
 Total Time: 60 Min

Stack Area	17.41 Sq Ft	Nozzle Area	.000521 Sq Ft
Stack Temp	151 Deg F	Meter Temp	81 Deg F
Stack Pressure	29.91 "Hg	Baro. Pressure	29.89 "Hg
Stack Vel Head	.614 "H2O	Meter Press Diff	1.94 "H2O
		Meter Volume	46.103 cf
Pitot Tube Factor	.84	Condensate Volume	238 ml

1. Volume Water Vapor	11.210 SCF
2. Gas Volume Sampled - STPD	45.165 SCFD
3. Total Volume	56.374 SCF
4. Moisture in Stack Gas - Volume Fraction	.199
5. Dry Stack Gas - Volume Fraction	.801
6. Molecular Weight of Stack Gas - Dry Basis	29.00
7. Molecular Weight of Stack Gas - Stack Conditions	26.81
8. Specific Gravity of Stack Gas Relative to Air	.92
9. Excess Air - Percent	
10. Average Stack Velocity	2307.4 FPM
11. Average Stack Gas Flow Rate	40172 ACFM
12. Actual Stack Gas Flow Rate Dry	32184 CFMD
13. Stack Gas Flow Rate STPD	27802 SCFMD
14. Percent Isokinetic	90.4 %

Probe Wash:	11.60 Mg	.0040 Gr/SCF	.94 Lbs/Hr
Filter:	145.70 Mg	.0497 Gr/SCF	11.87 Lbs/Hr
===Totals===	157.30 Mg	.0536 Gr/SCF	12.81 Lbs/Hr

CTA
~~BA~~
~~PL~~ } FYI
 Willard

Willard will need to
 talk to legal on this as legal
 was involved.

Can you do? Shahr
 Butler 1/6

Willard, 12/16
 Don't we need
 to charge them
 \$250?

12-17-91 Patty
 Tell Brodeur we need
 \$250 fee for amendment
 LMD

Department of Environmental Regulation Routing and Transmittal Slip

To: (Name, Office, Location)

1. Gary Smallbridge, OGC
2. Amy Early - What do you think
3. about this?
4. Amy

Remarks:

Clair wants OGC's approval on any
 response to Florida Solite's Dec. 11, 1991,
 request.

As used oil with less than 50ppm PCB
 can be burned in industrial boilers/furnaces,
 I proposed that the Request be approved
 (see handwritten draft amendment, attached).
 I have the background information of the
 construction permit for Skid 1A, if you
 need it.

What is OGC's opinion / recommendation
 on Florida Solite's request?

From

Willard Hanks

Date

1-6-92

Phone

488-1344

Certified Mail - Return Receipt Requested

Mr. John B. Koogler
Koogler & Associates
Environmental Services
4014 NW Thirteenth Street
Gainesville, Florida 32609

Dear Mr. Koogler:
Amendment to Permit
Re: Permit No. AC 10-125262, Florida Solite Company

The Department is in receipt of your December 11, 1991, letter requesting permission to burn liquid burnable material (LBM) with less than 50 ppm polychlorinated biphenyls (PCB) in clay kiln No. 1A at Florida Solite Company's Green Cove Springs, Clay County, Florida, light aggregate plant. This request is acceptable, with conditions, and ^{specific Condition No 16 of the} referenced construction permit is amended:

From

The liquid burnable waste (LBM) shall not contain any of the following contaminants above the detectable levels by the appropriate analytical procedures (40 CFR 263, Appendix III, 7/1/90): organic cyanides, sulfides, mercaptans, PCB's, insecticides, pesticides, herbicides, electroplating waste, and radioactive material. The detectable level for PCB's is considered to be 2 ppm (40 CFR 761.20(d)(2) Testing of used Oil Fuel, 7/1/88). Florida Solite Company shall retain the manifest of each load for 2 years for Department inspection.

To:

To:

The liquid burnable waste (LBM) shall not contain any of the following contaminants above the detectable levels by the appropriate analytical procedures (40 CFR 263, Appendix III, 7/1/90): organic cyanides, sulfides, mercaptans, ~~PCB's~~, insecticides, pesticides, herbicides, electroplating waste, and radioactive material. ~~The detectable level for PCB's is considered to be 2 ppm (40 CFR 761.20(d)(2) Testing of used Oil Fuel, 7/1/88). Florida Solite Company shall retain the manifest of each load for 2 years for Department inspection.~~

Recycled



Paper

The LBM shall not be mixed with any material containing 50 PPM ^{or more} PCB. The maximum PCB concentration in the LBM must be less than 50 PPM.

The kiln must be at its normal operation temperature before LBM containing PCB is burned in it. The kiln shall not be started or shut down while burning LBM. The permittee shall maintain a log that includes the PCB content of each batch of LBM received at the plant. ~~The permittee shall comply with any applicable requirements of 40 CFR 266, Subpart F, and 761, Subpart G when burning LBM~~

The permittee is also required to comply with any applicable condition in 40 CFR 266 and 761 when burning LBM.

A copy of this letter shall be attached to the referenced permit and shall become a part of that permit.

Sincerely,
Carol Browner

C: Andrew Kutyras, NE Dist.

Tony Saunders, FL Solid B.

Attach: Kozler's Dec. 11, 1991, letter
Solite's Dec. 18, 1991, letter



KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 • FAX 377-7158

KA 150-90-03

November 25, 1991

RECEIVED

NOV 27 1991

Division of Air
Resources Management

Mr. C. H. Fancy
Florida Department of
Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Comments on Draft Permit for Kiln 5
Florida Solite Company
Green Cove Springs, Florida
Permit File No. AC10-197099

Dear Mr. Fancy:

Following are our comments on the draft air construction permit for the installation of a baghouse dust collector on Kiln 5 located at the Florida Solite Company facility near Green Cove Springs, Florida.

On July 26, 1991, the Department issued the Technical Evaluation and Preliminary Determination and the proposed permit for the referenced project. On August 22, 1991, Solite was granted an extension until October 7, 1991, to file a petition in matters related to the proposed permit, if necessary. An additional extension of time to resolve these issues was requested by letter dated October 4, 1991. On October 9, 1991, another extension of time was granted until December 9, 1991. A meeting was held at the FDER office in Tallahassee on September 17, 1991 to discuss the proposed permit. At the meeting it was agreed that Solite would submit comments on the draft permit for the Department's consideration and review. The following comments address the issues of concern to Solite and suggest changes to some of the specific conditions in the draft permit.

First, I would like to take the opportunity to restate Solite's intent when first requesting the permit. Solite originally requested approval to replace the existing scrubber on the No. 5 kiln with a baghouse so the kiln could be operated in compliance with two new regulations adopted under the federal RCRA program. The first set of rules was adopted by EPA to regulate the burning of Hazardous Waste Derived (HWD) fuel in Boilers and Industrial Furnaces. To continue operating after August 21, 1990, Solite was required to pre-certify compliance of the kiln. That is, Solite was required to supply EPA with reasonable assurance that the kiln

would comply with all of the provisions of the Boiler and Industrial Furnace regulations. In order to operate under the terms of the pre-compliance certification after August 21, 1991, Solite is required to meet emission limiting standards which would require the installation of the subject baghouse.

The second set of regulations affecting Solite is actually the application of previously adopted regulations; regulations from which Solite and other lightweight aggregate producers had been exempt. Under these regulations, scrubber water and scrubber sediment from air pollution control equipment associated with industrial furnaces utilizing HWD fuel will now be classified as a hazardous waste. As a result of the application of these rules, it is no longer practical for Solite to operate the scrubber systems that have been on their three lightweight aggregate kilns while firing the kilns with HWD fuel.

As a result of these two sets of federal regulations, Solite has requested, through the permitting process, approval to replace the existing scrubber system on the No. 5 kiln with a baghouse. The intent of the request was that no other operating condition of the kiln would change; except for the reduction in particulate matter and metals emissions resulting from the increased efficiency of the baghouse. Originally, Solite sought this approval through an amendment of the existing air operating permit but, at the Department's urging, approval was pursued through the subject air construction permit.

The intent of the subject air construction permit is to allow Solite to install the baghouse and to continue operating Kiln 5 as it is presently operated. When Solite is required under the federal Boiler and Industrial Furnace regulations to demonstrate full compliance (by August 21, 1992), several additional operating constraints will be placed on the kiln. It would be most appropriate for the Department to either amend the subject air construction permit or to issue a new air construction permit incorporating all of the permit conditions required by federal regulations after August 21, 1992, rather than to attempt to incorporate similar conditions at this time. This background information is presented only to place the subject air construction permit in perspective.

EXPIRATION DATE COMMENT

Due to various economic reasons discussed during our meeting on September 17, 1991, Solite now expects a delay in the installation of the baghouse. FDER staff suggested that a period of time less

than 48 months would be a reasonable time frame for a construction permit. It is therefore requested that the expiration date of the subject permit be changed from December 31, 1991, to December 31, 1994. This will allow time for stabilization of the market, refinements in currently available baghouse system designs to correspond to Solite's specific operating parameters, installation and shake-down of the baghouse system, compliance testing to satisfy both state and federal requirements, and operation permit application submittal.

PROJECT DESCRIPTION COMMENTS

The draft permit should amend the reference to "Fuller" air pollution control equipment on Page 1 to provide Solite the flexibility to install "Fuller or equivalent" equipment. Information on specific control equipment will be submitted to FDER when the selection is finalized.

SPECIFIC CONDITION 2

It is recognized that the Department requires reasonable assurance that permitted sulfur dioxide emission limits will not be violated; however, the requirement for a continuous emission monitor (CEM) is not justified. Furthermore, there is no specific rule requirement for a CEM for installations similar to Solite.

It is proposed that Solite provide FDER with the necessary reasonable assurance by submitting a mass balance of the sulfur input to the kiln and the calculated corresponding SO₂ emissions. Sulfur is introduced to the kiln through coal, LBM and raw clay. The sulfur content of the coal and LBM fired in the kiln can readily be determined for each shipment of fuel received. It is suggested that the sulfur content of the clay be determined by the method presented below.

Solite will analyze clay samples taken from the face of the clay wall of the quarry being mined in order to geographically define the sulfur content of the clay at the mine. Individual samples will be taken every 10 feet and composited over 50 foot intervals along the clay face. The composite samples will be obtained and analyzed approximately 30 days in advance of commencement of mining operations in the sampled area. Clay will only be processed in the

No. 5 kiln from areas having a sulfur content low enough to allow Solite to meet its permitted emission limits. Calculations submitted to FDER will reflect the SO₂ emissions resulting from the combinations of clay and fuel anticipated by Solite.

These approaches would avoid the unnecessary high cost of installing and operating a CEM and yet provide FDER with reasonable assurance that the permitted sulfur dioxide emission limits will not be exceeded.

SPECIFIC CONDITION 4

The particulate matter emission limit proposed for Kiln 5 (5.9 pounds per hour) was based on the existing stack gas flow rate of 20,000 dry standard cubic feet per minute at 15 percent oxygen and a particulate matter concentration in the stack gas of 0.08 grains per dry standard cubic foot, corrected to seven percent oxygen. The concentration limit corresponds to the particulate matter standard for the kiln while operating under the federal Boiler and Industrial Furnace regulations.

Also included in the Boiler and Industrial Furnace regulations is the requirement that the kiln operate under a negative pressure to assure there will be no fugitive emission releases. This requirement, plus operational changes that could be associated with the installation of the proposed baghouse, will, in all likelihood, result in a requirement for an increased air flow rate through the kiln. The expected maximum air flow rate through Kiln 5 was estimated by multiplying the measured air flow rate through Kiln 1A (26,000 dry standard cubic feet per minute) by the ratio of Kiln 5 production to Kiln 1A production. The resulting maximum air flow rate through Kiln 5 would be 40,000 dry standard cubic feet per minute at 15 percent oxygen. The particulate matter emission limit corresponding to this air flow rate would be 11.8 pounds per hour. This amended particulate matter emission rate would still result in a decrease in actual particulate matter emissions of over three pounds per hour based on actual 1989 (15.86 lbs/hr) and 1990 (14.92 lbs/hr) emissions.

The visible emission limit of five percent opacity for Kiln 5 should be amended to reflect 15 percent opacity. This would be a reasonable compromise between the FDER proposal of five percent (as stated in the permit), which is not a specific rule requirement, and

the general visible emissions requirement of 20 percent.

SPECIFIC CONDITION 5

The sulfur dioxide emission limits proposed under Specific Condition No. 5 should be changed to reflect present actual sulfur dioxide emissions from Kiln 5. As there are only limited sulfur dioxide emission data available for Kiln 5, the actual emissions for Kiln 5 are based on the extensive sulfur dioxide emission data base generated for Kiln 1A. The sulfur dioxide emissions from Kiln 1A have been increased in proportion to the ratio of production rates of Kiln 5 and Kiln 1A to estimate sulfur dioxide emissions from Kiln 5. This method of estimating emissions is reasonable as sulfur dioxide emissions are directly proportional to the sulfur contained in the clay and fuel input to the kilns, and the clay and fuel inputs are directly proportional to the production rates of the kilns.

To expedite permitting matters, Solite will retain the maximum hourly sulfur dioxide emission limit of 227 pounds per hour that is presently included in Permit A010-122377 and proposed for the subject permit. It should be recognized that this emission limit is not now federally enforceable as it appears in no air construction permit. The limit first appeared some years ago in an air operating permit issued for Kiln 5. The limit was an attempt by the Department's Northeast District Office to account for sulfur in the fuel with no consideration being given to the sulfur present in the raw clay fed to the kiln; the major single source of sulfur in the system.

For the 30-day average hourly sulfur dioxide emission limit, a rate of 84.5 pounds per hour is proposed, and for the maximum annual emission rate, a limit of 370 tons per year is proposed. The 370 tons per year is the present actual sulfur dioxide emission rate and the 30-day average emission rate of 84.5 pounds per hour was established based on the annual emission rate and a permitted operating time of 8760 hours per year. The data supporting these emission limits are attached.

SPECIFIC CONDITION 11

The current permit that Solite has for Kiln 1A includes visible emission limits for fugitive particulate matter emissions from several of the material handling areas including:

1. the clay storage area,
2. coal storage area, and
3. the transfer of product to the sizing and storage area.

Thus, the condition in the subject permit limiting fugitive emissions should apply only to the operations of Kiln 5. This would include the kiln and the pit into which the hot product is discharged.

If an opacity limit is required for fugitive particulate matter from Kiln 5, it is proposed that a limit of 20 percent be imposed; a limit that is consistent with the general visible emission requirements of Chapter 17-2, FAC, and a limit that is appropriate for fugitive particulate matter in a rural, particulate matter attainment area.

SPECIFIC CONDITION 13

The draft permit requires that either the clay input rate to the kiln or the aggregate production rate of the kiln be monitored. This subject was discussed in detail during the September 17, 1991, meeting and problems associated with measuring the input or output rates of the kiln were identified. The sticky nature of the clay makes it extremely difficult to use a belt scale on the clay feed system and the temperature of the product discharged from the kiln (approximately 2,000°F) makes the determination of the production rate difficult. As was pointed out during the September 17, 1991, meeting, Solite is required to overcome one or both of these difficulties by August 21, 1992, in order to have Kiln 5 fully certified under the conditions of the federal Boiler and Industrial Furnace regulations.

Until Solite establishes a method for continuously monitoring the input and/or production rate of the kiln, the following procedure for measuring production rate is proposed. During normal kiln operations, the pit receiving the product from the kiln is emptied by a front-end loader approximately every four hours. The front-

end loader used to remove the product is equipped with a load cell that can be used to measure the weight of each load of material removed. To determine the production rate, it is proposed that the receiving pit be emptied at the beginning of the first shift (approximately 0800 hours) and the time recorded. At approximately 1200 hours, the receiving pit will again be emptied and the time of emptying and the weight of each load of product removed will be recorded. At the end of the first shift (approximately 1600 hours), the receiving pit will again be emptied and the time and weight of each load of product removed will be recorded. From these times and weights, the average production rate over the 8-hour first shift can be calculated.

During the second and third shifts (from approximately 1600 hours to 0800 hours), the plant operates with a reduced staff. During these hours, it is proposed that only the times of emptying the receiving pit and the number of loads of product removed be recorded. The number of loads of material removed during the second and third shift can be compared with the number of loads removed during the first shift to provide the Department with the assurance that the production rate of the kiln has remained essentially constant during these shifts.

SPECIFIC CONDITION 14

The proposed permit limits the heat input to the kiln to 54.5 MMBTU per hour. The permit also limits the coal feed rate to 4540 pounds per hour and the LBM firing rate to 545 gallons per hour. These limits were based on information contained in the permit application that we submitted on behalf of Solite.

The heat input of 54.5 MMBTU per hour is based on a heat requirement of 5.0 MMBTU per ton of product. A review of compliance test data from Kiln 5 for the period 1987-1990 shows that the heat required to produce a ton of product ranges from 5.4 to 5.8 MMBTU. For establishing a revised maximum heat input to the kiln, a heat rate of 6.0 MMBTU per ton of product has been used. At a production rate of 11 tons per hour, the maximum heat input rate would 66.0 MMBTU per hour.

For calculating the maximum fuel input for permitting purposes, a heating value of 12,000 BTU per pound has been assumed for coal and a minimum heating of 90,000 BTU per gallon has been assumed for LBM.

This would result in a maximum coal usage of 5500 pounds per hour or a maximum LBM usage of 733 gallons per hour. The average heat input rate and average fuel use rates will be less than the maximum rates.

It should be noted that these limits are the maximum heat input and fuel use rates expected and do not represent an increase over present actual maximum fuel use or heat input rates. It should also be noted that there are no federally enforceable limits on heat input or fuel use rates for Kiln 5. One final note; the maximum limits for heat input and fuel use will not cause the particulate matter, sulfur dioxide or nitrogen oxides emission limits to increase nor will there be an increase in the emissions of non-regulated pollutants over historical emission rates.

In redrafting Specific Condition No. 14, it is requested that Solite also be given the option of burning combinations of coal and LBM. This option is included in the present permit for Kiln 5 and it has been a practice of Solite in the past to burn a combination of the two fuels.

SPECIFIC CONDITION 15

As discussed with the Department during the permitting of Kiln 1A, Solite requests a PCB limit in LBM of 50 ppm or less. This reflects the present EPA position as set forth in 40CFR761.20(e); a rule exempting fuels or materials containing less than 50 ppm of PCB.

It should be noted that with the destruction removal efficiency achieved in the Solite kiln system, virtually all of the PCBs contained in a fuel would be destroyed or removed. The product of PCB combustion that would be of concern would be hydrogen chloride. The small amount of hydrogen chloride added to the stack gas by 50 ppm of PCB in the LBM fuel would be negligible when compared to hydrogen chloride formed during the combustion of chlorides normally present in the LBM. For example, with a maximum LBM firing rate of 733 gallons per hour, a 50 ppm PCB concentration in the fuel and a stack gas flow rate of 30,000 dry standard cubic feet per minute, the hydrogen chloride concentration in the stack gas resulting from PCB combustion would be 1 ppm or less than 0.2 pounds per hour.

With the other restricted constituents, Solite requests that the language, "... any ... above the detection limit by the appropriate

analytical procedure.", be retained.

SPECIFIC CONDITION 16

It is requested that the compliance testing requirement for particulate matter and sulfur dioxide be amended to require testing annually while burning the fuel expected to result in the greatest emissions, if that fuel is used more than 400 hours during the year. This would allow Solite to conduct the compliance tests while burning LBM if LBM is burned nearly 100 percent of the time, as is presently the case. If Solite does burn coal more than 400 hours a year, the requirement would then be that the compliance testing be conducted while burning coal.

The compliance testing requirement for nitrogen oxides is acceptable; that is, using EPA Method 7E to test for nitrogen oxides emissions once every five years.

The testing requirement for visible emissions should also be changed to require testing in accordance with EPA Method 9 annually while burning the fuel expected to result in the greatest emissions; if that fuel is burned more than 400 hours during the year. The conditions under which visible emissions tests would be conducted would be the same as conditions for particulate matter and sulfur dioxide testing.

It is the opinion of Solite that testing for metals and VOCs is not appropriate at this time. As pointed out previously in this correspondence, the purpose of the subject permit is not to assure that Solite is complying with all of the conditions that might be imposed as a result of the Boiler and Industrial Furnace regulations. The purpose of the permit is to allow Solite to install a baghouse which will allow them to proceed with the compliance demonstration requirements of the federal regulations. Once the conditions of compliance with the Boiler and Industrial Furnace regulations are established, it would be appropriate for the Department to issue a new or modified air construction permit to parallel the federal requirements.

Furthermore, the proposed permit has no emission limiting standards for VOCs or metals and, yet, has emission testing requirements for these constituents. In view of the fact that there are no emission limiting standards in the proposed permit and the fact that federal

regulations will establish specific emission limiting standards for VOCs and metals, it is requested that the testing requirements for these constituents be removed from the presently proposed permit.

SPECIFIC CONDITION NO. 20

Specific Condition No. 20 allows the proposed construction permit to be extended beyond the expiration date for good cause and further requires the request for extension be submitted to the Department 60 days prior to the expiration date of the permit. As stated earlier in this correspondence, Solite requests the expiration date of the permit be extended to December 31, 1994. As the permit is not yet final, it is our understanding that the request stated herein is the only request necessary to extend the expiration date of the permit.

Another matter that I would like to present for Department consideration and related to the subject permit is the use of the proposed baghouse by Kilns 1 and 1A in addition to the proposed use by Kiln 5.

As stated previously, Solite must comply with various federal regulations when firing kilns with HWD fuel. These regulations are related both to air emissions and residues associated with air pollution control equipment (particulate matter from baghouses and particulate matter plus scrubber water from the scrubbers). As a result of these regulations, Solite finds it most practical to control emissions from kilns fired with HWD fuel with a baghouse. While burning non-hazardous fuels, Solite can still comply with all permitted emission limiting standards while controlling emissions with the existing scrubbers associated with each of the three kilns.

As discussed during our meeting on September 17, 1991, and herein, Solite finds it impractical to install baghouses on each of the three kilns at the present time for reasons associated with the state of the economy and the effects on Solite. In the relatively near future, Solite does plan to install one, of what will eventually be three baghouses. To utilize this first baghouse to its ultimate effectiveness and to provide Solite with the greatest degree of operating flexibility, Solite is considering the following operating plan.

A single baghouse will be installed in the near future. This baghouse will be large enough to accommodate the gas flow from either Kiln 5 or Kilns 1 and 1A combined. Solite will also retain each of the three existing scrubber systems. The kilns will be ducted in such a way that

Mr. C. H. Fancy
Florida Department
of Environmental Regulation

November 25, 1991
Page 11

when Kiln 5 is operating on HWD fuel, the off-gases from the kiln will pass through the baghouse for emission control. During these times, Kiln 1 and/or Kiln 1A will either operate on conventional fuel with emissions being controlled by the existing scrubbers on the respective kiln or the kilns will be inoperative. The other option is to fire either Kiln 1 or 1A or both with HWD fuel and duct the emissions from one or both of those kilns to the baghouse for emission control. If only one of the two kilns is fired with HWD fuel, the remaining kiln will either be inactive or fired with conventional fuel. The emissions from the kiln (Kiln 1 or 1A) fired with conventional fuel will be controlled with the existing scrubber on that kiln. During times when Kiln 1 and/or 1A are fired with HWD fuel, Kiln 5 will either be inactive or fired with conventional fuel. When fired with conventional fuel, emissions from Kiln 5 will be controlled with the existing scrubber for that kiln.

It is recognized that the operating plan discussed in the preceding paragraphs will involve Kilns 1 and 1A as well as Kiln 5. As a result, it is recognized that permit modifications or new construction permits may be required for Kilns 1 and 1A. I would appreciate your review the operating plan described above and your thoughts on the permitting requirements for the plan.

As stated previously, Solite has been granted an extension of time to resolve the issues addressed herein up to December 9, 1991. Your review and consideration of the changes suggested will be appreciated. If there are any questions regarding any of the matters addressed herein, please do not hesitate to contact me.

Very truly yours,

KOOGLER & ASSOCIATES

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

JBK:mab
Enc.

c: Mr. Ed Martin
Mr. Tony Saunders
Mr. George Williamson
Mr. Albert Galliano



LIST OF ATTACHMENTS

- | | |
|--------------|---|
| ATTACHMENT 1 | Kiln 5 SO ₂ Emission Calculations |
| ATTACHMENT 2 | Kiln 1A Permitted Emission Limits and Production Rate |
| ATTACHMENT 3 | Kiln 1A 30-Day SO ₂ Emission Limit Documentation from FDER |
| ATTACHMENT 4 | Kiln 5 Permitted Emission Limits and Production Rate |
| ATTACHMENT 5 | Kiln 5 Hours of Operation for 1990 |



ATTACHMENT 1

ATTACHMENT 1

SO₂ EMISSION LIMITATION CALCULATIONS FOR KILN 5

The 30-day average SO₂ emission limit for Kiln 1A is 75.8 pounds per hour. The prorated current SO₂ emissions for Kiln 5 can be estimated as follows:

$$\begin{aligned}\text{Present SO}_2, \text{ Kiln 5} &= 7.58 \text{ lbs/hr} \times 11 \text{ tph}/7 \text{ tph (Kiln 5/Kiln 1A)} \\ &= 119.1 \text{ lbs/hr}\end{aligned}$$

Based on operating hours in 1990 of 6216 hours,

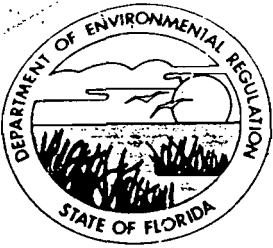
$$\begin{aligned}\text{Present SO}_2 &= 119.1 \text{ lbs/hr} \times 6216 \text{ hrs/yr} \times \text{ton}/2000 \text{ lb} \\ &= 370 \text{ tpy}\end{aligned}$$

Therefore, the proposed 30-day average SO₂ emissions which would result in no annual actual emissions increase can be estimated as follows:

$$\begin{aligned}\text{Proposed SO}_2 &= 370 \text{ tpy} \times 2000 \text{ lbs/ton} \times \text{yr}/8760 \text{ hrs} \\ &= 84.5 \text{ lbs/yr, 30-day average without controls.}\end{aligned}$$

NOTE: Supporting data for these calculations provided in Attachments 2, 3 and 4.

ATTACHMENT 2



Florida Department of Environmental Regulation

Northeast District • Suite 200, 7825 Baymeadows Way • Jacksonville, Florida 32256-7577 • 904-448-4300

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary
Ernest Frey, Deputy Assistant Secretary

PERMITTEE:

Florida Solite Company
Post Office Box 297
Green Cove Springs, Florida 32043

I.D. Number: 31JAX10000406
Permit/Cert Number: A010-133604
Date of Issue:
Expiration Date: August 1, 1995
County: Clay
Latitude/Longitude: 30°04'04"N; 81°45'14"W
Project: No. 1A Kiln
UTM: E-(17)427.4; N-3326.5

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the operation of No. 1A clay aggregate kiln w/emissions controlled by a scrubber (Ducon Dynamics, Type UW4, Model 111, Size 108).

Located west of U.S. 17, east of S.R. 209A, north of Green Cove Springs, Clay County, Florida.

In accordance with:

1. Construction permit (CP) No. AC10-125262 issued 01-15-87
2. Certificate of Completion of Construction received 04-28-87
3. Additional information received 08-28-87
4. CP revision dated 03-30-88
5. Additional information received 06-06-88
6. Additional information received 11-28-88
7. CP revision dated 11-30-88
8. Additional information received 02-09-89
9. Additional information received 07-26-90
10. Denial issued 10-09-90
11. Petition time extension request received 10-18-90
12. Information received 11-27-90
13. Information received 12-10-90

PERMITTEE:
Florida Solite Company
Post Office Box 297
Green Cove Springs, Florida 32043

I.D. Number: 31JAX10000406
Permit/Cert: A010-133604
Date of Issue:
Expiration Date: August 1, 1995

SPECIFIC CONDITIONS:

1. The maximum operating rates are as listed below and shall not be exceeded without prior approval:

<u>Rate</u>	<u>Material</u>
14.4 TPH ¹	clay (wet)
8.6 TPH ¹	clay (dry)
7.0 TPH ^{2,3}	clay aggregate
476 GPH	LBM ^{4,5}
2.0 TPH	coal ⁶
308 GPH ⁷	LBM w/coal
0.7 TPH ⁷	coal w/LBM

¹input to kiln

²produced by kiln

³From CP# AC10-125262, a front end loader used to transport the product from the cooler to the sizing and storage area shall be equipped with a scale which can be used to measure the production from the kiln No. 1A

⁴LBM - liquid burnable materials (see SC #9 for specifications)

⁵LBM sulfur content shall not exceed 0.45% by wt. (see note 8)

⁶Coal sulfur content shall not exceed 0.41% by wt (see note 9)

⁷From CP #AC10-125262

⁸The sulfur content of the liquid burnable material (LBM) used in the kiln shall be determined for a composite sample of the fuel burned in the kiln during the week (Sunday thru Saturday) by the latest applicable ASTM methods. Test results (company procedure) of the sulfur content of the LBM used shall be obtained for each batch received at the plant and on a composite sample of the fuel burned during each week. Results of the analysis shall be kept by the company for a minimum of 2 years for department inspection.

⁹A certified analysis by the latest applicable ASTM method shall be used to determine the percent sulfur in each shipment of coal received at the plant. Results of the analysis shall be kept by the company for a minimum of 2 years for department inspection.

2. Testing of emissions must be performed at an operating rate of at least 90% of the rate in Specific Condition (SC) No. 1, or SC No. 3 will become effective.
3. The operating rate shall not exceed 110% of the operating rate during the most recent test except for testing purposes, but shall not exceed the rate in SC No. 1. After testing at an operating rate greater than 110% of the last test operating rate, the operating rate shall not exceed 110% of the last (submitted) test operating rate until the test report at the higher rate has been reviewed and accepted by the Department.

PERMITTEE:
Florida Solite Company
Post Office Box 297
Green Cove Springs, Florida 32043

I.D. Number: 31JAX10000406
Permit/Cert: A010-133604
Date of Issue:
Expiration Date: August 1, 1995

SPECIFIC CONDITIONS:

4. The maximum allowable emission rate for each pollutant is as follows:

<u>Pollutant</u>	<u>F.A.C. Rule</u>	<u>lbs/hr</u>	<u>TPY</u>
PM ¹	17-2.610(1)	12.8 ²	48.6 ³
SO ₂ ⁴	-----	----- ⁵	288.0 ³
NO _x ⁶	-----	14.2 ²	53.96 ³
VE ⁷	17-2.610(2)	20% Opacity	
Odor	-----	None objectionable ²	
UPM ⁸	17-2.610(3)	See SC #5	

¹PM - particulate matter

²From CP #AC10-125262

³Hours of operation shall not exceed 7600 hrs/yr (total for #1 kiln and #1A kiln) and shall be recorded.

⁴SO₂ - sulfur dioxide

⁵SO₂ (1-hr avg) shall not exceed 226 lbs/hr (872 ppm) and
SO₂ (30 day avg) shall not exceed 75.8 lbs/hr (292 ppm)

⁶NO_x - nitrogen oxides

⁷VE - visible emissions from the kiln

⁸UPM - unconfined particulate matter

5. Unconfined particulate matter emissions shall be controlled by complying with the reasonable precautions listed below, but shall not be limited to those listed:

1. From wet clay feed area
 1. Apply a wetting agent
 2. Construct wind breaks near hoppers and transfer points
2. From coal handling and product coller
 1. Enclose equipment
 2. Or use a wetting agent
3. From transporting product to sizing and storage area
 1. Use a wetting agent

6. Test the emission for the following pollutant(s) at the interval(s) indicated, notify the Department 14 days prior to testing, and submit the test report documentation to the Department within 45 days after completion of the testing:

<u>Pollutant</u>	<u>Interval</u>	<u>Test Method(s)</u>
PM ¹	12 Months from 04-30-90	EPA 5
SO ₂ ²	12 Months from 04-30-90	EPA 6
NO _x ³	12 Months from 04-30-90	EPA 7
VE ³	12 Months from 04-30-90	DER 9
VE ¹⁴	12 Months from 04-30-90	EPA 22 ⁵
VE ²⁶	12 Months from 04-30-90	EPA 22 ⁵
VE ³⁷	12 Months from 04-30-90	EPA 22 ⁵

ATTACHMENT 3



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtman, Secretary

John Shearer, Assistant Secretary

September 20, 1989

Dr. John B. Koogler, P.E.
Koogler & Associates
4014 NW Thirteenth Street
Gainesville, Florida 32609

Dear Dr. Koogler:

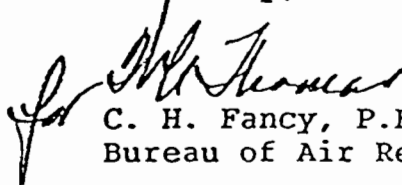
Re: Florida Solite Company

The Bureau has reviewed your August 3, 1989, letter to the Northeast District requesting an amendment to specific conditions Nos. 1 and 4 of permit No. AO 10-154570.

In your September, 1986, application requesting Florida Solite be allowed to substitute kiln No. 1A for kiln No. 1 (file No. AC 10-125262), the baseline production and emissions for kiln No. 1 were documented. Briefly, clay input was 8.6 TPH (dry), production was 7.0 TPH (dry), particulate matter emissions were 12.7 lbs/hr (55.6 TPY), and sulfur dioxide emissions were 75.8 lbs/hr (288.1 TPY) average with a maximum 226.0 lbs/hr, one hour average.

Any increase in these rates is a modification and will require a new permit to construct.

Sincerely,



C. H. Fancy, P.E.
Bureau of Air Regulation

CHF/WH/t

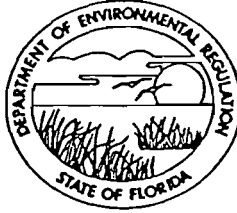
cc: J. Cole, NE District

ATTACHMENT 4

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
(904) 396-6959



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY
ERNEST E. FREY
DISTRICT MANAGER

PERMITTEE:
Florida Solite Company
Post Office Box 297
Green Cove Springs, FL 32043

I.D. Number: 31/10/0004/05
Permit/Certification Number: A010-122377
Date of Issue: Dec. 12, 1986; Revised Dec. 30, 1986
Expiration Date: August 19, 1991
County: Clay
Latitude/Longitude: 30°04'07"N; 81°45'17"W
Project: No. 5 Kiln
UIM: E-(17)427.3; N-3326.5

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the operation of No. 5 Kiln with particulate matter emissions controlled by a wet scrubber. The coal and/or liquid burnable material (LBM) firing rate shall not exceed the rates in Specific Condition #4.

Located west of U.S. 17, north of S.R. 209, east of S.R. 209A, north of Green Cove Springs, Clay County, Florida

In accordance with;

operation permit application dated July 9, 1986
additional information received September 29, 1986

PERMITTEE:
Florida Solite Company
Kiln No. 5

Permit No.: AO10-122377
Date of Issue: 12/12/86; Revised 12/30/86
Expiration Date: August 19, 1991

SPECIFIC CONDITIONS:

1. The maximum input rate is 26,400 lbs/hr (dry clay) plus 4,540 lbs/hr (coal) and the maximum production rate is 22,000 lbs/hr rate (operating rate) and neither shall be exceeded without prior approval.
2. Testing of emissions must be performed at an operating rate of at least 90% of the rate in Specific Condition (SC) No.1, or SC No. 3 will become effective.
3. The operating rate shall not exceed 110% of the operating rate during the most recent test except for testing purposes, but shall not exceed the rate in SC No. 1. After testing at an operating rate greater than 110% of the last test operating rate, the operating rate shall not exceed 110% of the last (submitted) test operating rate until the test report at the higher rate has been reviewed and accepted by the Department.
4. The permitted maximum allowable emission rate for each pollutant is as follows:

<u>Pollutant</u>	<u>Rule</u>	<u>Emission Rate</u>	
		<u>lbs/hr</u>	<u>TPY</u>
Particulate Matter (PM)	17-2.610(1), FAC	19.61 ¹	85.68
Sulfur Dioxide (SO ₂)	---	227.00 ²	991.54
Sulfur Dioxide (SO ₂)	---	174.40 ³	---
Visible Emissions (VE)	17-2.610(2), FAC	<20% opacity	

¹Basis: P = 15.47 TPH (clay and coal); E = 19.61

²Basis: 4540 lbs coal/hr; 2.5% sulfur (maximum)

³Basis: 545 gals LBM/hr; 8 lbs/gal; 2.0% sulfur (maximum)

5. The liquid burnable waste (LBM) shall not contain any organic cyanides, sulfide, mercaptans, PCB's, insecticides, pesticides, herbicides, electroplating waste or radioactive material. Florida Solite Company shall retain the manifest of each load for 2 years for Department inspection.
6. Unconfined particulate matter emissions shall be controlled by application of dust suppressants, unless an alternative method is requested and approved, to all areas necessary to reasonably control such emissions per Florida Administrative Code Rule 17-2.610(3).

I N T E R O F F I C E M E M O R A N D U M

Date: 08-Aug-1991 02:44pm GMT
From: Iris Littleton (TAL)
LITTLETON_I
Dept: Office General Counsel
Tel No: 904/488-9730

TO: Ernest Frey

(FREY, ERNEST)

CC: Andrew Kutyna

(KUTYNA, ANDREW)

CC: Frank Watkins

(WATKINS, FRANK)

CC: Pat Manning (TAL)

(MANNING_P)

CC: Dottie Diltz (TAL)

(DILTZ_D)

Subject: New OGC Case Assignments

TO: Ernest Frey

FROM: Iris - OGC - Tallahassee

Received 8/07/91 request for an Extension of Time from
Florida Solite Company, Inc., concerning permit AC10-197099.

Received 8/07/91 request for an Extension of Time from the
City of Hastings concerning permit DC55-191762.

CC: W. Hanks

Soil Thermal Treatment Facilities

1/8

I. Why Does Florida need these facilities?

The Department is responsible for cleaning up any contaminated medium within the state - air, water, and soil. Leachate from contaminated soil can pollute ground and surface waters. In the past, the cost of the cleanup has deterred the owners from reporting the contaminated site to the Department. The cleanup cost was also considered prohibitive by some small businesses and individuals.

A. The state passed the Underground Petroleum Environmental Response Act in 1986. The act established a cleanup trust fund. Approximately 10,000 soil contaminated sites were then reported to the Department.

U. In late 1987, the Bureau of Waste Cleanup developed F.A.C. Rule 17-770 which established cleanup criteria for soil, - the maximum petroleum products and metals that could be in clean soil. They later developed F.A.C. Rule 17-775 for soil thermal treatment facilities. This rule covered monitoring and handling of the treated soil.

Q. The Bureau of Air Regulation does not have a specific regulation for thermal soil treatment facilities. One is in the process of being adopted. Currently, the air bureau is regulating these sources under the general authority of Chapter 403, FS, and F.A.C. Rule 17-2. The current policy is to require a minimum of 95% destruction of the VOC, compliance with our toxic policy and for the particulate matter emission, to meet the incinerator standard.

II. Treatment Options Available or in use in Florida.

Contaminated soil is being treated in Florida by air stripping, vacuum extraction, and thermal desorption. Other methods that can be used to treat soil is incineration, landfarming, and miscellaneous processes that include washing, mixing with boiler fuels, hauling to landfills, and others.

Air stripping removes the volatile organics from ground water. They are basically a pack tower with countercurrent flow of the contaminated water and ambient air. The Department's policy is that the emissions cannot cause an impact that exceeds the no threat level (toxic policy). Permanent strippers and strippers that emit large quantities of organics are required to obtain an air permit from the Department. Small, temporary unit (service station cleanup sites) are required to provide data showing compliance with the toxic policy but do not have to obtain an air permit.

Vacuum extraction units lower the pressure in the soil to evaporate the volatile organics. Initial emissions are high. The Department requires air pollution controls on these units for the first two months of operation. After that, the unit can be re-evaluated and if the uncontrolled emissions will not have an impact that exceeds the no-threat-level, the controls can be removed. Air permits are required for these operations.

Thermal desorption - also call incineration, soil remediation, and (currently) soil thermal treatment - is a popular choice in Florida. Units typically consist of a kiln or heated pug mill, baghouse or scrubber, and afterburner. Permits, PM, and VOC controls required. Discuss history later

3/8

Incineration - actually burning soil - is not currently in use in Florida. Would expect this process would more likely be used for RCRA or hazardous waste. Permits and AP controls would be required.

Landfarming is not being used in Florida at this time. It involves spreading the soil on the surface and tilling it periodically to allow the volatiles to evaporate into the atmosphere. The Department would be concerned about the ambient air impact of a landfarm and would require an evaluation of this as part of the air permitting process.

Brief comments on the other methods.

Some tests on washing the soil in-situ have been made but weren't that successful because of channeling of the liquids, some boilers (coal and biomass) add virgin petroleum contaminated soil from their own facility in small amounts - test show not measurable increase in VOC emissions, lined landfills can take contaminated soil - up to County in Florida, some soil hauled out of state to hazardous waste facilities, some fixed (soil with PCB mixed with cement) to prevent leaching of material, some mixed with asphalt plant feed, some used as road bed construction.

Main process appears to be soil thermal treatment facilities in Florida. Contaminated soils processed in:

Stationary Sources - Asphalt plants, Cement-clay-rock kilns,
Transportable sources - kilns/parg mills designed for the service.

III Thermal Soil Treatment Facilities - Permits Required
 Air permits are required to treat soil in these units.
 Currently, the Bureau of Waste Cleanup requires a general permit for soil thermal treatment facilities.

If unit treats soils containing RCRA or hazardous waste, they are subject to other rules and additional permit requirements.

The Bureau of Waste Cleanup regulates the petroleum hydrocarbons and metals that can be in clean soil and preventing other soil/water contamination. Requirements different for stationary and transportable sources. Both can treat petroleum and petroleum product contaminated soils and analyze the soil before and after treatment. The other main requirements are:
Stationary Facilities - store untreated soil on slab under a roof and treated soil on a slab until confirmed clean. They also must have monitoring wells around the property.
Transportable Facilities - notification requirement on relocation of a facility and are required to store untreated soils on a plastic sheet and cover it with plastic.

The BAR is concerned with any air pollutants emitted during the treatment of the soil. Contaminates in soil limited to gasoline, diesel fuels, nos. 2 through 6 fuel oils, and petroleum based motor oil (on-spec). Generally, a baghouse or scrubber and a afterburner is used to control air pollutants. The air pollutants regulated are PM, VOC, and toxic emissions (primarily)

IV. Air Pollutant Permitting Procedure in Florida

An Application/fee is submitted describing the source, operation, and emissions. The Department may request additional information to complete the Application. Once the Application is considered complete, the applicant is required to publish a Notice of Application in ^{a newspaper circulated in} each County the unit will be operated in Florida. For a transportable facility scheduled to operate throughout the state, that can be 68 Counties. A notice in a newspaper can cover several Counties.

The Department Reviews the Application. The Review engineer looks at the particulate matter and VOC control equipment and fugitive dust control procedures. If the facility appears to be capable of complying with the Department's rules and policies, the engineer writes the Technical Evaluation and Preliminary Determination and Proposed permit, obtains management's approval of the recommendations, and mails the package to the applicant - all within 90 days of the date the application is complete. The package includes a Notice of Intent that the applicant must publish in ^{a newspaper circulated in} each County the facility will operate in. If comments are submitted in response to the Notice, they are addressed in the Final Determination and Construction permit. If a petition for hearing is filed in response to the Notice, the hearing officer assigned to the case must issue his final order before the BAR can act on the application. This can take years.

The Notice Requirements for transportable facilities is awkward. If the applicant publishes the Notice statewide, for a statewide operation.

a petition for Reopening from any county in the state can stop the permitting process. We have allowed applicants to obtain a permit to operate in limited parts of the state but to complete the public notice requirements and obtain an amendment to the permit(s) for the facility prior to operating in another part of the state. A petition can still block the permit from being amended but may not affect the operation in other parts of the state. This policy could be changed in the future if it is determined that it does not comply with the public notice requirements.

On transportable units, a number of government offices have to be notified ^(by certified mail) at least 3 days prior to operating the unit at a new location. This includes the DER District Air and Bureau Waste Cleanup personnel, County environmental programs, County governments, and City governments.

V Air Emission Control - no specific air regulation now.

Original

BAR originally regulated PM and toxics only from these facilities. The PM standard remained 0.04 grains/dscf for asphalt plants and was set at 0.03 gr/dscf, the RACT standard, for transportable facilities.

Current Data received showed facilities could become major sources of air pollution if VOC not controlled. Also, that benzene was more toxic than the references indicated, the TLV for benzene was reduced from 30 to 3 ug/m³. The Department began requiring VOC control on these facilities, setting on 95% destruction. The incinerator standard of 0.08 gr/dscf @ 50% EA was the PM standard. The toxic policy involved determining that the maximum emission of any chemical ^{that} through the use of EPA's Screening model (needed stack height, diameter, temperature, gas velocity, and emission), would not exceed the acceptable ambient air concentration, AAC, which is $\frac{1}{420}$ of the TLV for a continuous operation. Formula for shorter operation times, $AAC = (40/\text{hours week}) (1/\text{safety}) (TLV)$. We are now using DS-Threat - Levels instead of AAC when they are available.

Proposed Currently adopting ^{air} rule for these facilities. Because of problems in analyzing what is in feed and measuring the destruction efficiency of the VOC control devices the reverse rule set a temperature

and residence time. They are: 1400°F for 2 seconds or;
1500°F for 1.0 second or; 1600°F for 0.5 seconds or;
1800°F for 0.3 seconds.

Soil thermal treatment facilities will be restricted to treating soils contaminated with gasoline, fuel oils, and petroleum based motor oils. If other material in the soil, i.e. hazardous waste, an application for an air permit to treat hazardous waste would have to be approved before the soil could be treated.

The PM Standard Remains ^{GRAINS} 0.08 gr/dscf Corrected 50% EA
Fugitive dust must also be controlled by wetting with water.

The BAR believes by restriction^{on} what can be in the soil, limiting the amount of particulate matter that can be emitted, and exposing the flue gases to a minimum temperature and residence time that the air pollution controls will be adequate to protect health and welfare.

A third workshop may be held on the air regulations for these facilities on Feb 28, 1992, and the rule may be adopted in June, 1992.

ers of hazardous waste fuel.

Persons who market hazardous waste fuel are termed "marketers", and are subject to the following requirements. Marketers include generators who market hazardous waste fuel directly to a burner, persons who receive hazardous waste from generators and produce, process, or blend hazardous waste fuel from these hazardous wastes, and persons who distribute but do not process or blend hazardous waste fuel.

(a) **Prohibitions.** The prohibitions under § 266.31(a);

(b) **Notification.** Notification of hazardous waste fuel activities. Even if a marketer has previously notified EPA of his hazardous waste management activities and obtained a U.S. EPA Identification Number, he must renotify to identify his hazardous waste fuel activities.

(c) **Storage.** The applicable provisions of § 262.34, and Subparts A through L of Part 264, Subparts A through L of Part 265, and Part 270 of this chapter;

(d) **Off-site shipment.** The standards for generators in Part 262 of this chapter when a marketer initiates a shipment of hazardous waste fuel;

(e) **Required notices.** (1) Before a marketer initiates the first shipment of hazardous waste fuel to a burner or another marketer, he must obtain a one-time written and signed notice from the burner or marketer certifying that:

(i) The burner or marketer has notified EPA and identified his waste-as-fuel activities; and

(ii) If the recipient is a burner, the burner will burn the hazardous waste fuel only in an industrial furnace or boiler identified in § 266.31(b).

(2) Before a marketer accepts the first shipment of hazardous waste fuel from another marketer, he must provide the other marketer with a one-time written and signed certification that he has notified EPA under section 3010 of RCRA and identified his hazardous waste fuel activities; and

(f) **Recordkeeping.** In addition to the applicable recordkeeping requirements of Parts 262, 264, and 265 of this chapter, a marketer must keep a copy of

sends for three years from the date he last engages in a hazardous waste fuel marketing transaction with the person who sends or receives the certification notice.

(The notification requirements contained in paragraph (b) of this section were approved by the Office of Management and Budget under control number 2050-0028. The storage requirements contained in paragraph (c) of this section were approved by the Office of Management and Budget under control number 2050-0009. The manifest and invoice requirements contained in paragraph (d) of this section were approved by the Office of Management and Budget under control numbers 2050-0039 and 2050-0047, respectively. The certification requirements contained in paragraph (e) were approved by the Office of Management and Budget under control number 2050-0047. The recordkeeping requirements contained in paragraph (f) were approved by the Office of Management and Budget under control number 2050-0047.)

[50 FR 49204, Nov. 29, 1985, as amended at 52 FR 11821, Apr. 13, 1987]

§ 266.35 Standards applicable to burners of hazardous waste fuel.

Owners and operators of industrial furnaces and boilers identified in § 266.31(b) that burn hazardous waste fuel are "burners" and are subject to the following requirements:

(a) **Prohibitions.** The prohibitions under § 266.31(b);

(b) **Notification.** Notification of hazardous waste fuel activities. Even if a burner has previously notified EPA of his hazardous waste management activities and obtained a U.S. EPA Identification Number, he must renotify to identify his hazardous waste fuel activities.

(c) **Storage.** (1) For short-term accumulation by generators who burn their hazardous waste fuel on site, the applicable provisions of § 262.34 of this chapter;

(2) For existing storage facilities, the applicable provisions of Subparts A through L of Part 265, and Parts 270 and 124 of this chapter; and

(3) For new storage facilities, the applicable provisions of Subparts A through L of Part 264, and Parts 270 and 124 of this chapter;

(d) **Required notices.** Before a burner accepts the first shipment of hazardous waste fuel from a marketer, he must provide the marketer a one-time written and signed notice certifying that:

(1) He has notified EPA and identified his waste-as-fuel activities; and

(2) He will burn the fuel only in a boiler or furnace identified in § 266.31(b).

(e) **Recordkeeping.** In addition to the applicable recordkeeping requirements of Parts 264 and 265 of this chapter, a burner must keep a copy of each certification notice that he sends to a marketer for three years from the date he last receives hazardous waste fuel from that marketer.

(The notification requirements contained in paragraph (b) of this section were approved by the Office of Management and Budget under control number 2050-0028. The storage requirements contained in paragraph (c) of this section were approved by the Office of Management and Budget under control number 2050-0009. The certification requirements contained in paragraph (d) of this section were approved by the Office of Management and Budget under control number 2050-0047. The recordkeeping requirements contained in paragraph (e) of this section were approved by the Office of Management and Budget under control number 2050-0047.)

[50 FR 49204, Nov. 29, 1985, as amended at 52 FR 11821, Apr. 13, 1987]

Subpart E—Used Oil Burned for Energy Recovery

SOURCE: 50 FR 49205, Nov. 29, 1985, unless otherwise noted.

§ 266.40 Applicability.

(a) The regulations of this subpart apply to used oil that is burned for energy recovery in any boiler or industrial furnace that is not regulated under Subpart O of Part 264 or 265 of this chapter, except as provided by paragraphs (c) and (e) of this section. Such used oil is termed "used oil fuel". Used oil fuel includes any fuel produced from used oil by processing, blending, or other treatment.

(b) "Used oil" means any oil that has been refined from crude oil, used, and, as a result of such use, is contaminated by physical or chemical impurities.

(c) Except as provided by paragraph (d) of this section, used oil that is mixed with hazardous waste and burned for energy recovery is subject to regulation as hazardous waste fuel under Subpart D of Part 266. Used oil containing more than 1000 ppm of total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in Subpart D of Part 261 of this chapter. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Appendix VIII of Part 261 of this chapter).

(d) Used oil burned for energy recovery is subject to regulation under this subpart rather than as hazardous waste fuel under Subpart D of this part if it is a hazardous waste solely because it:

(1) Exhibits a characteristic of hazardous waste identified in Subpart C of Part 261 of this chapter, provided that it is not mixed with a hazardous waste; or

(2) Contains hazardous waste generated only by a person subject to the special requirements for small quantity generators under § 261.5 of this chapter.

(e) Except as provided by paragraph (c) of this section, used oil burned for energy recovery, and any fuel produced from used oil by processing, blending, or other treatment, is subject to regulation under this subpart unless it is shown not to exceed any of the allowable levels of the constituents and properties in the specification shown in the following table. Used oil fuel that meets the specification is subject only to the analysis and recordkeeping requirements under § 266.43(b) (1) and (6). Used oil fuel that exceeds any specification level is termed "off-specification used oil fuel".

LEVEL IS SUBJECT TO THIS SUBPART WHEN BURNED FOR ENERGY RECOVERY *

Constituent/property	Allowable level
Arsenic	5 ppm maximum.
Cadmium	2 ppm maximum.
Chromium	10 ppm maximum.
Lead	100 ppm maximum.
Flash Point	100 °F minimum.
Total Halogens	4,000 ppm maximum.

* The specification does not apply to used oil fuel mixed with a hazardous waste other than small quantity generator hazardous waste.

† Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under § 266.40(c). Such used oil is subject to Subpart D of this part rather than this subpart when burned for energy recovery unless the presumption of mixing can be successfully rebutted.

§ 266.41 Prohibitions.

(a) A person may market off-specification used oil for energy recovery only:

(1) To burners or other marketers who have notified EPA of their used oil management activities stating the location and general description of such activities, and who have an EPA identification number; and

(2) To burners who burn the used oil in an industrial furnace or boiler identified in paragraph (b) of this section.

(b) Off-specification used oil may be burned for energy recovery in only the following devices:

(1) Industrial furnaces identified in § 260.10 of this chapter; or

(2) Boilers, as defined in § 260.10 of this chapter, that are identified as follows:

(i) Industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;

(ii) Utility boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale; or

(iii) Used oil-fired space heaters provided that:

(A) The heater burns only used oil that the owner or operator generates or used oil received from do-it-yourself oil changers who generate used oil as household waste;

maximum capacity of not more than 0.5 million Btu per hour; and

(C) The combustion gases from the heater are vented to the ambient air.

§ 266.42 Standards applicable to generators of used oil burned for energy recovery.

(a) Except as provided in paragraphs (b) and (c) of this section, generators of used oil are not subject to this subpart.

(b) Generators who market used oil directly to a burner are subject to § 266.43.

(c) Generators who burn used oil are subject to § 266.44.

§ 266.43 Standards applicable to marketers of used oil burned for energy recovery.

(a) Persons who market used oil fuel are termed "marketers". Except as provided below, marketers include generators who market used oil fuel directly to a burner, persons who receive used oil from generators and produce, process, or blend used oil fuel from these used oils (including persons sending blended or processed used oil to brokers or other intermediaries), and persons who distribute but do not process or blend used oil fuel. The following persons are not marketers subject to this subpart:

(1) Used oil generators, and collectors who transport used oil received only from generators, unless the generator or collector markets the used oil directly to a person who burns it for energy recovery. However, persons who burn some used oil fuel for purposes of processing or other treatment to produce used oil fuel for marketing are considered to be burning incidentally to processing. Thus, generators and collectors who market to such incidental burners are not marketers subject to this subpart.

(2) Persons who market only used oil fuel that meets the specification under § 266.40(e), and who are not the first person to claim the oil meets the specification (i.e., marketers who do not receive used oil from generators or initial transporters and marketers who

neither receive nor market off-specification used oil fuel).

(b) Marketers are subject to the following requirements:

(1) *Analysis of used oil fuel.* Used oil fuel is subject to regulation under this subpart unless the marketer obtains analyses or other information documenting that the used oil fuel meets the specification provided under § 266.40(e).

(2) *Prohibitions.* The prohibitions under § 266.41(a);

(3) *Notification.* Notification to EPA stating the location and general description of used oil management activities. Even if a marketer has previously notified EPA of his hazardous waste management activities under section 3010 of RCRA and obtained a U.S. EPA Identification Number, he must renotify to identify his used oil management activities.

(4) *Invoice system.* When a marketer initiates a shipment of off-specification used oil, he must prepare and send the receiving facility an invoice containing the following information:

(i) An invoice number;

(ii) His own EPA identification number and the EPA identification number of the receiving facility;

(iii) The names and addresses of the shipping and receiving facilities;

(iv) The quantity of off-specification used oil to be delivered;

(v) The date(s) of shipment or delivery; and

(vi) The following statement: "This used oil is subject to EPA regulation under 40 CFR Part 266";

NOTE: Used oil that meets the definition of combustible liquid (flash point below 200 °F but at or greater than 100 °F) or flammable liquid (flash point below 100 °F) is subject to Department of Transportation Hazardous Materials Regulations at 49 CFR Parts 100 through 177.

(5) *Required notices.* (i) Before a marketer initiates the first shipment of off-specification used oil to a burner or other marketer, he must obtain a one-time written and signed notice from the burner or marketer certifying that:

(A) The burner or marketer has notified EPA stating the location and general description of his used oil management activities; and

(B) If the recipient is a burner, the burner will burn the off-specification used oil only in an industrial furnace or boiler identified in § 266.41(b); and

(ii) Before a marketer accepts the first shipment of off-specification used oil from another marketer subject to the requirements of this section, he must provide the marketer with a one-time written and signed notice certifying that he has notified EPA of his used oil management activities; and

(6) *Recordkeeping.* (i) *Used oil fuel that meets the specification.* A marketer who first claims under paragraph (b)(1) of this section that used oil fuel meets the specification must keep copies of analysis (or other information used to make the determination) of used oil for three years. Such marketers must also record in an operating log and keep for three years the following information on each shipment of used oil fuel that meets the specification. Such used oil fuel is not subject to further regulation, unless it is subsequently mixed with hazardous waste or unless it is mixed with used oil so that it no longer meets the specification.

(A) The name and address of the facility receiving the shipment;

(B) The quantity of used oil fuel delivered;

(C) The date of shipment or delivery; and

(D) A cross-reference to the record of used oil analysis (or other information used to make the determination that the oil meets the specification) required under paragraph (b)(6)(i) of this section.

(ii) *Off-specification used oil fuel.* A marketer who receives or initiates an invoice under the requirements of this section must keep a copy of each invoice for three years from the date the invoice is received or prepared. In addition, a marketer must keep a copy of each certification notice that he receives or sends for three years from the date he last engages in an off-specification used oil fuel marketing transaction with the person who sends or receives the certification notice.

(The analysis requirements contained in paragraph (b)(1) of this section were approved by OMB under control number 2050-

0047. The notification requirements contained in paragraph (b)(3) of this section were approved by OMB under control number 2050-0028. The invoice requirements contained in paragraph (b)(4) of this section were approved by OMB under control number 2050-0047. The certification requirements contained in paragraph (b)(5) of this section were approved by OMB under control number 2050-0047. The recordkeeping requirements contained in paragraph (b)(6) of this section were approved by OMB under control number 2050-0047.)

[50 FR 49205, Nov. 29, 1985, as amended at 52 FR 11822, Apr. 13, 1987]

§ 266.44 Standards applicable to burners of used oil burned for energy recovery.

Owners and operators of facilities that burn used oil fuel are "burners" and are subject to the following requirements:

(a) **Prohibition.** The prohibition under § 266.41(b);

(b) **Notification.** Burners of off-specification used oil fuel, and burners of used oil fuel who are the first to claim that the oil meets the specification provided under § 266.40(e), except burners who burn specification oil that they generate, must notify EPA stating the location and general description of used oil management activities. Burners of used oil fuel that meets the specification who receive such oil from a marketer that previously notified EPA are not required to notify. Owners and operators of used oil-fired space heaters that burn used oil fuel under the provisions of § 266.41(b)(2) are exempt from this notification requirement. Even if a burner has previously notified EPA of his hazardous waste management activities under section 3010 of RCRA and obtained an identification number, he must renotify to identify his used oil management activities.

(c) **Required notices.** Before a burner accepts the first shipment of off-specification used oil fuel from a marketer, he must provide the marketer a one-time written and signed notice certifying that:

(1) He has notified EPA stating the location and general description of his used oil management activities; and

(2) He will burn the used oil only in an industrial furnace or boiler identified in § 266.41(b); and

(d) **Used oil fuel analysis.** (1) Used oil fuel burned by the generator is subject to regulation under this subpart unless the burner obtains analysis (or other information) documenting that the used oil meets the specification provided under § 266.40(e).

(2) Burners who treat off-specification used oil fuel by processing, blending, or other treatment to meet the specification provided under § 266.40(e) must obtain analyses (or other information) documenting that the used oil meets the specification.

(e) **Recordkeeping.** A burner who receives an invoice under the requirements of this section must keep a copy of each invoice for three years from the date the invoice is received. Burners must also keep for three years copies of analyses of used oil fuel as may be required by paragraph (d) of this section. In addition, he must keep a copy of each certification notice that he sends to a marketer for three years from the date he last receives off-specification used oil from that marketer.

(The notification requirements contained in paragraph (b) of this section were approved by OMB under control number 2050-0028. The certification requirements contained in paragraph (c) of this section were approved by OMB under control number 2050-0047. The analysis requirements contained in paragraph (d) of this section were approved by OMB under control number 2050-0047. The recordkeeping requirements contained in paragraph (e) of this section were approved by OMB under control number 2050-0047.)

[50 FR 49205, Nov. 29, 1985, as amended at 52 FR 11822, Apr. 13, 1987]

Subpart F—Recyclable Materials Utilized for Precious Metal Recovery

§ 266.70 Applicability and requirements.

(a) The regulations of this subpart apply to recyclable materials that are reclaimed to recover economically significant amounts of gold, silver, platinum, palladium, iridium, osmium, rhodium, ruthenium, or any combination of these.

(b) Persons who generate, transport, or store recyclable materials that are regulated under this subpart are subject to the following requirements:

Environmental Protection Agency

(1) Notification requirements under section 3010 of RCRA;

(2) Subpart B of Part 262 (for generators), §§ 263.20 and 263.21 (for transporters), and §§ 265.71 and 265.72 (for persons who store) of this chapter;

(c) Persons who store recycled materials that are regulated under this subpart must keep the following records to document that they are not accumulating these materials speculatively (as defined in § 261.1(c) of this chapter):

(1) Records showing the volume of these materials stored at the beginning of the calendar year;

(2) The amount of these materials generated or received during the calendar year; and

(3) The amount of materials remaining at the end of the calendar year.

(d) Recyclable materials that are regulated under this subpart that are accumulated speculatively (as defined in § 261.1(c) of this chapter) are subject to all applicable provisions of Parts 262 through 265, 270 and 124 of this chapter.

Subpart G—Spent Lead-Acid Batteries Being Reclaimed

§ 266.80 Applicability and requirements.

(a) The regulations of this subpart apply to persons who reclaim spent lead-acid batteries that are recyclable materials ("spent batteries"). Persons who generate, transport, or collect spent batteries, or who store spent batteries but do not reclaim them are not subject to regulation under Parts 262 through 266 or Part 270 or 124 of this chapter, and also are not subject to the requirements of section 3010 of RCRA.

(b) Owners or operators of facilities that store spent batteries before reclaiming them are subject to the following requirements.

(1) Notification requirements under section 3010 of RCRA;

(2) All applicable provisions in Subparts A, B (but not § 264.13 (waste analysis)), C, D, E (but not § 264.71 or § 264.72 (dealing with the use of the manifest and manifest discrepancies)), and F through L of Part 264 of this chapter;

[50 FR 666, Jan. 4, 1985, as amended at 50 FR 33543, Aug. 20, 1985]

PART 267—INTERIM STANDARDS FOR OWNERS AND OPERATORS OF NEW HAZARDOUS WASTE LAND DISPOSAL FACILITIES

Subpart A—General

Sec.

267.1 Purpose, scope and applicability.

267.2 Applicability of Part 264 standards.

267.3 Duration of Part 267 standards and their relationship to permits.

267.4 Imminent hazard action.

267.5 Additional permit procedures applicable to Part 267.

267.6 Definitions.

Subpart B—Environmental Performance Standard

267.10 Environmental performance standard.

Subpart C—Landfills

267.20 Applicability.

267.21 General design requirements.

267.22 General operating requirements.

267.23 Closure and post-closure.

267.24 Treatment of waste.

267.25 Additional requirements.

Subpart D—Surface Impoundments

267.30 Applicability.

267.31 General design requirements.

267.32 General operating requirements.

267.33 Closure and post-closure.

267.34 Treatment of waste.

267.35 Additional requirements.

Subpart E—Land Treatment

267.40 Applicability.

267.41 General design requirements.

267.42 General operating requirements.

267.43 Unsaturated zone monitoring.

267.44 Closure and post-closure.

267.45 Treatment of waste.

267.46 Additional requirements.

Subpart F—Ground-Water Monitoring

267.50 Applicability.

267.51 Ground-water monitoring system.

267.52 Ground-water monitoring procedures.

267.53 Additional requirements.

Subpart G—Underground Injection

267.60 Applicability.

(e)

Agency

§ 761.20

limited to, control, use as carrier, and on pipes.

In addition to any applicable requirements under 40 CFR Part 266, subpart E, marketers and burners of used oil who market (process or dispose in commerce) for energy recovery used oil containing any quantifiable level of PCBs are subject to the following requirements:

(1) Restrictions on marketing. Used oil containing any quantifiable level of PCBs (2 ppm) may be marketed only

(i) Qualified incinerators as defined in 40 CFR 761.3.

(ii) Other marketers identified in 40 CFR 266.41(a)(1).

(iii) Burners identified in 40 CFR 266.41(b). Only burners in the automotive industry may burn used oil generated from automotive sources in used oil-fired space heaters provided the provisions of 40 CFR 266.41(b)(2)(iii) (A), (B) and (C) are met. The Regional Administrator may grant a variance for a boiler that does not meet the 40 CFR 266.41(b) criteria after considering the criteria listed in 40 CFR 260.32 (a) through (f). The applicant must address the relevant criteria contained in 40 CFR 260.32 (a) through (f) in an application to the Regional Administrator.

(2) Testing of used oil fuel. Used oil to be burned for energy recovery is presumed to contain quantifiable levels (2 ppm) of PCB unless the marketer obtains analyses (testing) or other information that the used oil fuel does not contain quantifiable levels of PCBs.

(i) The person who first claims that a used oil fuel does not contain quantifiable level (2 ppm) PCB must obtain analyses or other information to support that claim.

(ii) Testing to determine the PCB concentration in used oil may be conducted on individual samples, or in accordance with the testing procedures described in § 761.60(g)(2). However, for purposes of this part, if any PCBs at a concentration of 50 ppm or greater have been added to the container or equipment, then the total container contents must be considered as having

a PCB concentration of 50 ppm or greater for purposes of complying with the disposal requirements of this part.

(iii) Other information documenting that the used oil fuel does not contain quantifiable levels (2 ppm) of PCBs may consist of either personal, special knowledge of the source and composition of the used oil, or a certification from the person generating the used oil claiming that the oil contains no detectable PCBs.

(3) Restrictions on burning. (i) Used oil containing any quantifiable levels of PCB may be burned for energy recovery only in the combustion facilities identified in paragraph (e)(1) of this section when such facilities are operating at normal operating temperatures (this prohibits feeding these fuels during either startup or shutdown operations). Owners and operators of such facilities are "burners" of used oil fuels.

(ii) Before a burner accepts from a marketer the first shipment of used oil fuel containing detectable PCBs (2 ppm), the burner must provide the marketer a one-time written and signed notice certifying that:

(A) The burner has complied with any notification requirements applicable to "qualified incinerators" (§ 761.3) or to "burners" regulated under 40 CFR Part 266, subpart E.

(B) The burner will burn the used oil only in a combustion facility identified in paragraph (e)(1) of this section and identify the class of burner he qualifies.

(4) Recordkeeping requirements. The following recordkeeping requirements are in addition to the recordkeeping requirements for marketers found in 40 CFR 266.43(b)(6) (i) and (ii), and for burners found in 40 CFR 266.44(e).

(i) Marketers. Marketers who first claim that the used oil fuel contains no detectable PCBs must include among the records required by 40 CFR 266.43(b)(6)(i), copies of the analysis or other information documenting his claim, and he must include among the records required by 40 CFR 266.43(b)(6)(ii), a copy of each certification notice received or prepared relating to transactions involving PCB-containing used oil.

(ii) *Reverses. Reverses must include among the records required by 40 CFR*

266.44(e), a copy of each certification notice required by paragraph (e)(3)(iii) of this section that he sends to a marketer.

(Approved by the office of Management of Budget under OMB control number 2050-0047)

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020, (15 U.S.C. 2605)

[44 FR 31542, May 31, 1979. Redesignated at 47 FR 19527, May 6, 1982, and amended at 49 FR 25241, June 20, 1984; 49 FR 28190, July 10, 1984; 49 FR 44638, Nov. 8, 1984; 53 FR 12524, Apr. 15, 1988; 53 FR 24220, June 27, 1988]

§ 761.30 Authorizations.

The following non-totally enclosed PCB activities are authorized pursuant to section 6(e)(2)(B) of TSCA:

(a) *Use in and servicing of transformers (other than railroad transformers).* PCBs at any concentration may be used in transformers (other than in railroad locomotives and self-propelled railroad cars) and may be used for purposes of servicing including rebuilding these transformers for the remainder of their useful lives, subject to the following conditions:

(1) *Use conditions.* (i) As of October 1, 1985, the use and storage for reuse of PCB Transformers that pose an exposure risk to food or feed is prohibited.

(ii) As of October 1, 1990, the use of network PCB Transformers with higher secondary voltages (secondary voltages equal to or greater than 480 volts, including 480/277 volt systems) in or near commercial buildings is prohibited. Network PCB Transformers with higher secondary voltages which are removed from service in accordance with this requirement must either be reclassified to PCB Contaminated or non PCB status, placed into storage for disposal, or disposed.

(iii) Except as otherwise provided, as of October 1, 1985, the installation of PCB Transformers, which have been placed into storage for reuse or which have been removed from another location, in or near commercial buildings is prohibited.

(A) The installation of PCB Transformers on or after October 1, 1985,

BEST AVAILABLE COPY

permitted either in an emergency situation, as defined in § 761.3, or in situations where the transformer has been retrofilled and is being placed into service in order to qualify for reclassification under paragraph (a)(2)(v) of this section.

(B) Installation of a PCB Transformer in an emergency situation is permitted when done in accordance with the following:

(1) Documentation to support the reason for the emergency installation of a PCB Transformer must be maintained at the owner's facility and completed within 30 days after installation of the PCB Transformer. The documentation must include, but is not limited to:

(i) The type of transformer, i.e., radial or lower or higher network, that requires replacement.

(ii) The type(s) of transformers, i.e., radial or lower or higher network, that must be used for replacement.

(iii) The date of transformer failure.

(iv) The date of subsequent replacement.

(v) The type of transformer, i.e., radial or lower or higher network, installed as a replacement.

(vi) A statement describing action taken to locate a non-PCB or PCB Contaminated transformer replacement.

(2) Such emergency installation is permitted until October 1, 1990, and the use of any PCB Transformer installed on such an emergency basis is permitted for 1 year from the date of installation or until October 1, 1990, whichever is earlier.

(3) PCB Transformers installed for emergency purposes may be subsequently reclassified; however, the transformer must be effectively reclassified to a non-PCB or PCB-Contaminated status within 1 year after installation or by October 1, 1990, whichever is earlier because the transformer was initially installed in an emergency situation.

(C) Installation of a retrofilled PCB Transformer for reclassification purposes is permitted when it is done in accordance with the following:

(1) Those who installed transformers for reclassification purposes must

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40 CFR 266, Subpart E - Additional Requirements

266.43 (b)(6)(i) + (ii) Record Keeping
for burn 266.44(e)

FLORIDA SOLITE

9/17/91

Willard Hambro	BAR	904/488-1344
Pradeep Raval	K&A	904/377-5822
Barry Andrews	BAR	904-488-1344
ALBERT GALLIANO	SOLITE	904-264-6121
Tony Saunders	FLA. SOLITE	904-264-6121
George Williamson	"	"
John Koogler	Koogler & Associates	904/377-5822
MIKE HARLEY	Air Compliance & Enforcement	(904) 488-1344
Preston Lewis	FLA-BAR	(904) 488-1344

Williams

But shot down fully economic rule

new furnace Reg. / did not meet 8/1 deadline

> operation problems -

< Clay fines

> can't meet original cost. sch. (EXTEND EXP DATE)

> Burn coal now (non-Raydon fuel)

Sept 10 - FL model RCTB (Bark and about excluded discharges)

Let/scrub - Ray waste) MAY BE REVERSED (MARCH 92)

FL SOLITE WANTS TO BE IN HAZ. WASTE BUSINESS

pre-est. 3 bills to burn Ray waste fuel

< Clay fines model needed

1/2 Use other fuller than Fuller or equivalent

MH want doc. on final selection

?
5 : 0.6 %
: 1.3 %

5000/yr

S.C.1 May not use Fuller B.H.

monom S. in Clay or fuel

2 WKS
KARMA

S.C.2

S.C.5 Ratio 11/7

(1990 - 370⁵⁰⁰ TPY)

volume 760000/yr

Document
proposed

%5 clay

4. Check flow rate 5.9 lbs/hr

VE

Solids burn coal

want different std as
cool. Why needed?

6. Coal may have different NO_x
778 No problem with 0.02 g/g coal

Cracks - 10% /
Coal handling
dry storage - 5%

12. 7600 lbs/yr

13. not comply with indent.
Don't want the monitor fuel / prod.

MA MB
problem with
scale

14. need more fuel. Document actual fuel usage
no's in spec. wrong.

Want combination of 2 - the input not exceed --

16. ul high & coal not used more x-days/yr

10 miles w/ Ind. Waste Reg.

method 25 - Use Method 25A?

Amend permit for Ind. Waste Reg.

CO + VOC (Amend EMI)

VOC ~ 40 ppm

New Industrial furnace reg. may require new emissions

15.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

WILLARD -
THIS IS ALL OGC
HAS REGARDING
THE

In the matter of an
Application for Permit By:

Florida Solite Company, Inc.
Post Office Box 297
Green Cove Springs, Florida 32043

DER File No. AC 10-197099

Clay County

2 x 1 1/2 #5

Gary

MOTION FOR EXTENSION OF TIME

The Applicant, Florida Solite Company, Inc., by and through its undersigned attorney, and pursuant to Rule 17-103.070, FAC, moves the Secretary of DER (no hearing officer is presiding) for a 60-day extension of time in which to file a petition, and as grounds thereof states as follows:

1. The applicant needs more than 14 days to evaluate and study the general and specific conditions of the permit, in order for the applicant to completely understand all the general and specific conditions of the permit. Complicated engineering studies and evaluation must be performed that will require more than 14 days.

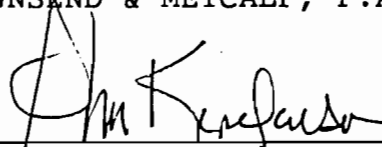
2. The applicant needs additional time to meet with the department to discuss and negotiate the specific requirements of the general and specific conditions of the permit.

The undersigned attorney hereby certifies that he has consulted with William Holmes Congdon, Jr., Esquire, Office of General Counsel, concerning the extension requested and he has no

objection to such extension.

Dated this 6th day of August, 1991, in Orange Park, Clay County, Florida.

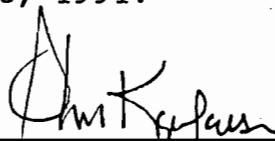
KOPELOUSOS, HEAD, SMITH,
TOWNSEND & METCALF, P.A.



JOHN KOPELOUSOS
Florida Bar No.: 092130
Post Office Box 855
Orange Park, FL 32067-0855
904/264-6000
Attorney for Florida Solite Company,
Inc.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing has been furnished to William Holmes Congdon, Jr., Esquire, Office of General Counsel, DER, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, and Ernest E. Frey, P.E., Deputy Assistant Secretary, Northeast District Office, 7825 Baymeadows Way, Suite B200, Jacksonville, Florida 32256-7577, by U. S. Mail, this 6th day of August, 1991.



John Kopelousos

I N T E R O F F I C E M E M O R A N D U M

Date: 08-Aug-1991 02:44pm GMT
From: Iris Littleton (TAL)
LITTLETON_I
Dept: Office General Counsel
Tel No: 904/488-9730

TO: Ernest Frey (FREY,ERNEST)
CC: Andrew Kutyna (KUTYNA,ANDREW)
CC: Frank Watkins (WATKINS,FRANK)
CC: Pat Manning (TAL) (MANNING_P)
CC: Dottie Diltz (TAL) (DILTZ_D)

Subject: New OGC Case Assignments

TO: Ernest Frey
FROM: Iris - OGC - Tallahassee

Received 8/07/91 request for an Extension of Time from
Florida Solite Company, Inc., concerning permit AC10-197099.

Received 8/07/91 request for an Extension of Time from the
City of Hastings concerning permit DC55-191762.

CC: W. Hanks

9-11-91

Gary

BAR has a meeting scheduled
with Florida Solite on
Tuesday, 9/17/91, at 9:30 AM.
to discuss ^{PROPOSED} permit No. AC10-197099.
Did their request for an
extension list what they
objected to in the permit? If
so, I'd like a copy of it.

Willard Hanko

Buzz me when
you want to meet



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee	
To: _____	Location: _____
To: _____	Location: _____
To: _____	Location: _____
From: _____	Date: _____

Interoffice Memorandum

NORTHEAST DISTRICT - JACKSONVILLE

TO: Barry Andrews
FROM: Andy Kutyna
DATE: August 7, 1991
SUBJECT: Clay County - AP
Florida Solite Company
#5 Kiln
Draft CP

These comments are concerning the draft construction permit received 07-30-91.

1. To comply with the SO₂ limits, the sulfur content in the clay should be limited to 0.24% by wt.
2. How is Specific Condition (SC) No. 9 to be used to limit and to show compliance?
3. When is the first test for each pollutant in SC No. 16 due?
4. Have you questioned Florida Solite why hydrated lime is being injected after the cooler? Adding the material ahead of the cooler would enhance absorption.
5. Logging of the following parameters would help insure particulate control efficiency.

Inlet temperature to cooler
Outlet temperature from cooler
Outlet temperature from baghouse
Compressed air pressure

AK:JC:bt

RECEIVED

AUG 12 1991

Division of Air
Resources Management

Department of Environmental Regulation
Routing and Transmittal Slip

To: (Name, Office, Location)

1.

2.

3.

4.

Remarks:

RECEIVED

AUG 12 1991

Division of Air
Resources Management

From:

Air / Jax

Date

Phone



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

July 26, 1991

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Tony Saunders, Plant Manager
Florida Solite Company
P. O. Box 297
Green Cove Springs, Florida 32043

Dear Mr. Saunders:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit to construct a dust collector, a fines clay bin, and a lime injection system to replace the existing scrubber for kiln No. 5 at your lightweight aggregate production facility near Green Cove Springs, Clay County, Florida.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Barry Andrews of the Bureau of Air Regulation.

Sincerely,

for C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/WH/plm

Attachments

c: Andrew Kutyna, NED
John Koogler, P.E.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

CERTIFIED MAIL

In the Matter of an
Application for Permit by:

DER File No. AC 10-197099
Clay County

Florida Solite Company
P. O. Box 297
Green Cove Springs, Florida 32043

INTENT TO ISSUE

The Department of Environmental Regulation gives notice of its intent to issue a permit (copy attached) for the proposed project as detailed in the application specified above, for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, Florida Solite Company, applied on May 17, 1991, to the Department of Environmental Regulation for a permit to construct a dust collector, a fines clay bin, and a lime injection system to replace the existing scrubber for kiln No. 5 at their lightweight aggregate production facility near Green Cove Springs, Clay County, Florida.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes and Florida Administrative Code Chapters 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that a construction permit is required for the proposed work.

Pursuant to Section 403.815, Florida Statutes and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of their receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(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 Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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 intent. Persons whose substantial interests will be affected by any decision of the Department with regard to the application 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 14 days of receipt of this intent 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 Section 120.57, F.S., 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 28-5.207, F.A.C.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

for Barry D. Anthony
C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this INTENT TO ISSUE and all copies were mailed by certified mail before the close of business on 7-26-91 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Kym Lober 7-26-91
Clerk Date

Copies furnished to:

Andrew Kutyna, NED
John Koogler, P.E.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF INTENT TO ISSUE PERMIT

The Department of Environmental Regulation gives notice of its intent to issue a permit to Florida Solite Company, P. O. Box 297, Green Cove Springs, Florida 32043, to construct a dust collector, a fines clay bin, and a lime injection system to replace the existing scrubber for kiln No. 5. The kiln is located at the applicant's lightweight aggregate production facility on County Road 209A, north of Green Cove Springs, Clay County, Florida. Particulate matter emissions from the kiln and associated equipment are estimated to be 6.3 lbs/hr and 27.2 TPY. Sulfur dioxide emissions from the kiln are estimated to be 213.1 lbs/hr and 313 TPY. The emissions of other pollutants from the kiln, primarily the products of combustion of coal and liquid burnable material, will not change. A determination of Best Available Control Technology (BACT) was not required. As the modification does not result in an increase in emissions of any air pollutant, the impact of the emissions on the ambient air will not increase. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information; (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (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 Department's action or proposed action; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of

the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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 application 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 14 days of publication 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 Section 120.57, F.S., 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 28-5.207, F.A.C.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Department of Environmental Regulation
Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7577

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

Technical Evaluation
and
Preliminary Determination

Florida Solite Company
Clay County
Green Cove Springs, Florida

Aggregate Kiln No. 5 Alteration
File No. AC 10-197099

Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

July 26, 1991

I. General Information

A. Applicant

Florida Solite Company
P. O. Box 297
Green Cove Springs, Florida 32043

B. Request

On May 17, 1991, Florida Solite Company submitted an application for a permit to construct (alter) kiln No. 5 by replacing the existing wet spray scrubber with a dust collector and lime injection system. The project does not include an increase in production, fuels, or normal operations. The application was revised to include a clay fines bin, and resubmitted on June 20, 1991. The application was considered complete on June 20, 1991. The kiln No. 5 is located at the lightweight aggregate production facility (SIC 3295) on County Road 209A, north of Green Cove Springs, Clay County, Florida 32043. The UTM coordinates of this site are Zone 17, 427.3 km E and 3326.5 km N.

C. Emissions

Particulate matter (PM) emissions from the kiln No. 5 will be reduced from 19.6 lbs/hr from the existing wet spray scrubber to a design rate of 5.9 lbs/hr (25.7 TPY) from the proposed kiln dust collector. The applicant estimates that the clay fines bin dust collector will emit 0.12 lbs/hr and 0.5 TPY PM and the lime bin dust collector will emit 0.23 lbs/hr and 1.0 TPY PM.

Sulfur dioxide emission will be controlled with a lime injection system. The system is designed to remove at least 40% of the uncontrolled SO₂ emissions. Allowable production and fuel usage are not being changed. The emissions of other air pollutants from kiln No. 5 should not increase as a result of this project. The emissions of other pollutants from kiln No. 5 have not been documented. Based on similar kiln operations and other data, the applicant's engineer estimates the emissions of other pollutants to be the following:

<u>Pollutant</u>	<u>lbs/hr</u>	<u>TPY</u>
SO ₂	213.1	933.2
NOx	24.0	105.3
CO	3.7	16.4
VOC	6.7	29.6

II. Rule Applicability

The proposed project, construction of a dust collector, clay fines bin, and lime injection system to replace the existing wet

spray scrubber on kiln No. 5, is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code.

The facility is in an area designated attainment for all criteria pollutants (F.A.C. Rule 17-2.420).

The facility (SIC 3295) is at a major source of particulate matter, sulfur dioxide, and nitrogen oxides because the allowable emissions of each of these pollutants exceed 100 TPY.

The project will not result in an increase in emissions of any criteria pollutant. Therefore, the project is not subject to the Prevention of Significant Deterioration (PSD) regulations (F.A.C. Rule 17-2.500).

The project is subject to F.A.C. Rule 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements. The particulate matter and nitrogen oxides emission standards shall be set at the rate requested by the applicant. The sulfur dioxide emissions standards shall be set at rates documented for a similar kiln at this facility. Any emissions of toxic pollutants must comply with the Department's toxic policy.

III. Technical Evaluation

No operational changes (raw material, production, or fuel usage) to kiln No. 5 is associated with this project. Therefore, the uncontrolled emissions of all air pollutants should not change.

The proposed kiln dust collector is more efficient at removing particulate matter (PM) than the existing wet spray scrubber it will replace. Based on a standard of 0.08 gr/dscf @ 7% oxygen, the kiln's dust collector would be allowed to emit 5.9 lbs/hr PM. The concentration of PM in the flue gas can be achieved with a dust collector.

Dust collectors will also be employed to control the PM emissions from the clay fines bin and the lime bin. The applicant used an emission concentration of 0.04 gr/dscf to estimate the PM emissions from these bins. The PM emission concentration from dust collectors on similar sources in Florida are less than 0.02 gr/dscf. The Department believes a properly designed, operated, and maintained dust collector will meet a PM emission standard of 0.02 gr/dscf.

The uncontrolled sulfur dioxide (SO₂) emissions from a 7 TPH kiln in identical service as kiln No. 5 at this facility was documented to be 226 lbs/hr (max. 1 hour) and 75.8 lbs/hr (30 day average). The Department believes the uncontrolled SO₂ emissions from kiln 5 at 11 TPH production should be proportional, 355.1 lbs/hr (1 hr. max.) and 119.1 lbs/hr (30 day average). The applicant estimates the lime injection system will reduce the SO₂

emissions by 40 percent. Based on this, the Department believes the SO₂ emissions from kiln 5 will be 213.1 lbs/hr (1 hr. max.), 71.5 lbs/hr (30 day average) and 313 TPY. Data from a continuous emissions monitor for SO₂ can be used to determine the 30 day average emissions.

The estimated nitrogen oxides (NOx) emissions for kiln No. 5 is also based on tests on the similar 7 TPH kiln. Based on the production ratio of the proposed kiln and the 7 TPH kiln, NOx emissions from kiln No. 5 are estimated to be 24.0 lbs/hr. No air pollution controls for NOx are used on either kiln.

The estimated carbon monoxide (CO) and volatile organic compounds (VOC) emissions of 3.7 lbs/hr and 6.7 lbs/hr, respectively, are based on concentrations of these pollutants measured in tests on similar sources. No air pollution controls for CO and VOC are used on the proposed kiln.

Kiln No. 5 will also emit toxic pollutants contained in the liquid burnable material (LBM). The applicant did not measure the current emissions or estimate the future emissions of these toxic pollutants. The Department will require tests to establish what happens to the toxic pollutants, including heavy metals, as a condition to any permit to construct issued for this kiln. A specific condition of the proposed permit restricts toxic pollutant emissions to a level that will not endanger the health of the public.

Higher emissions could subject the plant to other regulations.

IV. Air Quality Analysis

As the proposed project does not result in an increase in emissions of any pollutant, the impact of the emissions on the ambient air quality should be the same or, for particulate matter and sulfur dioxides, reduced.

V. Conclusion

Based on the information provided by Florida Solite Company, the Department has reasonable assurance that the replacement of the wet spray scrubber on kiln No. 5 with a baghouse, clay fines bin, and lime rejection system, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any state or national ambient air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code, on property accessible to the public.





Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:

Florida Solite Company

P. O. Box 297

Green Cove Springs, FL 32043

Permit Number: AC 10-197099

Expiration Date: December 31, 1991

County: Clay

Latitude/Longitude: 30°04'07"N

81°45'17"W

Project: Kiln No. 5 Modification

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Authorization to replace the existing wet spray scrubber servicing kiln No. 5 with a Fuller SMS 7500R/A dust collector and lime injection system. Also included in this project is a clay fines bin controlled with a Fuller Model 9-DS-8 dust collector and a lime bin controlled by a Fuller Model 9-DS-8 dust collector. This kiln is located at the permittee's lightweight aggregate manufacturing facility (SIC 3295) on County Road 209A, north of Green Cove Springs, Clay County, Florida 32043. The UTM coordinates of this site are Zone 17, 427.3 km E and 3326.5 km N.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Application received May 17, 1991.
2. Revised application received June 19, 1991.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: December 31, 1991

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: December 31, 1991

GENERAL CONDITIONS:

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

- a. a description of and cause of non-compliance; and
- b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: December 31, 1991

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: December 31, 1991

GENERAL CONDITIONS:

records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

14. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

Construction Requirements

1. The construction of the dust collectors, lime injection system, and clay fines bin shall reasonably conform to the plans and schedule in the application.

2. A continuous monitor for sulfur dioxide that meets the Performance Specification 2 of 40 CFR 60, Appendix B (July 1, 1990) shall be installed on the stack for the dust collector serving kiln No. 5.

3. The dust collector serving kiln No. 5 shall be equipped with instruments that continuously record the pressure drop when the unit is in operation. The instrument shall be properly calibrated and maintained.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: December 31, 1991

SPECIFIC CONDITIONS:

Emission Restrictions

4. Particulate matter emissions from kiln No. 5 dust collector shall not exceed any of the following: 0.08 gr/dscf corrected to 7% oxygen, 5.9 lbs/hr, 25.7 TPY, and 5% opacity.
5. Sulfur dioxide emissions shall not exceed 213.1 lbs/hr (1 hr. max.), 71.5 lbs/hr (30 day avg.), and 313 TPY.
6. Nitrogen oxides emissions shall not exceed 24.0 lbs/hr and 105 TPY.
7. Particulate matter emissions from the lime bin dust collector shall not exceed any of the following: 0.02 gr/dscf, 0.116 lbs/hr, 0.5 TPY, or 5% opacity.
8. Particulate matter emissions from the clay fines bin dust collector shall not exceed any of the following: 0.02 gr/dscf, 0.06 lbs/hr, 0.3 TPY, or 5% opacity.
9. The combined emissions of metals and other toxic pollutants from all sources at this facility shall not result in ambient air concentrations predicted by Department approved modeling that exceed the acceptable ambient air concentrations or no threat levels established for any toxic pollutant.
10. The operation of this source shall not result in the emissions of air pollutants which cause or contribute to an objectionable odor pursuant to F.A.C. Rule 17-2.600(c)2.
11. Reasonable precautions shall be used to minimize unconfined emissions of particulate matter generated by this operation pursuant to F.A.C. Rule 17-2.610(3). Reasonable precautions shall be defined as the application of dust suppressants to the product from the kiln when visible emissions greater than 5% opacity are observed in this area.

Operation Requirements

12. The kiln may operate continuously, 8760 hrs/yr.
13. Maximum clay input to the kiln shall not exceed 13.2 TPH (dry) or 21.3 TPH (wet). Production shall not exceed 11.0 TPH (dry). The permittee shall have calibrated instruments on site to continuously monitor the clay input or production of this kiln.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: December 31, 1991

SPECIFIC CONDITIONS:

14. Heat input to the kiln shall not exceed 54.5 MMBtu/hr. A fuel input rate of 4540 lbs coal/hr containing up to 2.5% sulfur (maximum) or 545 gals LBM/hr containing up to 2.0% sulfur (maximum) may be burned in this kiln provided the actual sulfur dioxide emissions established pursuant to Specific Condition No. 5 of this permit are not exceeded.

15. The LBM shall not contain any organic cyanides, sulfide, mercaptans, insecticides, pesticides, herbicides, electroplating waste, radioactive material or PCB's above the detection level by the appropriate analytical procedure. The permittee shall retain the manifest of each load for 2 years for Department inspection.

Compliance Requirements

16. Kiln No. 5 shall be tested at 90 to 100% of its permitted capacity (11.9 to 13 TPH clay input (dry)) for the following pollutants:

<u>Pollutant</u>	Method (40 CFR 60, <u>Appendix A, 7/1/90)</u>	<u>Frequency</u>	<u>Comments</u>
PM	5	Annually	While burning high sulfur coal
SO ₂	6	Annually	While burning high sulfur coal
NOx	7E	Every 5 yrs	
VE	9	Annually	While burning high sulfur coal
VOC	25	Every 5 yrs	While burning LBM
Heavy Metals	filter/impinger analysis	Every 5 yrs	While burning LBM

Administrative Requirements

17. Stack test results shall be submitted to the Northeast District office within 45 days of the test.

PERMITTEE:
Florida Solite Company

Permit Number: AC 10-197099
Expiration Date: December 31, 1991

SPECIFIC CONDITIONS:

18. When the Department, after investigation, has good reason (such as complaints, increased visible emissions, or questionable maintenance of control equipment) to believe that any applicable emission standard contained in F.A.C. Chapter 17-2, or in this permit is being violated, it may require the owner or operator of the unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the source and to provide a report on the results of said tests to the Department.

19. The Northeast District office shall be notified in writing a minimum of 15 days in advance of any compliance tests to be conducted on this source.

20. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

21. An application for an operation permit must be submitted to the Northeast District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this _____ day
of _____, 1991

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

STEVE SMALLWOOD, P.E., Director
Division of Air Resources
Management

P 832 539 830



Certified Mail Receipt

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

PS Form 3800, June 1990

Sent to	
Mr. Tony Saunders, FL Solite	
Street & No.	
P. O. Box 297	
P.O., State & ZIP Code	
Green Cove Springs, FL 32043	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Delivery	
TOTAL Postage & Fees	\$
Postmark or Date	
Mailed: 7-26-91	
Permit: AC 10-197099	

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece next to the article number.

I also wish to receive the following services (for an extra fee):

- ☐ Addressee's Address
- ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. Tony Saunders, Plant Manager
Florida Solite Company
P. O. Box 297
Green Cove Springs, FL 32043

4a. Article Number
P 832 539 830

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery

5. Signature (Addressee)

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, October 1990

☆ U.S. GPO: 1990-273-881

DOMESTIC RETURN RECEIPT



KOOGLER & ASSOCIATES

ENVIRONMENTAL SERVICES

4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 • FAX 377-7158

KA 150-90-03

June 19, 1991

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

Subject: Application for Air Permit for Kiln No. 5
Florida Solite Company
Green Cove Springs, Florida

Dear Mr. Hanks:

This is in response to our telephone conversation of May 21, 1991, regarding additional information required to process the above application. Based on recent information regarding the lime system, the permit application has been amended as suggested by you. Four copies of the amended permit application are enclosed to facilitate the application review. Responses to specific issues are provided below.

Sulfur Dioxide Emission Estimates

The estimated sulfur dioxide emissions for Kiln No. 5 are based on a prorotation of Kiln No. 1A test data which have been documented with the Department. These prorated SO₂ emissions include sulfur in the fuels and sulfur in the clay feed and are based on actual measurements made on Kiln 1A. The data are submitted as best estimates for the purpose of permitting the above project. In response to your request to document actual SO₂ emissions for Kiln No. 5 and recognizing the time constraints on the permitting of this project, Solite would be agreeable to establishing the SO₂ emissions at a later date when actual test data can be obtained.

It is requested that the testing schedule to be approved for documenting SO₂ emissions be coordinated with the comprehensive testing scheduled to develop data for submitting a RCRA permit application (which will overlap air permit requirements) prior to August 1992.

Suggested wording for part of a specific condition in the permit regarding the SO₂ emission limits is presented below:

RECEIVED

JUN 20 1991

Division of Air
Resources Management

SO₂ emissions will be documented for PSD, inventory and permitting purposes using a testing protocol, approved by FDER, no later than August 1992. Prior to such time, the permittee shall comply with the SO₂ emission limits and compliance requirements as stated above.

Non-Criteria Pollutants

To expedite the permitting of the proposed project, Solite has tried to simplify the permitting issues as much as possible. As a result, no changes have been requested in either the presently permitted fuels or the fuel utilization rates. A typical analysis of the fuels is presented on page 5a of 12 of the application form.

As mentioned in the application, non-criteria pollutants resulting from the combustion of the fuels will be controlled by the use of the baghouse/lime injection/heat exchanger system. Extensive testing will be conducted prior to August 1992 to address non-criteria pollutant emissions, including toxics, as required by RCRA. Again, this activity will overlap air permitting issues. A tentative schedule for the proposed project is provided below:

Project Air Permitting:	May 1991 - July 1991
Construction Work:	July 1991 - November 1991 (Contractor time requirement)
Streamlining:	December 1991 - January 1992
Compliance Testing:	February 1992 - April 1992
RCRA/Air Permitting:	May 1992 - August 1992

It should be noted that the non-criteria emissions regulated by RCRA are part of the rules promulgated for Boilers and Industrial Furnaces (burning hazardous waste) to protect public health; the same objective as the current air permitting guidelines for toxics.

Control of Fugitive Emissions

The emissions of fugitive particulate matter from the kiln will be controlled by keeping the system under negative pressure (required by RCRA rules). The method of control of fugitive particulate matter from product handling operations is the same as for Kiln 1A. The lightweight aggregate is discharged from the kiln into a cooler consisting of metal sides on a concrete foundation. Heated air from the product is captured by a fan and used as combustion air. The product is transferred to a storage pile by payloaders. The fugitive emissions from this operation can be controlled by wetting the product as necessary.



Clay Fines System

The clay fines collected in the baghouse will be pneumatically conveyed to a storage bin. Air from the clay fines bin will be vented through a dust collector for the control of particulate matter.

Lime Injection System

A lime injection system has been proposed by Solite to control emissions of acid gases. The level of sulfur dioxide controlled by lime injection is expected to be about 40%.

Lime will be received in trucks and pneumatically transferred to a holding bin equipped with a dust collector for control of particulate matter. The lime will be pneumatically injected into a duct preceding the baghouse. As the flue gases pass through the baghouse, the lime particulates will be captured. The formation of a lime cake on the filters is expected to enhance particulate removal as well as acid gas control.

The action taken by the Department to fast track this project is very much appreciated in view of the tight schedule on which Solite has to have the baghouse installed and operational.

If there are any questions on the information provided in this letter or if there are any additional questions, please do not hesitate to give me a call.

Very truly yours,

KOOGLER & ASSOCIATES



Pradeep A. Raval

PAR:wa
Enc.

cc: Mr. T. Saunders, Solite
Mr. G. Williamson, Solite
Mr. B. Johnson, Solite

St. Hanks
A. Kutynski



STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION



APPLICATION TO ~~RENEW~~/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Aggregate Kiln ☐ New¹ ☒ Existing¹
APPLICATION TYPE: ☒ Construction ☐ Operation ☒ Modification
COMPANY NAME: Florida Solite Company COUNTY: Clay
Identify the specific emission point source(s) addressed in this application (i.e. Lime
Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Kiln No. 5
SOURCE LOCATION: Street CR209A, North of Green Cove Springs City Green Cove Springs
UTM: East (17) 427.3 km North 3326.5 km
Latitude 30 ° 04 ' 07 "N Longitude 81 ° 45 ' 17 "W
APPLICANT NAME AND TITLE: Tony Saunders, Plant Manager
APPLICANT ADDRESS: P.O. Box 297, Green Cove Springs, FL 32043

SECTION 'I': STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Florida Solite Company

I certify that the statements made in this application for a construction
permit are true, correct and complete to the best of my knowledge and belief. Further:
I agree to maintain and operate the pollution control source and pollution control
facilities in such a manner as to comply with the provision of Chapter 403, Florida
Statutes, and all the rules and regulations of the department and revisions thereof.
I also understand that a permit, if granted by the department, will be non-transferable
and I will promptly notify the department upon sale or legal transfer of the permitted
establishment.

*Attach letter of authorization

Signed: (See original submittal)

Tony Saunders, Plant Manager
Name and Title (Please Type)

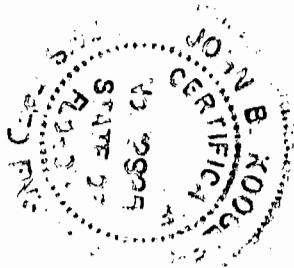
Date: _____ Telephone No. (904) 284-9271

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have
been ~~designed~~/examined by me and found to be in conformity with modern engineering
principles applicable to the treatment and disposal of pollutants characterized in the
permit application. There is reasonable assurance, in my professional judgment, that

¹ See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.



Signed _____

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

Name (Please Type)

Koogler & Associates, Environmental Services

Company Name (Please Type)

4014 N.W. 13th Street, Gainesville, FL 32609

Mailing Address (Please Type)

Florida Registration No. 12925 Date: 6/19/91 Telephone No. (904) 377-5822

SECTION II: GENERAL PROJECT INFORMATION

- A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

See pages 2a and b of 12. Kiln No. 5 will operate in full compliance with all

applicable regulations.

- B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction May 1991 Completion of Construction August 1991

- C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Baghouse - 790,000

Heat Exchanger - 280,000

Lime Injection System - 85,000

Clay Fines System - 60,000

- D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

A010-2617, Issued 10/4/76, Expired 8/31/81

A010-44991, Issued 8/19/81, Expired 8/19/86

A010-122377, Issued 12/12/86, Expires 8/19/91
Revised 12/30/86

SECTION II - PROJECT INFORMATION

Florida Solite Company operates a lightweight aggregate production facility near Green Cove Springs, Clay County, Florida. The facility is located on CR209A north of Green Cove Springs. The UTM coordinates of the facility are Zone 17, 427.3 km east and 3326.5 km north.

The existing facility processes clay into lightweight aggregate which is used in the construction industry. The clay is typically heated to 1900-2100°F in a rotary kiln to promote heat activated reactions causing the clay to expand resulting in a lightweight aggregate. Solite operates three kilns at the Green Cove facility, Kilns No. 1, 1A and 5.

The proposed project involves the installation of a baghouse on Kiln No. 5 to replace the existing particulate matter control device consisting of the water spray scrubber. Kiln No. 5 is permitted at an aggregate production rate of 11 tons per hour. The kiln is fired on coal and liquid burnable material (LBM). The replacement of the water scrubber with a baghouse is necessary to meet the recently promulgated, more stringent, particulate matter limits for boilers and industrial furnaces under RCRA regulations effective August 1991.

A pneumatic system will be installed to convey the clay fines collected in the baghouse to a storage bin equipped with a dust collector.

Another pneumatic system to be installed is the lime system. Hydrated lime will be received in trucks and pneumatically conveyed to a storage bin. The lime bin will be equipped with a dust collector and a blower. As needed the lime will be withdrawn from the bin and injected into the duct preceding the baghouse.

The installation of the baghouse and a lime injection system will result in a net decrease in the allowable particulate matter and sulfur dioxide emissions from Kiln No. 5.

The allowable particulate matter emissions from the kiln will be reduced from 19.6 pounds per hour to 5.9 pounds per hour, a reduction of about 60 tons per year. The allowable sulfur dioxide emissions from the kiln will be reduced from 227.0 pounds per hour to 213.1 pounds per hour, a reduction of about 58 tons per year.

The proposed baghouse/lime injection system is also expected to reduce emissions of non-criteria pollutants. Testing will be conducted at some time in the near future to determine control efficiencies and emission rates as required by RCRA regulations.

The proposed project will result in full compliance with all applicable regulations.

E. Requested permitted equipment operating time: hrs/day 24; days/wk 7; wks/yr 52; if power plant, hrs/yr _____; if seasonal, describe: _____

F. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? NO
a. If yes, has "offset" been applied? _____
b. If yes, has "Lowest Achievable Emission Rate" been applied? _____
c. If yes, list non-attainment pollutants. _____

2. Does best available control technology (BACT) apply to this source? NO
If yes, see Section VI.

3. Does the State "Prevention of Significant Deterioration" (PSD) requirement apply to this source? If yes, see Sections VI and VII. NO

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? NO

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? NO

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? NO

- a. If yes, for what pollutants? _____
b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Clay (approximately 38% moisture)	Particulate	5	26,400 (dry)	
Lime	Particulate	2	900 (max)	

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): 26,400 (dry)

2. Product Weight (lbs/hr): 22,000 (dry)

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

KILN -

Name of Contaminant	Emission ¹		Allowed ² Emission Rate per Rule 17-2	Allowable ³ Emission lbs/hr	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
PM	5.9	25.7			770	3373	
SO ₂	213.1	933.2			355.1	1555.5	
NOx	24.0	105.3			24.0	105.3	
CO	3.7	16.4			3.7	16.4	
VOC	6.7	29.6			6.7	29.6	

¹See Section V, Item 2.

²Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

³Calculated from operating rate and applicable standard.

⁴Emission, if source operated without control (See Section V, Item 3).

CLAY FINES BIN - ¹ 0.12 lb/hr, 0.5 tpy ; ⁴ 0.35 lb/hr, 1.5 tpy (PM)

LIME BIN - ¹ 0.23 lb/hr, 1.0 tpy ; ⁴ 5.4 lbs/hr, 23.7 tpy (PM)

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
FULLER SMS 7500 R/A (KILN)	Part. Matter	99.2%	> 2	Estimate
FULLER 9-DS-8 (CLAY FINES BIN)	Part. Matter	99 %	> 2	Estimate
FULLER 9-DS-8 (LIME BIN)	Part. Matter	99 %	> 2	Estimate

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Coal	-	4540 lbs/hr	54.5
LBM	-	545 gph	54.5

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis: Coal/LBM (See also Page 5a of 12)

Percent Sulfur: 2.5 / 2.0 Percent Ash: 12 / 10

Density: - / 8 lbs/gal Typical Percent Nitrogen: -

Heat Capacity: 12,000/12,500 BTU/lb - / 100,000 BTU/gal

Other Fuel Contaminants (which may cause air pollution): Trace

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average NA Maximum

G. Indicate liquid or solid wastes generated and method of disposal.

Solids collected will be recycled.

FUEL ANALYSES

COAL

Heat Value	12,000 Btu/lb
Moisture, max	10%
Ash, max	12%
Volatile, min	32%
Sulfur	1.5%
Fusion Temperature	2200°F
Hargrove Grindability Index No., max	55

LBM (typical average)

Heat Value	100,000 Btu/gal
Specific Gravity	0.96
Water	15%
Ash	10%
Sulfur	0.2%
Chlorides	1.3%
PCB	Non-detectible
Antimony	48 ppm
Arsenic	28 ppm
Barium	646 ppm
Cadmium	21 ppm
Chromium	155 ppm
Lead	385 ppm

KILN BAGHOUSE

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 65 ft. Stack Diameter: 5 ft.
 Gas Flow Rate: 39,216 ACFM 20,000 DSCFM Gas Exit Temperature: 420 °F.
 Water Vapor Content: 15 % Velocity: 33.3 FPS

SECTION IV: INCINERATOR INFORMATION

NOT APPLICABLE

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq. & Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume (ft) ³	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diameter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: ☐ Cyclone ☐ Wet Scrubber ☐ Afterburner

☐ Other (specify) _____

CLAY FINES BIN

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 50 ft. Stack Diameter: 0.3 ft.
 Gas Flow Rate: 400 ACFM 360 DSCFM Gas Exit Temperature: 100 °F.
 Water Vapor Content: 5 % Velocity: 94 FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq. & Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume (ft) ³	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diameter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: ☐ Cyclone ☐ Wet Scrubber ☐ Afterburner

☐ Other (specify) _____

LIME BIN

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 65 ft. Stack Diameter: 0.5 ft.
Gas Flow Rate: 722 ACFM 675 DSCFM Gas Exit Temperature: 77 °F.
Water Vapor Content: 5 % Velocity: 60 FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq. & Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume (ft) ³	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diameter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: ☐ Cyclone ☐ Wet Scrubber ☐ Afterburner

☐ Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.): _____

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
SEE ATTACHMENT 1
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made. SEE ATTACHMENT 1
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
SEE ATTACHMENT 1
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)
SEE ATTACHMENT 2
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency). SEE ATTACHMENT 1
6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
SEE ATTACHMENT 3
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
SEE ATTACHMENT 4A AND 4B
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.
SEE ATTACHMENT 5

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

NOT APPLICABLE.

- A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

☐ Yes ☐ No

Contaminant	Rate or Concentration

- B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

☐ Yes ☐ No

Contaminant	Rate or Concentration

- C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

- D. Describe the existing control and treatment technology (if any).

1. Control Device/System:

2. Operating Principles:

3. Efficiency:*

4. Capital Costs:

*Explain method of determining

5. Useful Life:

7. Energy:

9. Emissions:

6. Operating Costs:

8. Maintenance Cost:

Contaminant

Rate or Concentration

10. Stack Parameters

a. Height:

ft.

b. Diameter:

ft.

c. Flow Rate:

ACFM

d. Temperature:

°F.

e. Velocity:

FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

¹Explain method of determining efficiency.

²Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

5. Describe the control technology selected:

1. Control Device:

2. Efficiency:¹

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:²

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

¹Explain method of determining efficiency.

²Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant

Rate or Concentration

(8) Process Rate:¹

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant

Rate or Concentration

(8) Process Rate:¹

10. Reason for selection and description of systems:

¹Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

NOT APPLICABLE

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ () SO₂* _____ Wind spd/dir

Period of Monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

- a. Was instrumentation EPA referenced or its equivalent? ☐ Yes ☐ No
- b. Was instrumentation calibrated in accordance with Department procedures?
☐ Yes ☐ No ☐ Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____ / _____ / _____ to _____ / _____ / _____
month day year month day year
2. Surface data obtained from (location) _____
3. Upper air (mixing height) data obtained from (location) _____
4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

1. _____ Modified? If yes, attach description.
2. _____ Modified? If yes, attach description.
3. _____ Modified? If yes, attach description.
4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
ISP	_____ grams/sec
SO ₂	_____ grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

ATTACHMENT 1
CALCULATIONS

ATTACHMENT 1

CALCULATIONS

I. AGGREGATE KILN

1A. Process Input Rate

Clay (dry)	26,400 lbs/hr
Moisture (@ 38%)	<u>16,180 lbs/hr</u>
TOTAL	42,580 lbs/hr

B. Production Rate

Clay (dry)	22,000 lbs/hr (11.0 tons per hour)
Calcining Loss	4,400 lbs/hr (primarily CO ₂)
Moisture Loss	<u>16,180 lbs/hr</u>
TOTAL	42,580 lbs/hr

C. Fuel Input Rate

Total heat input = 54.5 MMBtu/hr

- (i) Coal, at 12,000 BTU/lb 4,540 lbs/hr
- (ii) LBM, at 100,000 BTU/gal 545 gals/hr

NOTE: A combination of the above fuels may be fired, not to exceed 54.5 MMBTU/hr.

2/3. Uncontrolled and Actual Emissions

A. Particulate Matter

- (i) Uncontrolled Emissions at 70 lbs/ton of product
(AP-42, Section 8.3.1, Clay Products)

$$\begin{aligned} \text{PM} &= 11 \text{ tons/hr} \times 70 \text{ lbs/ton of product} \\ &= 770 \text{ lbs/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times 1 \text{ ton/2000 lbs} \\ &= 3372.6 \text{ tons/yr} \end{aligned}$$

(ii) Controlled PM Emissions

Basis: 0.08 gr/dscf corrected to 7% oxygen

(Typical flue gas O₂ content of 15%)

$$\begin{aligned}\text{PM} &= 0.08 \text{ gr/dscf} \times 1\text{b}/7000 \text{ gr} \times 20,000 \text{ dscf/min} @ 15\% \text{ O}_2 \\ &\quad \times 60 \text{ min/hr} \times (0.21-0.15)/(0.21-0.07) \\ &= 5.9 \text{ lbs/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 25.7 \text{ tons/yr}\end{aligned}$$

B. Sulfur Dioxide

(i) Uncontrolled SO₂ Emissions

Based on documented emissions of Kiln 1 and 1A (See Attachment 6), which produce 7 tons/hr lightweight aggregate. The existing emission limits on Kiln No. 5 have not been documented, only written into the permit.

$$\begin{aligned}\text{SO}_2 &= 226 \text{ lbs/hr} \times 11 \text{ tph}/7 \text{ tph} \\ &= 355.1 \text{ lbs/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 1555.5 \text{ tons/yr}\end{aligned}$$

(ii) Controlled SO₂ Emissions

Based on estimated lime injection efficiency of 40%

$$\begin{aligned}\text{SO}_2 &= 355.1 \text{ lbs/hr} \times (1-0.4) \\ &= 213.1 \text{ lbs/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 933.2 \text{ tons/yr}\end{aligned}$$

C. Nitrogen Oxides

Uncontrolled/Actual Emissions

$$\begin{aligned}\text{NOx} &= 15.3 \text{ lbs/hr} \times 11 \text{ tons/7 tons} && \text{(tests at 7 tph, 15.3 lbs/hr; See Attachment 7)} \\ &= 24.0 \text{ lbs/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton/2000 lbs} \\ &= 105.3 \text{ tons/yr}\end{aligned}$$

D. Carbon Monoxide

Based on CO level of 100 ppm @ 7% O₂ (RCRA regulations)

$$\begin{aligned}\text{CO} &= 100/10^6 \times 20,000 \text{ dscf/min} \times 60 \text{ min/hr} \\ &\quad \times 1 \text{bmole/385 ft}^3 \times 28 \text{ lb/lbmole} \\ &\quad \times (0.21-0.15)/(0.21-0.07) \\ &= 3.7 \text{ lbs/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton/2000 lbs} \\ &= 16.4 \text{ tons/yr}\end{aligned}$$

E. Volatile Organic Compounds

Based on measured HC level of 40 ppm (wet) at a flow rate of 24,600 scfm, wet.

$$\begin{aligned}\text{VOC} &= 40/10^6 \times 24,600 \text{ scf/min} \times 60 \text{ min/hr} \\ &\quad \times 1 \text{bmole/385 ft}^3 \times 44 \text{ lb/lbmole (propane)} \\ &= 6.7 \text{ lbs/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton/2000 lbs} \\ &= 29.6 \text{ tons/yr}\end{aligned}$$

F. Non-criteria pollutants are also expected to be controlled by lime injection and the baghouse. Testing will be conducted at some time in the near future to determine control efficiencies and emission rates as required by RCRA regulations.

4. Control Device Details - See Attachment 2.

5. Control Efficiency

A. Particulate Matter

$$\begin{aligned}\text{Inlet} &= 770 \text{ lbs/hr} \\ \text{Outlet} &= 5.9 \text{ lbs/hr} \\ \text{Efficiency} &= (770 - 5.9) \times 100 / 770 = 99.2\%\end{aligned}$$

B. Sulfur Dioxide

$$\begin{aligned}\text{Inlet} &= 355.1 \text{ lbs/hr} \\ \text{Outlet} &= 213.1 \text{ lbs/hr} \\ \text{Efficiency} &= (355.1 - 213.1) \times 100 / 355.1 = 40\%\end{aligned}$$

II. Clay Fines Bin

1. Process (Transfer) Rate = 2600 lbs/hr

2/3. Uncontrolled and Actual Emissions

A. Uncontrolled Particulate Matter Emissions

Based on 0.27 lb/ton of material (pneumatic cement transfer operation factor, AP-42, Section 8-10).

$$\begin{aligned}\text{PM} &= 0.27 \text{ lb/ton} \times 2600 \text{ lbs/hr} \times \text{ton}/2000 \text{ lbs} \\ &= 0.35 \text{ lb/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 1.5 \text{ tons/yr}\end{aligned}$$

B. Actual Particulate Matter Emissions

Based on 0.04 gr/dscf exit gas loading.

$$\begin{aligned}\text{PM} &= 0.04 \text{ gr/dscf} \times 360 \text{ scf/min} \times \text{lb}/7000 \text{ gr} \times 60 \text{ min/hr} \\ &= 0.12 \text{ lb/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 0.5 \text{ ton/yr}\end{aligned}$$

4. Control Device Details - See Attachment 2

Model: 9-DS-8 Blow through type

Cloth Area: 93 sq. ft.

Air/Cloth: 3.8 to 1

Filter Media: Polyester

5. Control Efficiency

Inlet = 0.35 lb/hr

Outlet = 0.12 lb/hr

Required Efficiency = $(0.35 - 0.12) \times 100 / 0.35 = 66\%$

Expected Efficiency = 99%

III. Lime System

1. Process (Transfer) Rate = 40,000 lbs/hr (truck unloading)

2/3. Uncontrolled and Actual Emissions

A. Uncontrolled Particulate Matter Emissions

Based on 0.27 lb/ton of material (pneumatic cement transfer operation factor, AP-42, Section 8-10).

PM = $0.27 \text{ lb/ton} \times 40,000 \text{ lbs/hr} \times \text{ton}/2000 \text{ lbs}$

= 5.4 lbs/hr

x 8760 hrs/yr x ton/2000 lbs

= 23.7 tons/yr

B. Actual Particulate Matter Emissions

Based on 0.04 gr/dscf exit gas loading.

$$\begin{aligned}\text{PM} &= 0.04 \text{ gr/dscf} \times 675 \text{ scf/min} \times 1\text{b}/7000 \text{ gr} \times 60 \text{ min/hr} \\ &= 0.23 \text{ lb/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 1.0 \text{ ton/yr}\end{aligned}$$

4. Control Device Details - See Attachment 2

Model: 9-DS-8 Blow through type (Equipped with blower)
Cloth Area: 93 sq. ft.
Air/Cloth: 6.7 to 1
Filter Media: Polyester

5. Control Efficiency

Inlet = 5.4 lbs/hr
Outlet = 0.23 lb/hr
Required Efficiency = $(5.4 - 0.23) \times 100/5.4 = 96\%$
Expected Efficiency = 99%

NET ANNUAL EMISSION CHANGES

A. Particulate Matter

Permitted = 85.68 tons/yr (See Attachment 8, existing permit conditions)
Proposed = $25.7 + 0.5 + 1.0 = 27.2$ tons/yr
NET DECREASE = 58.5 tons/yr

B. Sulfur Dioxide

Permitted = 991.54 tons/yr

Proposed = 933.2 tons/yr

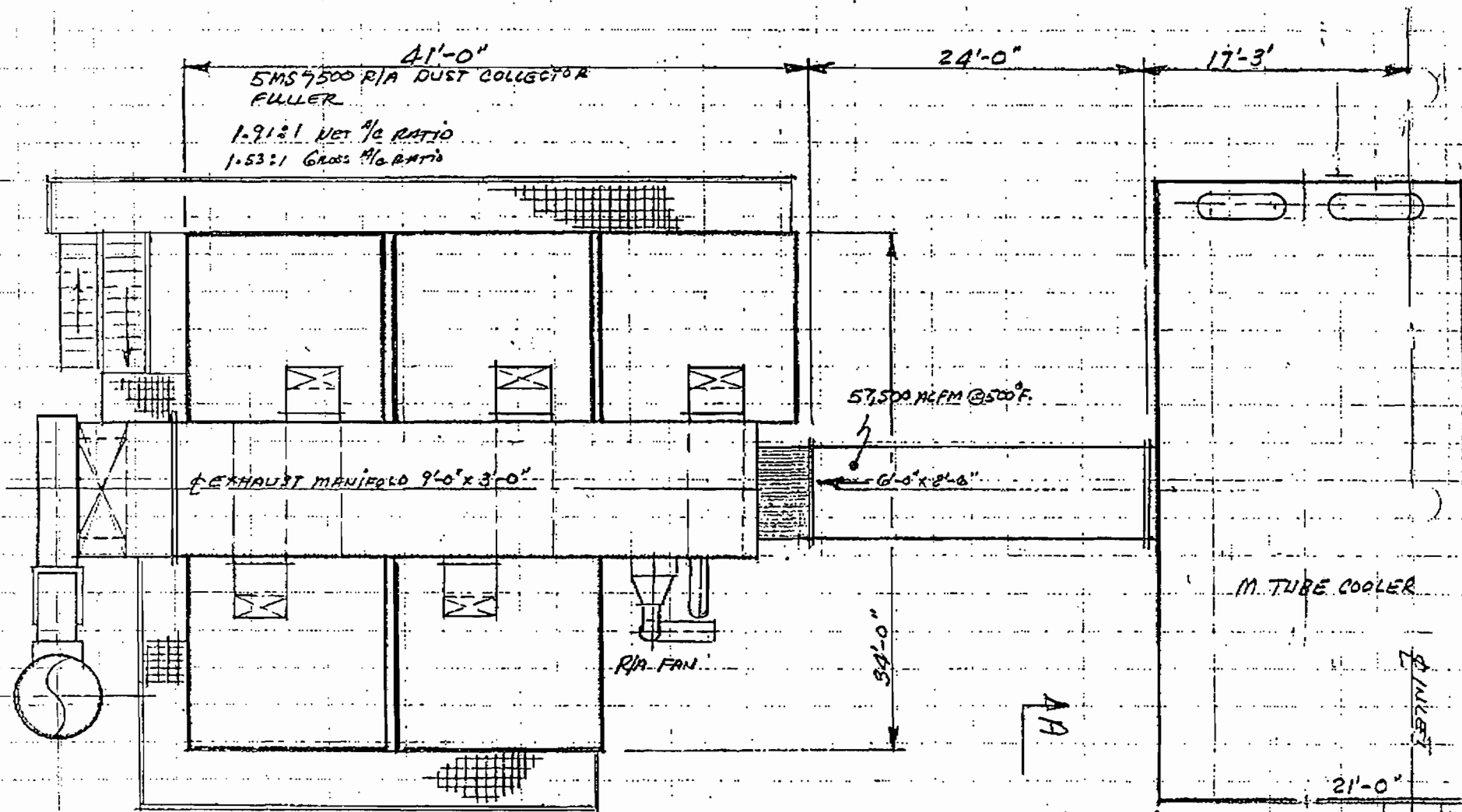
NET DECREASE = 58.3 tons/yr

ATTACHMENT 2
EQUIPMENT INFORMATION

KILN BAGHOUSE

P.4

MAY 06 '91 12:40PM FULLER PNU CON



PLAN

SKETCH #1

FLORIDA SOLITE

DJS

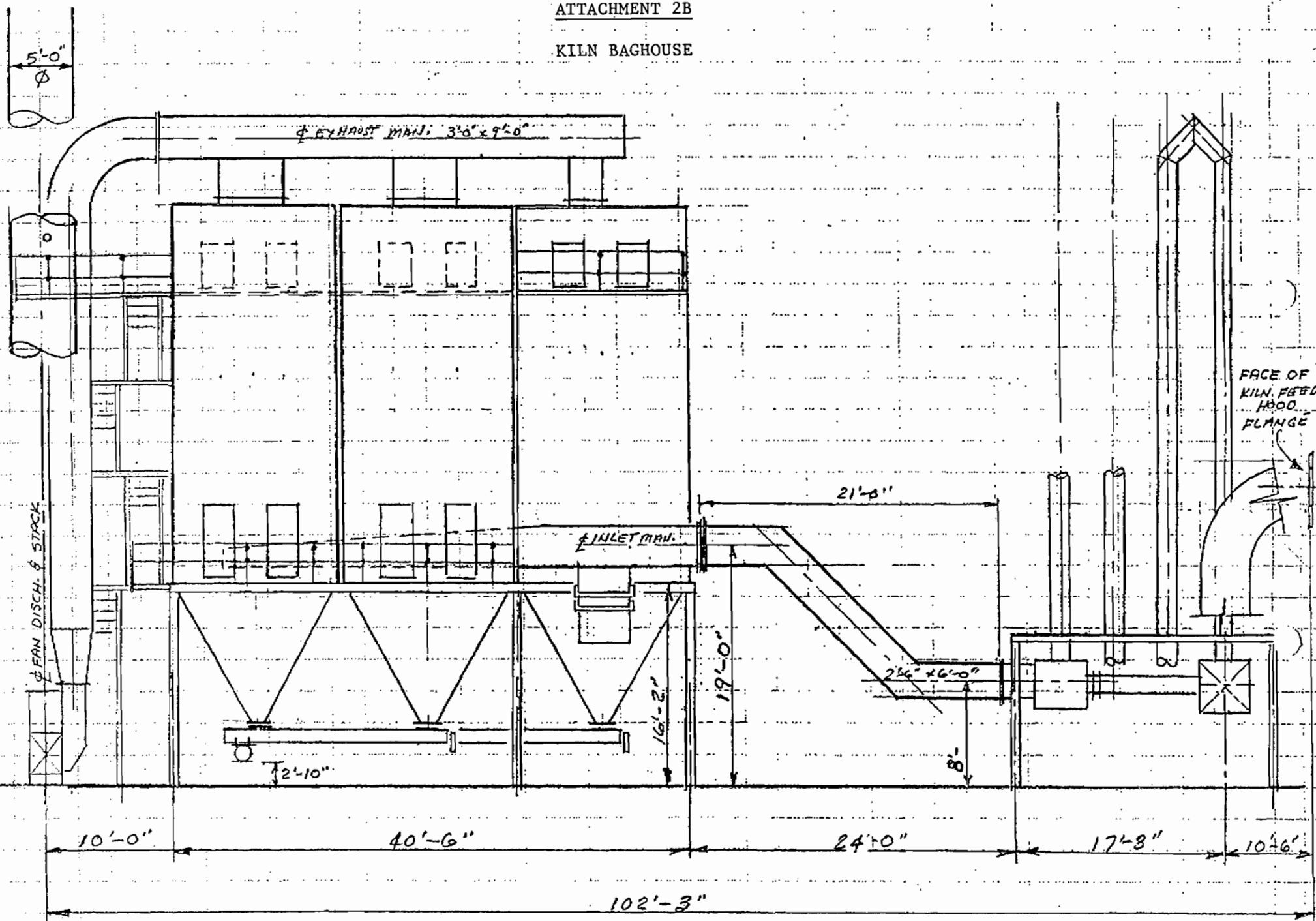
1"=10'

4/29/91

KILN BAGHOUSE

P.1

MAY 06 '91 12:38PM FULLER PNU CON



ELEVATION

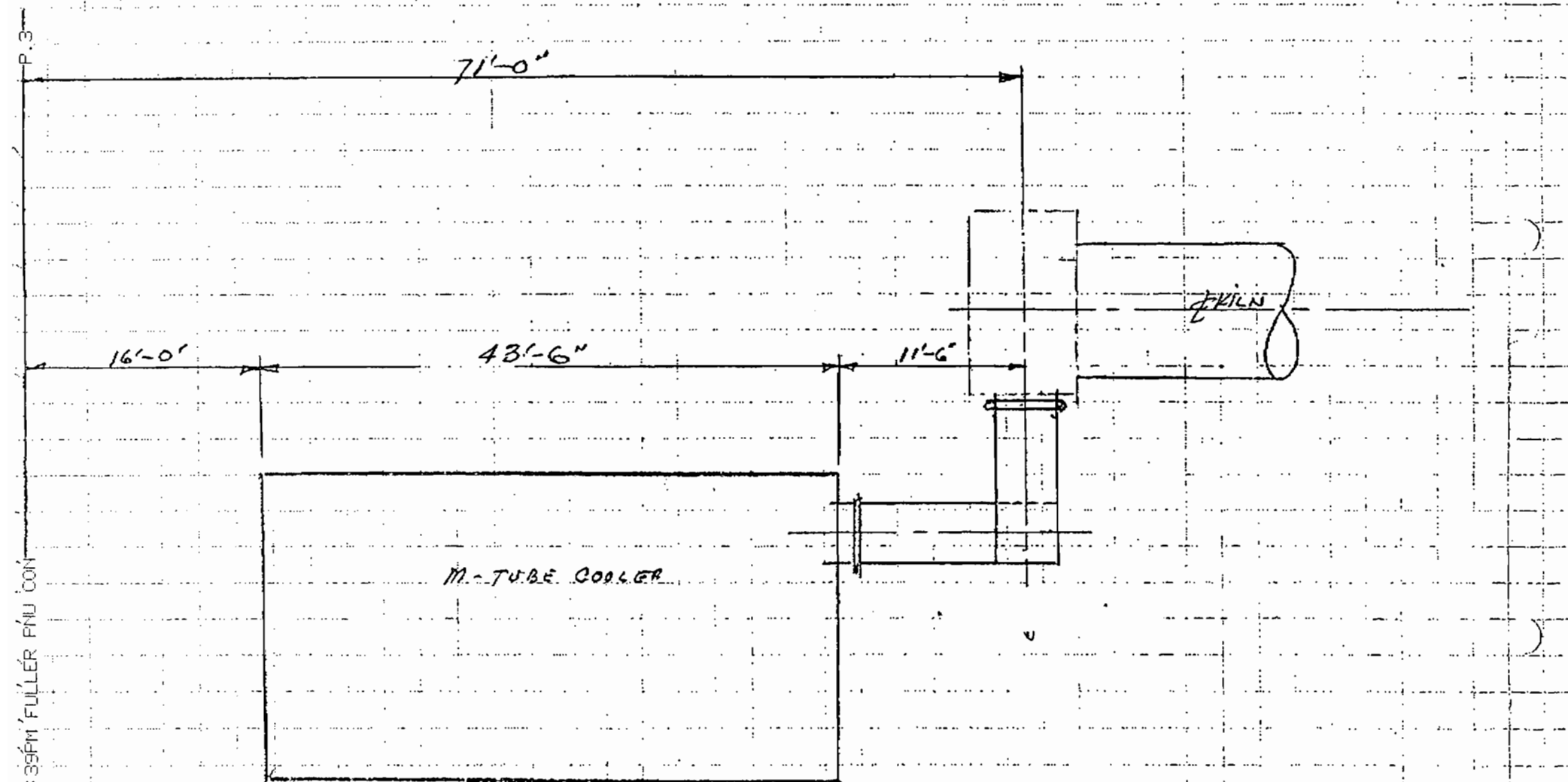
SKETCH #2

FLORIDA SOLITE

DJS 12-10-0" DJS 4/30/91

ATTACHMENT 2C

HEAT EXCHANGER



PLAN.

CONTINUATION OF SKETCH #1

SKETCH #2

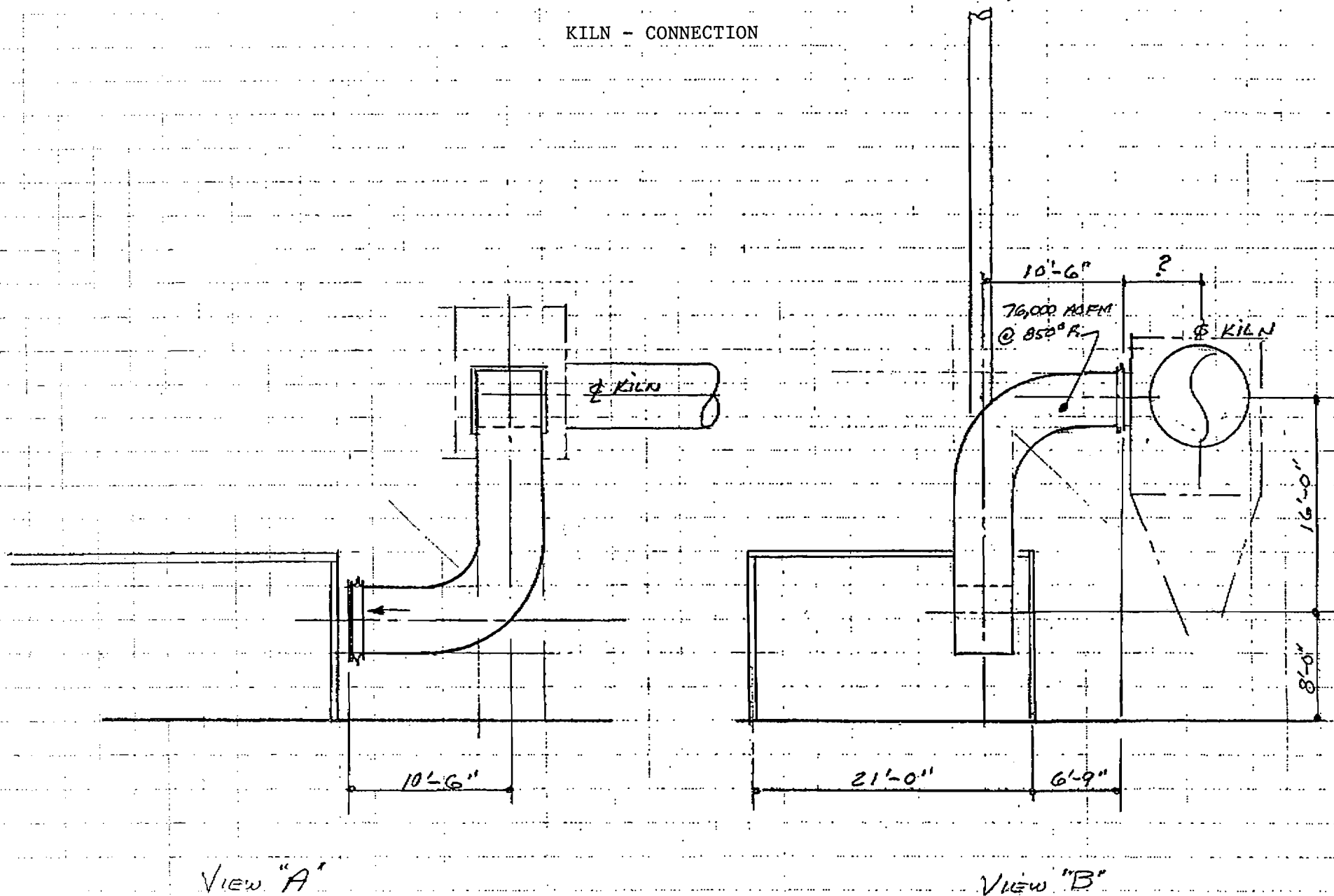
FLORIAN SOLIS

D.S.

1" = 10'-0"

4/30/91

KILN - CONNECTION



VIEW "A"

VIEW "B"

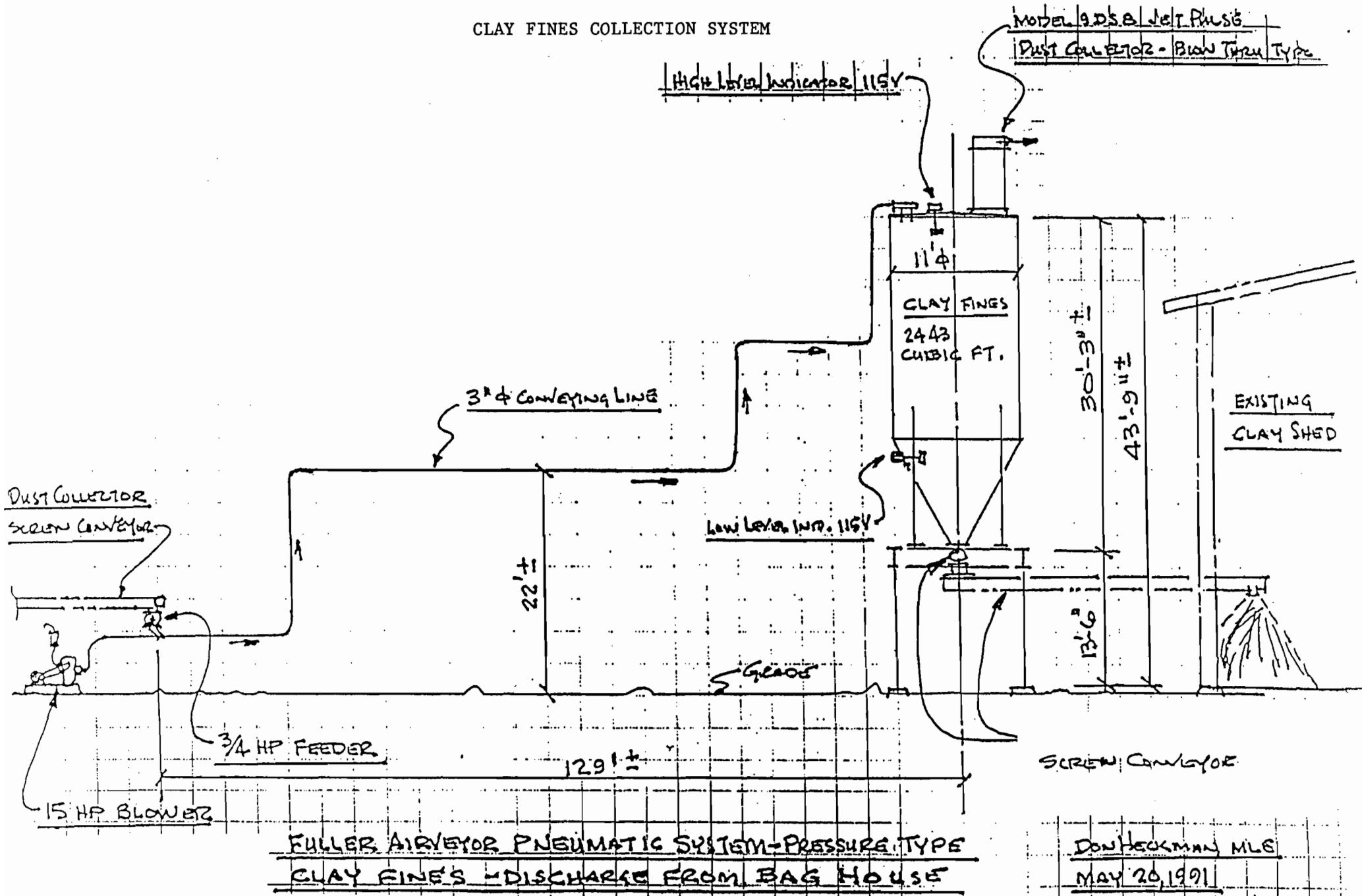
SKETCH # 4

FLORIDA SOLITE

DJS 1" = 10'-0"

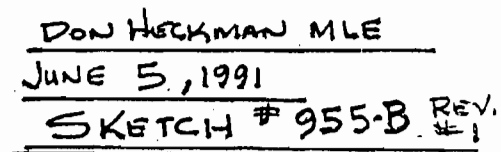
4/20/91

CLAY FINES COLLECTION SYSTEM

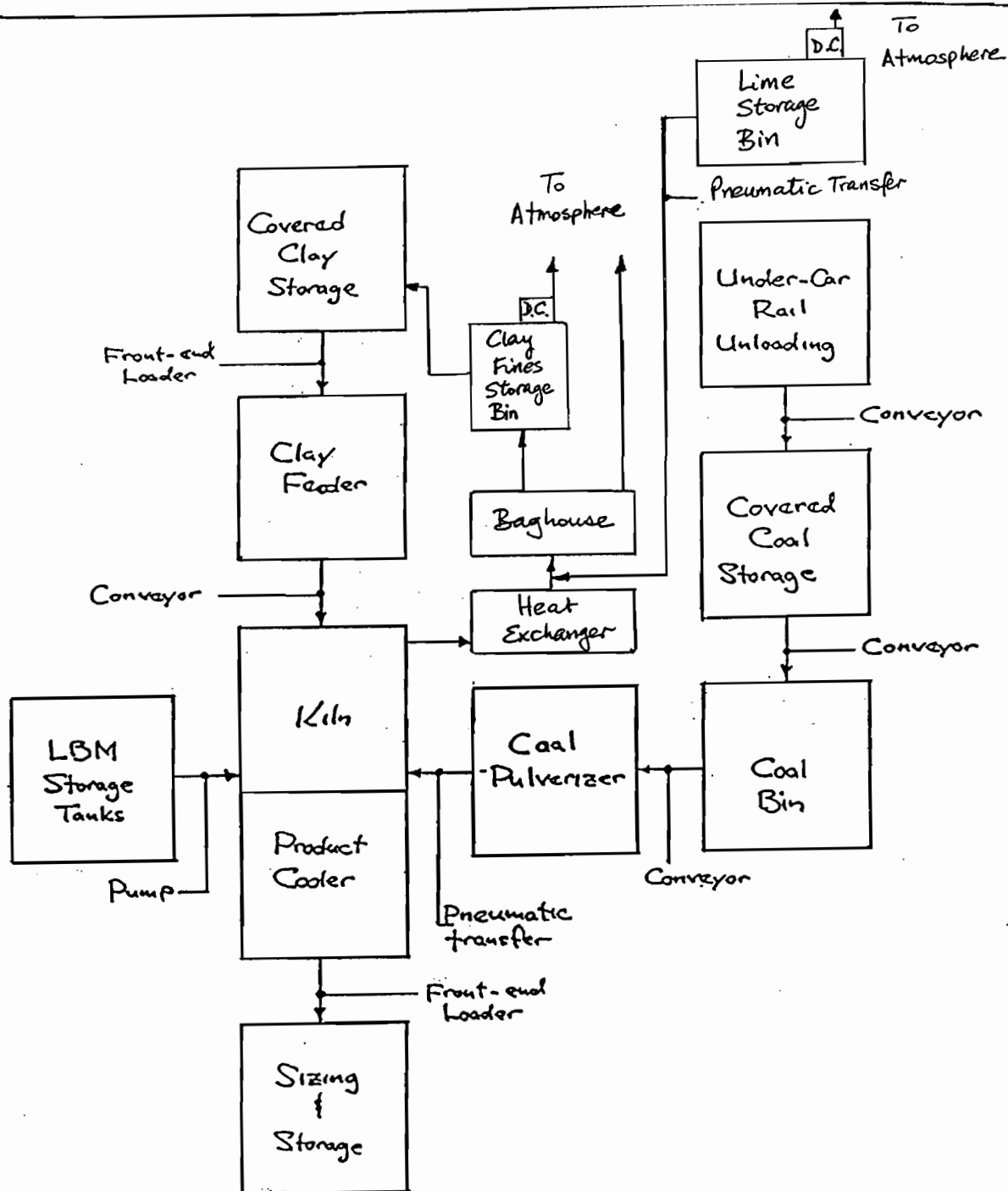


DONHECKMAN MLE
MAY 20, 1991

SKETCH # 955-A



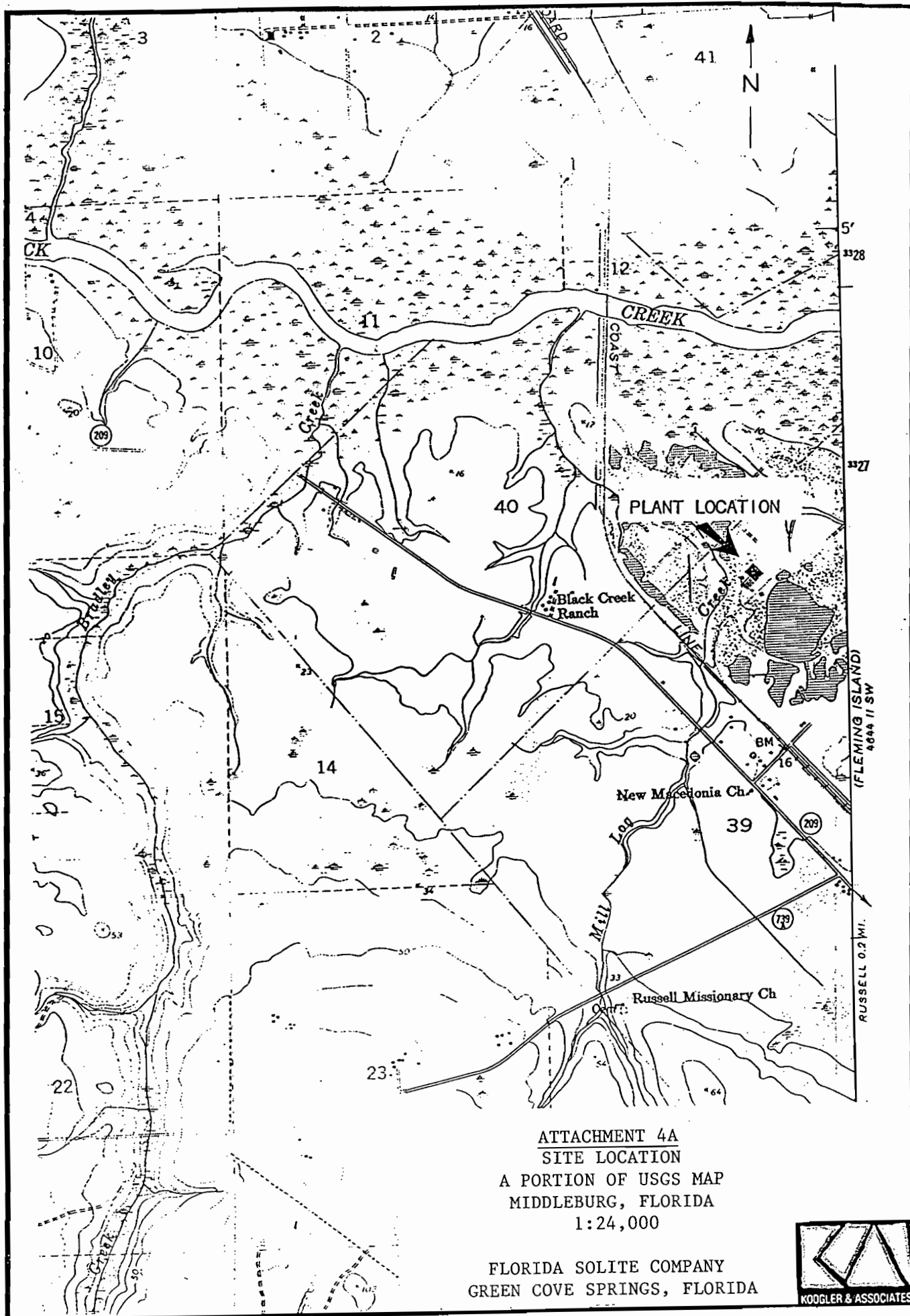
ATTACHMENT 3
PROCESS FLOW DIAGRAM

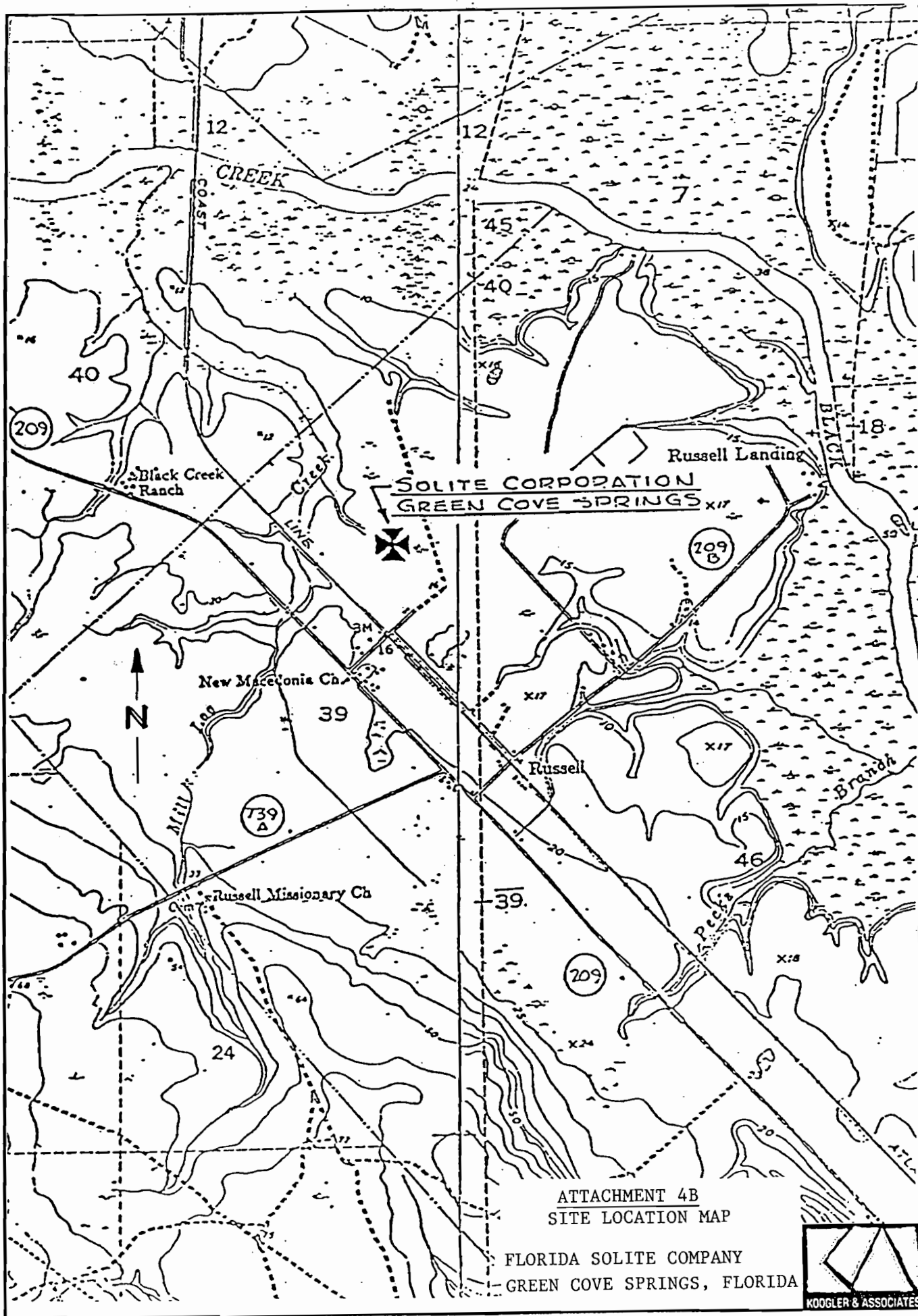


ATTACHMENT 3
PROCESS FLOW DIAGRAM

FLORIDA SOLITE COMPANY
GREEN COVE SPRINGS, FLORIDA

ATTACHMENT 4
SITE LOCATION





ATTACHMENT 5

PLOT PLAN



SEABOARD COASTLINE RAILROAD

Product
Storage

Kiln No.5

Kiln No.1A

Kiln No.1

Clay
Storage

Stacks

Office

Product
Storage

Pond

Entrance
Drive

ATTACHMENT 5
PLOT PLAN

FLORIDA SOLITE COMPANY
GREEN COVE SPRINGS, FLORIDA



ATTACHMENT 6
DOCUMENTED RATES



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

September 20, 1989

Dr. John B. Koogler, P.E.
Koogler & Associates
4014 NW Thirteenth Street
Gainesville, Florida 32609

Dear Dr. Koogler:

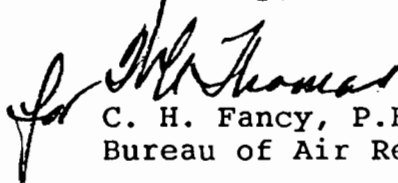
Re: Florida Solite Company

The Bureau has reviewed your August 3, 1989, letter to the Northeast District requesting an amendment to specific conditions Nos. 1 and 4 of permit No. AO 10-154570.

In your September, 1986, application requesting Florida Solite be allowed to substitute kiln No. 1A for kiln No. 1 (file No. AC 10-125262), the baseline production and emissions for kiln No. 1 were documented. Briefly, clay input was 8.6 TPH (dry), production was 7.0 TPH (dry), particulate matter emissions were 12.7 lbs/hr (55.6 TPY), and sulfur dioxide emissions were 75.8 lbs/hr (288.1 TPY) average with a maximum 226.0 lbs/hr, one hour average.

Any increase in these rates is a modification and will require a new permit to construct.

Sincerely,



C. H. Fancy, P.E.
Bureau of Air Regulation

CHF/WH/t

cc: J. Cole, NE District

ATTACHMENT 7
NITROGEN OXIDES EMISSION DATA

EMISSION MEASUREMENTS

KILN NO. 1A

FLORIDA SOLITE COMPANY
GREEN COVE SPRINGS, FLORIDA

Permit No. AC10-125262
(Expires June 30, 1989)

April 22, 1989

KOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 N.W. 13TH STREET
GAINESVILLE, FLORIDA 32609
(904) 377-5822



TABLE 4
NITROGEN OXIDES EMISSION DATA
FLORIDA SOLITE COMPANY
April 22, 1989

Run	Stack Gas Flow (dscfm)	Nitrogen Oxides (lb/hr)
1	27802	16.96
2	27442	12.83
3	26976	16.14
Avg.	27407	15.31

ATTACHMENT 8
CURRENT KILN NO. 5 AIR PERMIT

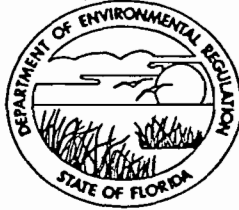


STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
(904) 396-6959



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

ERNEST E. FREY
DISTRICT MANAGER

PERMITTEE:

Florida Solite Company
Post Office Box 297
Green Cove Springs, FL 32043

I.D. Number:

31/10/0004/05

Permit/Certification Number: A010-122377

Date of Issue: Dec. 12, 1986; Revised Dec. 30, 1986

Expiration Date: August 19, 1991

County:

Clay

Latitude/Longitude:

30°04'07"N; 81°45'17"W

Project:

No. 5 Kiln

UIM:

E-(17)427.3; N-3326.5

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the operation of No. 5 Kiln with particulate matter emissions controlled by a wet scrubber. The coal and/or liquid burnable material (LBM) firing rate shall not exceed the rates in Specific Condition #4.

Located west of U.S. 17, north of S.R. 209, east of S.R. 209A, north of Green Cove Springs, Clay County, Florida

In accordance with;

operation permit application dated July 9, 1986
additional information received September 29, 1986

PERMITTEE:
Florida Solite Company
Kiln No. 5

Permit No.: AO10-122377
Date of Issue: 12/12/86; Revised 12/30/86
Expiration Date: August 19, 1991

SPECIFIC CONDITIONS:

1. The maximum input rate is 26,400 lbs/hr (dry clay) plus 4,540 lbs/hr (coal) and the maximum production rate is 22,000 lbs/hr rate (operating rate) and neither shall be exceeded without prior approval.
2. Testing of emissions must be performed at an operating rate of at least 90% of the rate in Specific Condition (SC) No.1, or SC No. 3 will become effective.
3. The operating rate shall not exceed 110% of the operating rate during the most recent test except for testing purposes, but shall not exceed the rate in SC No. 1. After testing at an operating rate greater than 110% of the last test operating rate, the operating rate shall not exceed 110% of the last (submitted) test operating rate until the test report at the higher rate has been reviewed and accepted by the Department.
4. The permitted maximum allowable emission rate for each pollutant is as follows:

<u>Pollutant</u>	<u>Rule</u>	<u>Emission Rate</u>	
		<u>lbs/hr</u>	<u>TPY</u>
Particulate Matter (PM)	17-2.610(1), FAC	19.61 ¹	85.68
Sulfur Dioxide (SO ₂)	---	227.00 ²	991.54
Sulfur Dioxide (SO ₂)	---	174.40 ³	---
Visible Emissions (VE)	17-2.610(2), FAC	<20% opacity	

¹Basis: P = 15.47 TPH (clay and coal); E = 19.61

²Basis: 4540 lbs coal/hr; 2.5% sulfur (maximum)

³Basis: 545 gals LBM/hr; 8 lbs/gal; 2.0% sulfur (maximum)

5. The liquid burnable waste (LBM) shall not contain any organic cyanides, sulfide, mercaptans, PCB's, insecticides, pesticides, herbicides, electroplating waste or radioactive material. Florida Solite Company shall retain the manifest of each load for 2 years for Department inspection.
6. Unconfined particulate matter emissions shall be controlled by application of dust suppressants, unless an alternative method is requested and approved, to all areas necessary to reasonably control such emissions per Florida Administrative Code Rule 17-2.610(3).

PERMITTEE:
Florida Solite Company
Kiln No. 5

Permit No.: AO10-122377
Date of Issue: 12/12/86; Revised 12/30/86
Expiration Date: August 19, 1991

7. Test the emission for the following pollutant(s) at the interval(s) indicated, notify us 14 days prior to testing, and submit the test report documentation to this office within 45 days after completion of the testing:

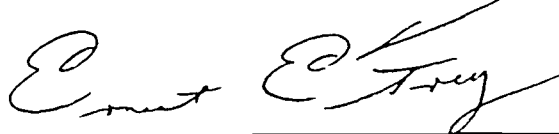
<u>Pollutant</u>	<u>Interval from</u>
PM	12 months from June 16, 1986
VE	12 months from June 16, 1986
SO ₂ (from coal)	12 months from June 16, 1986; submit certified ASTM analysis
SO ₂ (from LBM)	See Specific Condition #9

Tests and test reports shall comply with the requirements of Florida Administrative Code Rule 17-2.700(6) and (7), respectively.

8. In each test report, submit the maximum input/production rate at which this source was operated since the most recent test.
9. The LBM report shall contain a copy of the analyses and a copy of the composite sample log and shall be submitted within 30 days after the end of each calendar quarter; i.e., the first report will be due on July 30, 1987. The log shall include as a minimum the sample date, load number, received from whom and date received. The as-fired composite sample shall be accumulated in a container in increments according to ASTM Practice D 4057 or ASTM Method D 4177. The composite sample shall be analyzed by the appropriate ASTM Methods for the sulfur, lead, and PCB content once per month. Also indicate the ASTM Methods used in each report.
10. Submit an annual operation report for this source on the form supplied by the Department for each calendar year on or before March 1.
11. Any revision(s) to a permit (and application) must be submitted and approved prior to implementing.
12. Forms for renewal will be sent 5 months prior to August 19, 1991 and the completed forms with test results are due 90 days prior to August 19, 1991.

Issued this 12 day of December, 1986
Revised December 30, 1986

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION



Ernest E. Frey, District Manager

06-23-91
12:17:45

*** SCREEN-1.1 MODEL RUN ***
*** DRAFT VERSION XXXXX ***

fl solite kiln 5

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = 1.000
STACK HEIGHT (M) = 19.80
STK INSIDE DIAM (M) = 1.52
STK EXIT VELOCITY (M/S) = 10.15
STK GAS EXIT TEMP (K) = 489.00
AMBIENT AIR TEMP (K) = 293.00
RECEPTOR HEIGHT (M) = .00
IOPT (1=URB,2=RUR) = 2
BUILDING HEIGHT (M) = .00
MIN HORIZ BLDG DIM (M) = .00
MAX HORIZ BLDG DIM (M) = .00

BUOY. FLUX = 23.04 M**4/S**3; MOM. FLUX = 35.65 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	0	.0	.0	.0	.0	.0	.0	
100.	.3331E-01	5	1.0	1.3	5000.0	97.9	22.9	22.3	NO
200.	2.354	3	10.0	10.7	3200.0	39.2	24.0	14.6	NO
300.	7.199	3	10.0	10.7	3200.0	39.2	34.7	21.0	NO
400.	8.576	3	10.0	10.7	3200.0	39.2	45.1	27.1	NO
500.	8.083	3	10.0	10.7	3200.0	39.2	55.1	33.0	NO
600.	7.538	4	15.0	16.6	4800.0	30.7	42.9	21.6	NO
700.	7.217	4	15.0	16.6	4800.0	30.7	49.3	24.3	NO
800.	7.043	4	10.0	11.1	3200.0	38.4	55.9	27.4	NO
900.	6.807	4	10.0	11.1	3200.0	38.4	62.2	30.0	NO
1000.	6.477	4	8.0	8.9	2560.0	44.1	68.5	32.9	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

406.	8.579	3	10.0	10.7	3200.0	39.2	45.8	27.5	NO
------	-------	---	------	------	--------	------	------	------	----

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

8 hr (0.7) impact $1g/s = 6.01 \mu g/m^3$
24 hr (0.4) " $= 3.43 \mu g/m^3$
annual (0.1) " $= 0.86 \mu g/m^3$

*** SUMMARY OF SCREEN MODEL RESULTS ***

max emission of:	lbs/hr	g/s	1 hr input (ug/m ³)	8 hr	24 hr	Annual
Antimony	0.21	0.026	0.223	0.156✓	0.089✓	0.0223✓
Arsenic	0.12	0.015	0.129	0.09✓	0.052✓	0.013✓
Barium	2.82	0.36	3.088	2.162✓	1.2✓ (1.235)	0.5✓ (0.31)
Cadmium	0.09	0.01	0.086	0.060✓	0.034✓	5.6x10 ⁻⁴ (0.0086) 215% STD 94% met
Chromium	0.68	0.086	0.738✓	0.5✓ (0.517)	0.12 (0.30)	8.3x10 ⁻⁵ (0.074) 279% STD 99.9% met
Lead	1.68	0.212	1.819	1.27✓	0.73✓	9x10 ⁻² (0.182) 2x STD 51% met needed

(1.235) (0.31) (0.0086) (0.074) (0.182)
 215x STD 94% red 2992x STD 999% red 2x STD 51% red needed

Impact ~~barium~~ may be a problem if all emitted
 Cadmium " " " " " " " " " " " "
 Chromium " " " " " " " " " " " "
 Lead " " " " " " " " " " " "

may be ok if 95% removed
 may be problem (probably ok)

SO₂ 227 lbs/hr 28.6g/s
 1 hr 245.6 ug/m³ 3 hr 171.9 8 hr 98.2 24 hr 24.6 ✓ annual

file

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

FLORIDA SOLITE COMPANY, INC.

Petitioner,

vs.

CASE NO. 91-1329

STATE OF FLORIDA, DEPARTMENT
OF ENVIRONMENTAL REGULATION,

Respondent.

MEMO OF MEETING HELD MAY 22, 1991
AT OFFICES OF KOPELOUSOS, HEAD, SMITH,
TOWNSEND & METCALF, P.A.
1329 Kingsley Avenue
Orange Park, FL 32073

PERSONS PRESENT: Richard Coates, DER
Andrew Kutyna, DER
George Williamson, Attorney, Florida Solite
John Koogler, Engineer, Koogler & Associates
Tony Saunders, Florida Solite
John Kopelousos, Attorney for Florida Solite

A conference was held at the above time and place with the persons listed above attending.

The subject was a resolution pending hearing before the Department of Administrative Hearing (DOAH).

The issues that were discussed were the following:

1. The use of .41% coal sulphur content by weight required by Specific Condition 1, footnote 6 of the Operating Permit.
2. The NOx emission limits required by Specific Condition 4 of the Operating Permit.

3. The operating hours of Specific Condition 4, footnote 3 of the Operating Permit.
4. The language of Specific Condition 9 of the Operating Permit.

The four items listed above were resolved as follows:

A. (1 above) John Koogler will submit a report by June 30, 1991, which will be submitted for approval by DER, locating clay in the quarry area of the Solite facility with an acceptable sulphur content to be used in the kiln if and when 1.5% coal is used in the kiln for fuel, so that sulphur emissions will not exceed acceptable limits.

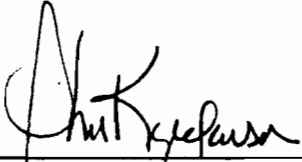
Upon submittal by Solite of reasonable assurances to DER that the sulphur content of the clay to be used with 1.5% coal will not exceed allowable sulphur emissions, DER will amend the Operating Permit to be consistent with the construction permit.

B. (2 above) This condition will become moot, and Solite will withdraw its challenge to this condition.

C. (3 above) This condition will become moot, and Solite will withdraw its challenge to this condition.

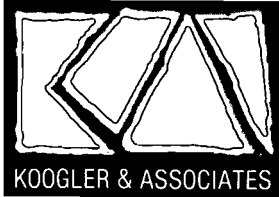
D. (4 above) Within 14 days Solite will submit to DER a request to modify the construction permit containing therein revised language for Specific Condition 9 of the Operating Permit.

Such language to conform Condition 9 with all applicable rules and regulations concerning hazardous wastes.



JOHN KOPELOUSOS, Attorney for
FLORIDA SOLITE COMPANY

RICHARD COATES,
Department of Environmental
Regulation



KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 ■ FAX 377-7158

RECEIVED
MAY 17 1991

Division of Air
Resources Management
KA 150-03
Rev 90-03

RECEIVED
DER - MAIL ROOM
1991 MAY 17 PM 1:28

May 13, 1991

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

Subject: Construction Permit Application for
Installation of Baghouse on Kiln No. 5
Florida Solite Company
Green Cove Springs, Clay County, Florida

Dear Mr. Fancy:

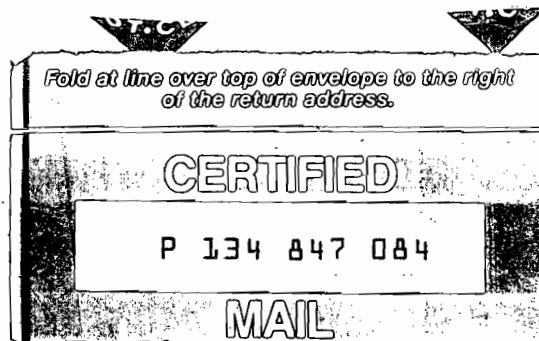
Enclosed are four copies of the permit application along with the permit processing fee of \$200 for the installation of a baghouse on Kiln No. 5 at the Solite facility located in Green Cove Springs, Clay County, Florida.

As Koogler & Associates discussed previously with you and Mr. Barry Andrews of your staff, Solite proposes to replace the existing particulate matter control device, a water scrubber, with a baghouse. The proposed replacement is necessary in order to meet more stringent RCRA standards promulgated for boilers and industrial furnaces. The new particulate matter emission limiting standard, effective August 21, 1991, limits particulate emissions to 0.08 grains per dry standard cubic foot corrected to 7% oxygen.

Another reason for the installation of a baghouse is a separate RCRA regulation which concerns the handling of process residues. That particular regulation concerning the Beville exclusion is expected to become effective by July 1, 1991. After the effective date, Solite will no longer be able to operate a kiln with a scrubber system as the scrubber water and the entire scrubber water recirculation would be classified as a hazardous waste facility.



MR. TONY SAUNDERS
SOLITE COMPANY
P. O. BOX 297
GREEN COVE SPRINGS, FL 32043



RECEIVED



RETURN RECEIPT
REQUESTED

490

MR. CLAIR H. FANCY
FLORIDA D.E.R.
2600 BLAIR STONE ROAD
TWIN TOWERS OFFICE BLDG
TALLAHASSEE, FL 32399-2400

Mr. Clair H. Fancy
Florida Department
of Environmental Regulation

May 13, 1991
Page 2

Solite does not have much time in which to install and make operational the baghouse to meet the RCRA regulatory deadlines. It would therefore be appreciated if the permit processing for the baghouse installation could be fast-tracked. Please inform us immediately of any information needed to expedite the permit issuance.

If you have any questions, please do not hesitate to give me a call.

Very truly yours,

KOOGLER & ASSOCIATES



Pradeep A. Raval

PAR:wa
Enc.

cc: Mr. Andrew Kutyna, FDER, Jacksonville
Mr. Tony Saunders, Florida Solite
Mr. George Williamson, Solite
Mr. Nankas



FLORIDA SOLITE CO. 12-73
PETTY CASH ACCOUNT
P. O. BOX 297
GREEN COVE SPRINGS, FL 32043

Best Available Copy

1593

May 15 1991

~~63-2~~
630 29

PAY TO THE ORDER OF **FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION**

\$ 200.00

TWO HUNDRED AND 00/100----- DOLLARS



First Union National Bank
of Florida
Green Cove Springs, Florida 32043

FOR Baghouse Kiln #5

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

Subject: Construction Permit Application for
Installation of Baghouse on Kiln No. 5
Florida Solite Company
Green Cove Springs, Clay County, Florida

Dear Mr. Fancy:

Enclosed are four copies of the permit application along with the permit processing fee of \$200 for the installation of a baghouse on Kiln No. 5 at the Solite facility located in Green Cove Springs, Clay County, Florida.

As Koogler & Associates discussed previously with you and Mr. Barry Andrews of your staff, Solite proposes to replace the existing particulate matter control device, a water scrubber, with a baghouse. The proposed replacement is necessary in order to meet more stringent RCRA standards promulgated for boilers and industrial furnaces. The new particulate matter emission limiting standard, effective August 21, 1991, limits particulate emissions to 0.08 grains per dry standard cubic foot corrected to 7% oxygen.

Another reason for the installation of a baghouse is a separate RCRA regulation which concerns the handling of process residues. That particular regulation concerning the Beville exclusion is expected to become effective by July 1, 1991. After the effective date, Solite will no longer be able to operate a kiln with a scrubber system as the scrubber water and the entire scrubber water recirculation would be classified as a hazardous waste facility.

10331

904 264-6121

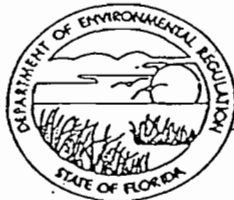
Tony
Schles

1-800

229-5482

\$200 pd.
5-17-91
AC 10-197099
Recpt. #151272

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION



APPLICATION TO ~~AMEND~~/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Aggregate Kiln [] New¹ [X] Existing¹
APPLICATION TYPE: [X] Construction [] Operation [X] Modification
COMPANY NAME: Florida Solite Company COUNTY: Clay
Identify the specific emission point source(s) addressed in this application (i.e. Lime
Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Kiln No. 5
SOURCE LOCATION: Street CR209A, North of Green Cove Springs City Green Cove Springs
UTM: East (17) 427.3 km North 3326.5 km
Latitude 30 ° 04' 07 "N Longitude 81 ° 45' 17 "W
APPLICANT NAME AND TITLE: Tony Saunders, Plant Manager
APPLICANT ADDRESS: P.O. Box 297, Green Cove Springs, FL 32043

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Florida Solite Company

I certify that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: Tony Saunders

Tony Saunders, Plant Manager
Name and Title (Please Type)

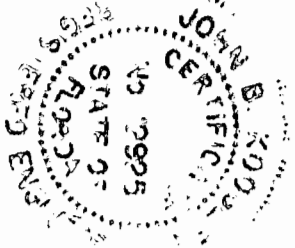
Date: 5-15-91 Telephone No. (904) 284-9271

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been ~~designed~~/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

¹ See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.



Signed _____

John B. Koogler, Ph.D., P.E.
Name (Please Type)

Koogler & Associates, Environmental Services
Company Name (Please Type)

4014 N.W. 13th Street, Gainesville, FL 32609
Mailing Address (Please Type)

Florida Registration No. 12925 Date: 5/13/91 Telephone No. (904) 377-5822

SECTION II: GENERAL PROJECT INFORMATION

- A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

See pages 2a and b of 12. Kiln No. 5 will operate in full compliance with all applicable regulations.

- B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction May 1991 Completion of Construction August 1991

- C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Baghouse - 790,000

Heat Exchanger - 280,000

Lime Injection System - 40,000

- D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

A010-2617, Issued 10/4/76, Expired 8/31/81

A010-44991, Issued 8/19/81, Expired 8/19/86

A010-122377, Issued 12/12/86, Expires 8/19/91
Revised 12/30/86

SECTION II - PROJECT INFORMATION

Florida Solite Company operates a lightweight aggregate production facility near Green Cove Springs, Clay County, Florida. The facility is located on CR209A north of Green Cove Springs. The UTM coordinates of the facility are Zone 17, 427.3 km east and 3326.5 km north.

The existing facility processes clay into lightweight aggregate which is used in the construction industry. The clay is typically heated to 1900-2100°F in a rotary kiln to promote heat activated reactions causing the clay to expand resulting in a lightweight aggregate. Solite operates three kilns at the Green Cove facility, Kilns No. 1, 1A and 5.

The proposed project involves the installation of a baghouse on Kiln No. 5 to replace the existing particulate matter control device consisting of the water spray scrubber. Kiln No. 5 is permitted at an aggregate production rate of 11 tons per hour. The kiln is fired on coal and liquid burnable material (LBM). The replacement of the water scrubber with a baghouse is necessary to meet the recently promulgated, more stringent, particulate matter limits for boilers and industrial furnaces under RCRA regulations effective August 1991. The installation of the baghouse and a lime injection system will result in a net decrease in the allowable particulate matter and sulfur dioxide emissions from Kiln No. 5.

The allowable particulate matter emissions will be reduced from 19.6 pounds per hour to 5.9 pounds per hour, a reduction of over 60 tons per year. The allowable sulfur dioxide emissions will be reduced from 227.0 pounds per hour to 213.1 pounds per hour, a reduction of 58 tons per year.

The proposed baghouse/lime injection system is also expected to reduce emissions of non-criteria pollutants. Testing will be conducted at some time in the near future to determine control efficiencies and emission rates as required by RCRA regulations.

The proposed project will result in full compliance with all applicable regulations.

E. Requested permitted equipment operating time: hrs/day 24; days/wk 7; wks/yr 52;
if power plant, hrs/yr _____; if seasonal, describe: _____

F. If this is a new source or major modification, answer the following questions.
(Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? NO
a. If yes, has "offset" been applied? _____
b. If yes, has "Lowest Achievable Emission Rate" been applied? _____
c. If yes, list non-attainment pollutants. _____

2. Does best available control technology (BACT) apply to this source? NO
If yes, see Section VI.

3. Does the State "Prevention of Significant Deterioration" (PSD) requirement apply to this source? If yes, see Sections VI and VII. NO

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? NO

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? NO

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? NO

a. If yes, for what pollutants? _____

b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Clay (approximately 38% moisture)	Particulate	5	26,400 (dry)	

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): 26,400 (dry)

2. Product Weight (lbs/hr): 22,000 (dry)

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Emission ¹		Allowed ² Emission Rate per Rule 17-2	Allowable ³ Emission lbs/hr	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
PM	5.9	25.7			770	3373	
SO ₂	213.1	933.2			355.1	1555.5	
NOx	24.0	105.3			24.0	105.3	
CO	3.7	16.4			3.7	16.4	
VOC	6.7	29.6			6.7	29.6	

¹See Section V, Item 2.

²Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

³Calculated from operating rate and applicable standard.

⁴Emission, if source operated without control (See Section V, Item 3).

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
FULLER SMS 7500 R/A	Part. Matter	99.2%	> 2	Estimate
BAGHOUSE				

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Coal	-	4540 lbs/hr	54.5
LBM	-	545 gph	54.5

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis: Coal/LBM

Percent Sulfur: 2.5 / 2.0 Percent Ash: 12 / 10

Density: - / 8 lbs/gal Typical Percent Nitrogen: -

Heat Capacity: 12,000/12,500 BTU/lb - / 100,000 BTU/gal

Other Fuel Contaminants (which may cause air pollution): Trace

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average NA Maximum

G. Indicate liquid or solid wastes generated and method of disposal.

Solids collected will be recycled.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 65 ft. Stack Diameter: 5 ft.
 Gas Flow Rate: 39,216 ACFM 20,000 DSCFM Gas Exit Temperature: 420 °F.
 Water Vapor Content: 15 % Velocity: 33.3 FPS

SECTION IV: INCINERATOR INFORMATION

NOT APPLICABLE

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq. & Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume (ft) ³	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diameter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: ☐ Cyclone ☐ Wet Scrubber ☐ Afterburner

☐ Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.): _____

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
SEE ATTACHMENT 1
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made. SEE ATTACHMENT 1
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
SEE ATTACHMENT 1
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)
SEE ATTACHMENT 2
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency). SEE ATTACHMENT 1
6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
SEE ATTACHMENT 3
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
SEE ATTACHMENT 4A AND 4B
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.
SEE ATTACHMENT 5

DER Form 17-1.202(1)

Effective November 30, 1982

Page 7 of 12

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

NOT APPLICABLE.

- A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

☐ Yes ☐ No

Contaminant

Rate or Concentration

- B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

☐ Yes ☐ No

Contaminant

Rate or Concentration

- C. What emission levels do you propose as best available control technology?

Contaminant

Rate or Concentration

- D. Describe the existing control and treatment technology (if any).

1. Control Device/System:

2. Operating Principles:

3. Efficiency:*

4. Capital Costs:

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant

Rate or Concentration

10. Stack Parameters

a. Height:	ft.	b. Diameter:	ft.
c. Flow Rate:	ACFM	d. Temperature:	°F.
e. Velocity:	FPS		

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device:	b. Operating Principles:
c. Efficiency: ¹	d. Capital Cost:
e. Useful Life:	f. Operating Cost:
g. Energy: ²	h. Maintenance Cost:
i. Availability of construction materials and process chemicals:	
j. Applicability to manufacturing processes:	
k. Ability to construct with control device, install in available space, and operate within proposed levels:	

2.

a. Control Device:	b. Operating Principles:
c. Efficiency: ¹	d. Capital Cost:
e. Useful Life:	f. Operating Cost:
g. Energy: ²	h. Maintenance Cost:
i. Availability of construction materials and process chemicals:	

¹Explain method of determining efficiency.

²Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:¹

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:²

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

¹Explain method of determining efficiency.

²Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant

Rate or Concentration

(8) Process Rate:¹

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant

Rate or Concentration

(8) Process Rate:¹

10. Reason for selection and description of systems:

¹Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

NOT APPLICABLE

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ () SO₂* _____ Wind spd/dir

Period of Monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? ☐ Yes ☐ No

b. Was instrumentation calibrated in accordance with Department procedures?

☐ Yes ☐ No ☐ Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant

Emission Rate

TSP

_____ grama/sec

SO²

_____ grama/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEOS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

ATTACHMENT 1
CALCULATIONS

ATTACHMENT 1

CALCULATIONS

1A. Process Input Rate

Clay (dry)	26,400 lbs/hr
Moisture (@ 38%)	<u>16,180 lbs/hr</u>
TOTAL	42,580 lbs/hr

B. Production Rate

Clay (dry)	22,000 lbs/hr (11.0 tons per hour)
Calcining Loss	4,400 lbs/hr
Moisture Loss	<u>16,180 lbs/hr</u>
TOTAL	42,580 lbs/hr

C. Fuel Input Rate

Total heat input = 54.5 MMBtu/hr

(i) Coal, at 12,000 BTU/lb 4,540 lbs/hr

(ii) LBM, at 100,000 BTU/gal 545 gals/hr

NOTE: A combination of the above fuels may be fired, not to exceed 54.5 MMBTU/hr.

2/3. Uncontrolled and Actual Emissions

A. Particulate Matter

(i) Uncontrolled Emissions at 70 lbs/ton of product
(AP-42, Section 8.3.1, Clay Products)

$$\begin{aligned} \text{PM} &= 11 \text{ tons/hr} \times 70 \text{ lbs/ton of product} \\ &= 770 \text{ lbs/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times 1 \text{ ton/2000 lbs} \\ &= 3372.6 \text{ tons/yr} \end{aligned}$$

(ii) Controlled PM Emissions

Basis: 0.08 gr/dscf corrected to 7% oxygen

(Typical flue gas O₂ content of 15%)

$$\begin{aligned}\text{PM} &= 0.08 \text{ gr/dscf} \times 1\text{b}/7000 \text{ gr} \times 20,000 \text{ dscf/min} @ 15\% \text{ O}_2 \\ &\quad \times 60 \text{ min/hr} \times (0.21-0.15)/(0.21-0.07) \\ &= 5.9 \text{ lbs/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 25.7 \text{ tons/yr}\end{aligned}$$

B. Sulfur Dioxide

(i) Uncontrolled SO₂ Emissions

Based on documented emissions of Kiln 1 and 1A (See Attachment 6), which produce 7 tons/hr lightweight aggregate. The existing emission limits on Kiln No. 5 have not been documented, only written into the permit.

$$\begin{aligned}\text{SO}_2 &= 226 \text{ lbs/hr} \times 11 \text{ tph}/7 \text{ tph} \\ &= 355.1 \text{ lbs/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 1555.5 \text{ tons/yr}\end{aligned}$$

(ii) Controlled SO₂ Emissions

Based on estimated lime injection efficiency of 40%

$$\begin{aligned}\text{SO}_2 &= 355.1 \text{ lbs/hr} \times (1-0.4) \\ &= 213.1 \text{ lbs/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 933.2 \text{ tons/yr}\end{aligned}$$

C. Nitrogen Oxides

Uncontrolled/Actual Emissions

$$\begin{aligned}\text{NOx} &= 15.3 \text{ lbs/hr} \times 11 \text{ tons}/7 \text{ tons} && \text{(tests at 7 tph, 15.3 lbs/hr; See Attachment 7)} \\ &= 24.0 \text{ lbs/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 105.3 \text{ tons/yr}\end{aligned}$$

D. Carbon Monoxide

Based on CO level of 100 ppm @ 7% O₂ (RCRA regulations)

$$\begin{aligned}\text{CO} &= 100/10^6 \times 20,000 \text{ dscf/min} \times 60 \text{ min/hr} \\ &\quad \times 1 \text{bmole}/385 \text{ ft}^3 \times 28 \text{ lb/lbmole} \\ &\quad \times (0.21-0.15)/(0.21-0.07) \\ &= 3.7 \text{ lbs/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 16.4 \text{ tons/yr}\end{aligned}$$

E. Volatile Organic Compounds

Based on measured HC level of 40 ppm (wet) at a flow rate of 24,600 scfm, wet.

$$\begin{aligned}\text{VOC} &= 40/10^6 \times 24,600 \text{ scf/min} \times 60 \text{ min/hr} \\ &\quad \times 1 \text{bmole}/385 \text{ ft}^3 \times 44 \text{ lb/lbmole (propane)} \\ &= 6.7 \text{ lbs/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 29.6 \text{ tons/yr}\end{aligned}$$

F. Non-criteria pollutants are also expected to be controlled by lime injection and the baghouse. Testing will be conducted at some time in the near future to determine control efficiencies and emission rates as required by RCRA regulations.

4. Control Device Details - See Attachment 2.

5. Control Efficiency

A. Particulate Matter

Inlet = 770 lbs/hr
Outlet = 5.9 lbs/hr
Efficiency = $(770 - 5.9) \times 100 / 770 = 99.2\%$

B. Sulfur Dioxide

Inlet = 355.1 lbs/hr
Outlet = 213.1 lbs/hr
Efficiency = $(355.1 - 213.1) \times 100 / 355.1 = 40\%$

NET ANNUAL EMISSION CHANGES

A. Particulate Matter

Permitted = 85.68 tons/yr (See Attachment 8, existing permit conditions)

Proposed = 25.7 tons/yr

NET DECREASE = 60.0 tons/yr

B. Sulfur Dioxide

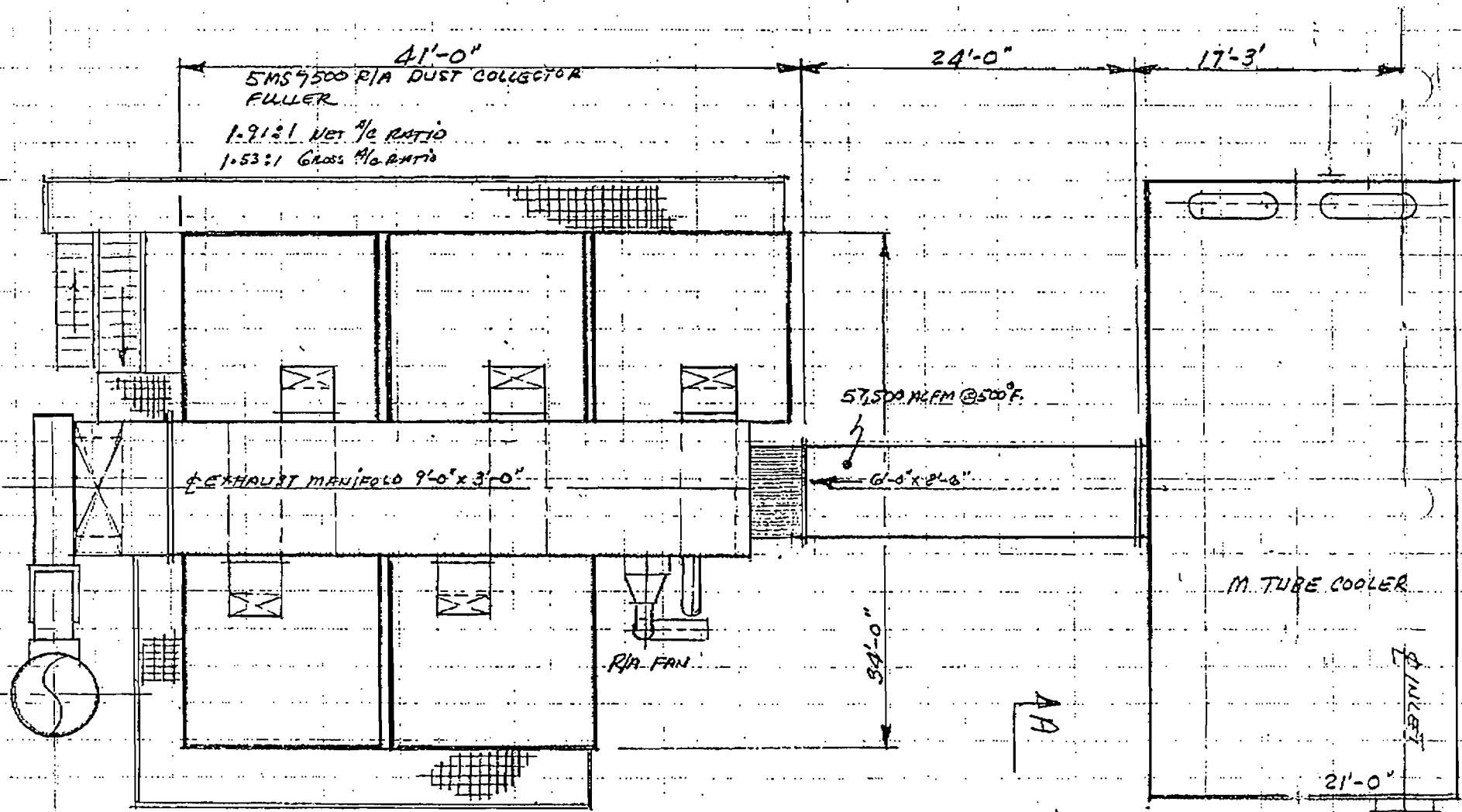
Permitted = 991.54 tons/yr

Proposed = 933.2 tons/yr

NET DECREASE = 58.3 tons/yr

ATTACHMENT 2
BAGHOUSE INFORMATION

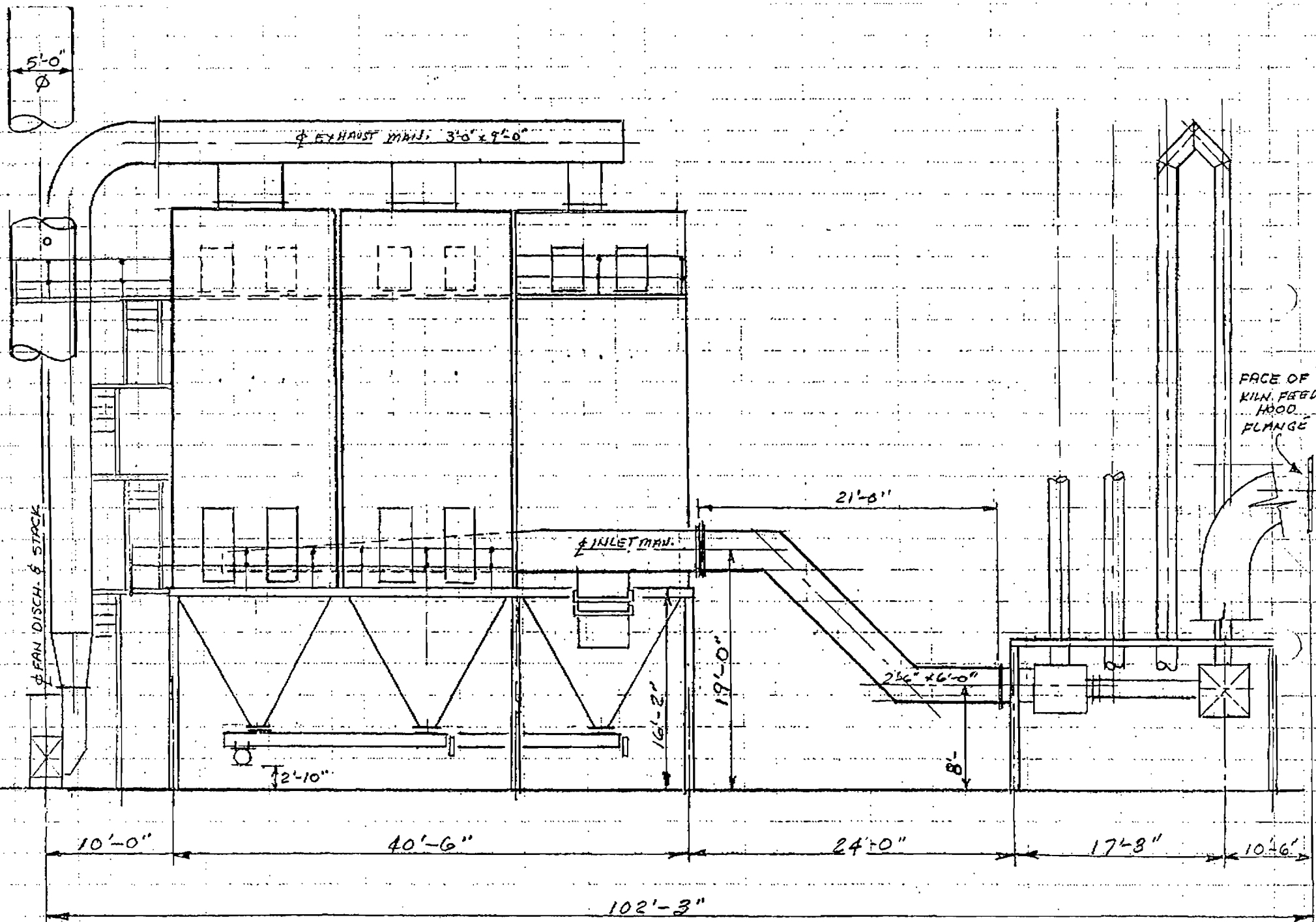




MAY 06 '91 12:40PM FULLER PNU CON

MAY 06 '91 12:38PM FULLER PNU CON

P.1

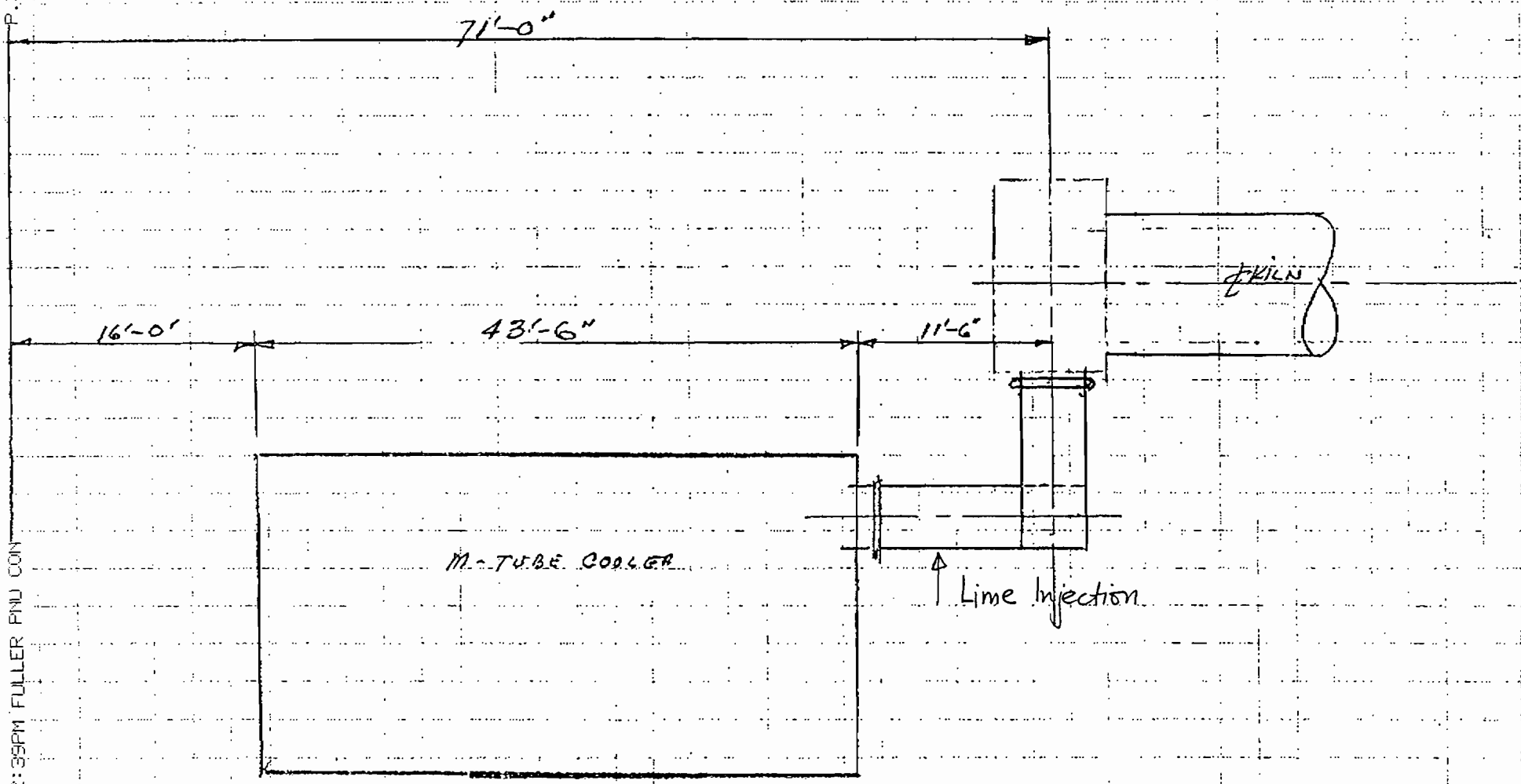


ELEVATION

FLORIDA SOLITE
SKETCH #2 DJS 11-10-90 DJS 4/30/91

P. 3

MAY 06 '91 12:35PM FULLER PNU CON



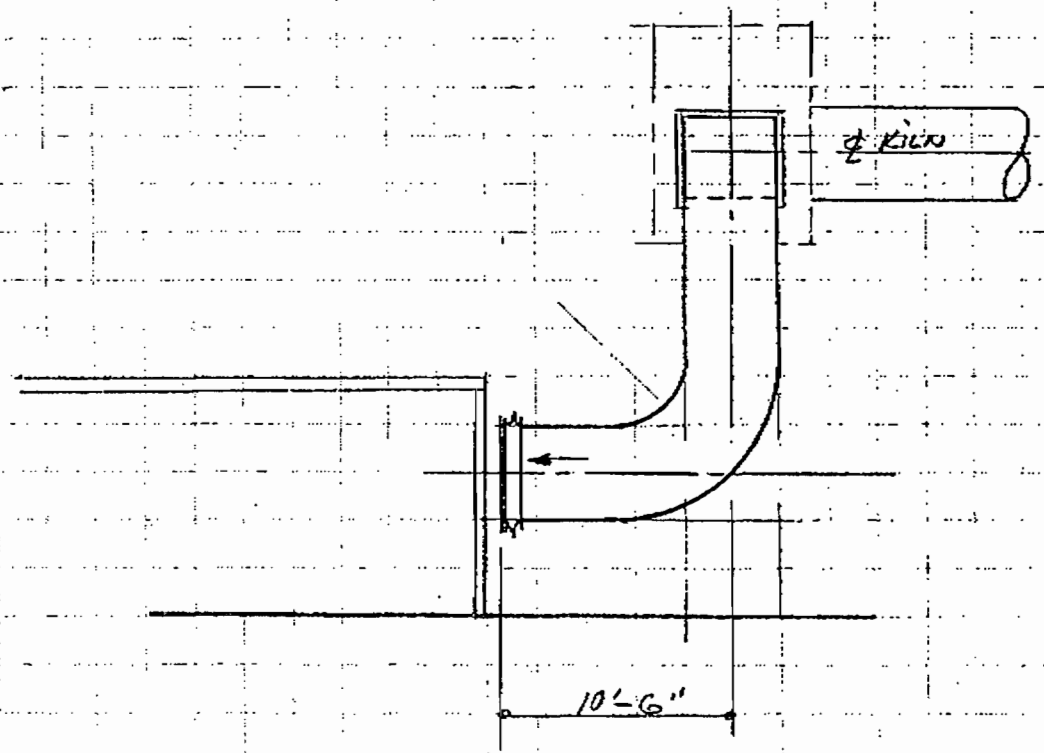
PLAN CONTINUATION OF SKETCH #1

SKETCH #3

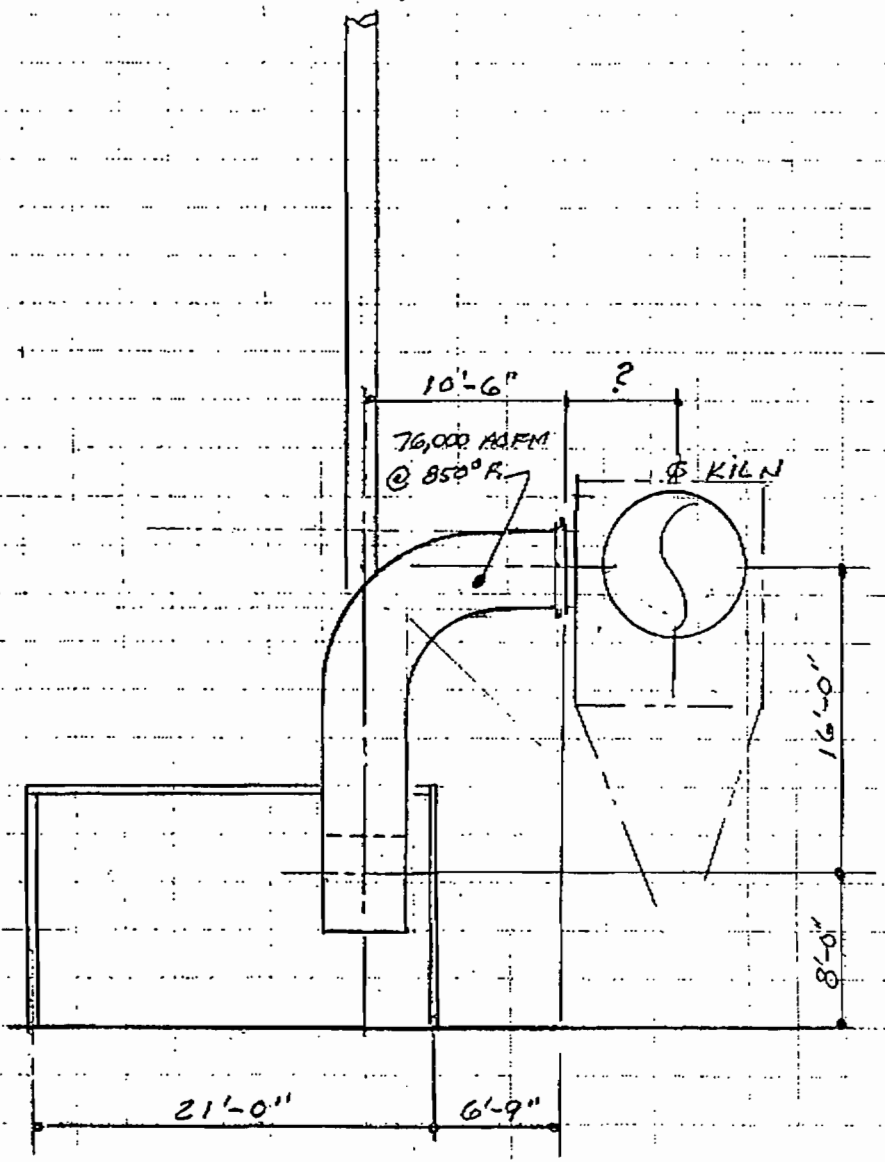
FLORIAN SOLITE

D 55 1" = 10'-0"

4/30/91



VIEW "A"

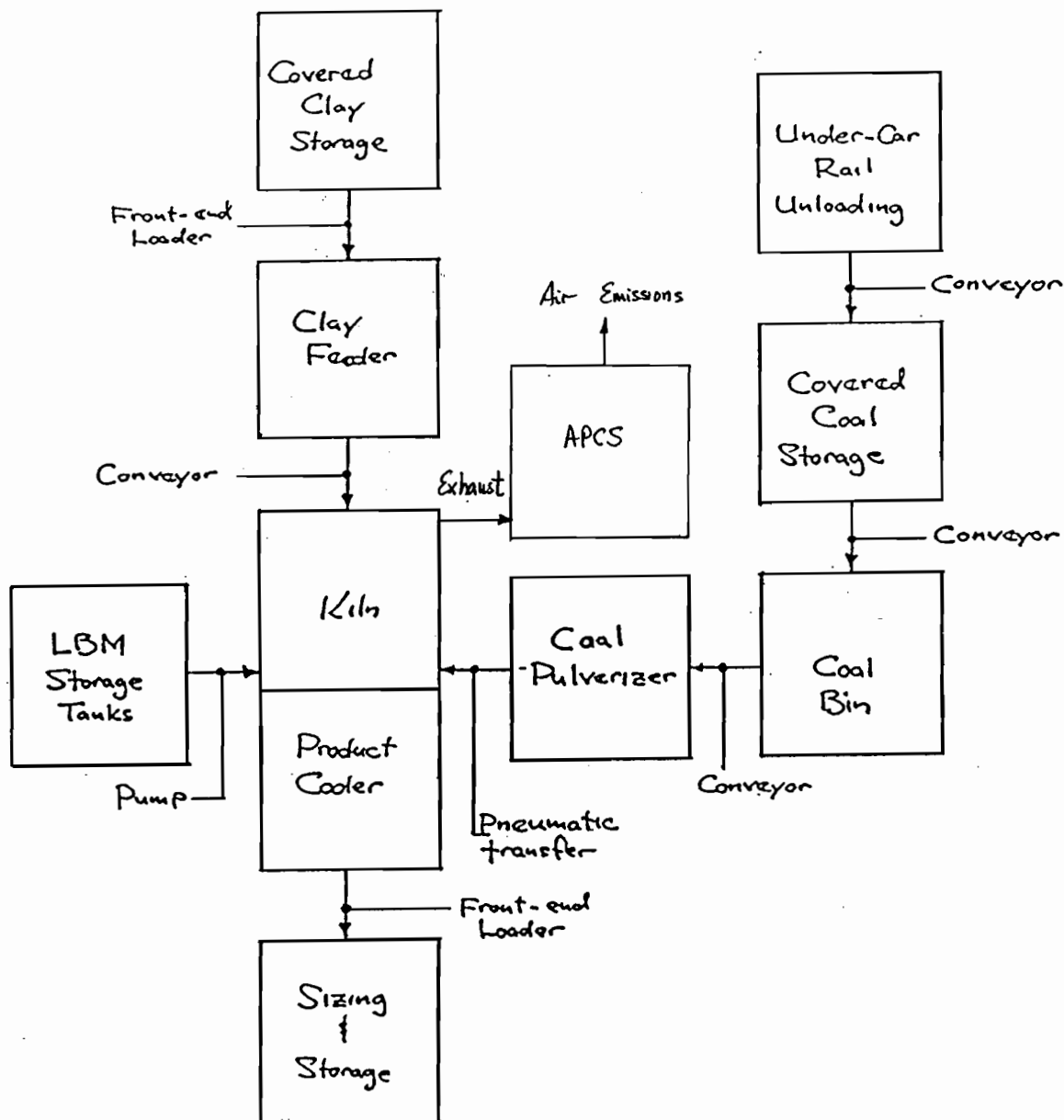


VIEW "B"

SKETCH # 4

FLORIAN SOLITE
DJS 1"=10'-0"
4/30/91

ATTACHMENT 3
PROCESS FLOW DIAGRAM



ATTACHMENT 3
PROCESS FLOW DIAGRAM

FLORIDA SOLITE CORPORATION
GREEN COVE SPRINGS, FLORIDA

ATTACHMENT 4
SITE LOCATION



FLORIDA SOLITE CORPORATION
GREEN COVE SPRINGS, FLORIDA



ATTACHMENT 5

PLOT PLAN

SEABOARD COASTLINE RAILROAD

Product
Storage

Kiln No.5

Kiln No.1A

Kiln No.1

Clay
Storage

Stacks

Office

Product
Storage

Pond

Entrance
Drive

ATTACHMENT 5
PLOT PLAN

FLORIDA SOLITE CORPORATION
GREEN COVE SPRINGS, FLORIDA



ATTACHMENT 6
DOCUMENTED RATES



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

September 20, 1989

Dr. John B. Koogler, P.E.
Koogler & Associates
4014 NW Thirteenth Street
Gainesville, Florida 32609

Dear Dr. Koogler:

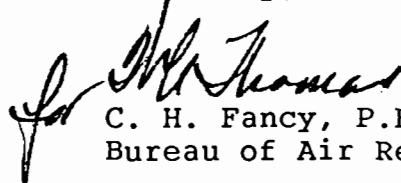
Re: Florida Solite Company

The Bureau has reviewed your August 3, 1989, letter to the Northeast District requesting an amendment to specific conditions Nos. 1 and 4 of permit No. AO 10-154570.

In your September, 1986, application requesting Florida Solite be allowed to substitute kiln No. 1A for kiln No. 1 (file No. AC 10-125262), the baseline production and emissions for kiln No. 1 were documented. Briefly, clay input was 8.6 TPH (dry), production was 7.0 TPH (dry), particulate matter emissions were 12.7 lbs/hr (55.6 TPY), and sulfur dioxide emissions were 75.8 lbs/hr (288.1 TPY) average with a maximum 226.0 lbs/hr, one hour average.

Any increase in these rates is a modification and will require a new permit to construct.

Sincerely,



C. H. Fancy, P.E.
Bureau of Air Regulation

CHF/WH/t

cc: J. Cole, NE District

ATTACHMENT 7
NITROGEN OXIDES EMISSION DATA

EMISSION MEASUREMENTS

KILN NO. 1A

FLORIDA SOLITE COMPANY
GREEN COVE SPRINGS, FLORIDA

Permit No. AC10-125262
(Expires June 30, 1989)

April 22, 1989

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 N.W. 13TH STREET
GAINESVILLE, FLORIDA 32609
(904) 377-5822



TABLE 4.
NITROGEN OXIDES EMISSION DATA
FLORIDA SOLITE COMPANY
April 22, 1989

Run	Stack Gas Flow (dscfm)	Nitrogen Oxides (lb/hr)
1	27802	16.96
2	27442	12.83
3	26976	16.14
Avg.	27407	15.31

ATTACHMENT 8
CURRENT KILN NO. 5 AIR PERMIT



STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
(904) 396-6959



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

ERNEST E. FREY
DISTRICT MANAGER

PERMITTEE:

Florida Solite Company
Post Office Box 297
Green Cove Springs, FL 32043

I.D. Number:

31/10/0004/05

Permit/Certification Number: A010-122377

Date of Issue: Dec. 12, 1986; Revised Dec. 30, 1986

Expiration Date: August 19, 1991

County:

Clay

Latitude/Longitude:

30°04'07"N; 81°45'17"W

Project:

No. 5 Kiln

UIM:

E-(17)427.3; N-3326.5

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the operation of No. 5 Kiln with particulate matter emissions controlled by a wet scrubber. The coal and/or liquid burnable material (LEM) firing rate shall not exceed the rates in Specific Condition #4.

Located west of U.S. 17, north of S.R. 209, east of S.R. 209A, north of Green Cove Springs, Clay County, Florida

In accordance with;

operation permit application dated July 9, 1986
additional information received September 29, 1986

PERMITTEE:
Florida Solite Company
Kiln No. 5

Permit No.: A010-122377
Date of Issue: 12/12/86; Revised 12/30/86
Expiration Date: August 19, 1991

SPECIFIC CONDITIONS:

1. The maximum input rate is 26,400 lbs/hr (dry clay) plus 4,540 lbs/hr (coal) and the maximum production rate is 22,000 lbs/hr rate (operating rate) and neither shall be exceeded without prior approval.
2. Testing of emissions must be performed at an operating rate of at least 90% of the rate in Specific Condition (SC) No.1, or SC No. 3 will become effective.
3. The operating rate shall not exceed 110% of the operating rate during the most recent test except for testing purposes, but shall not exceed the rate in SC No. 1. After testing at an operating rate greater than 110% of the last test operating rate, the operating rate shall not exceed 110% of the last (submitted) test operating rate until the test report at the higher rate has been reviewed and accepted by the Department.
4. The permitted maximum allowable emission rate for each pollutant is as follows:

<u>Pollutant</u>	<u>Rule</u>	<u>Emission Rate</u>	
		<u>lbs/hr</u>	<u>TPY</u>
Particulate Matter (PM)	17-2.610(1), FAC	19.61 ¹	85.68
Sulfur Dioxide (SO ₂)	---	227.00 ²	991.54
Sulfur Dioxide (SO ₂)	---	174.40 ³	---
Visible Emissions (VE)	17-2.610(2), FAC	<20% opacity	

¹Basis: P = 15.47 TPH (clay and coal); E = 19.61

²Basis: 4540 lbs coal/hr; 2.5% sulfur (maximum)

³Basis: 545 gals LBM/hr; 8 lbs/gal; 2.0% sulfur (maximum)

5. The liquid burnable waste (LBM) shall not contain any organic cyanides, sulfide, mercaptans, PCB's, insecticides, pesticides, herbicides, electroplating waste or radioactive material. Florida Solite Company shall retain the manifest of each load for 2 years for Department inspection.
6. Unconfined particulate matter emissions shall be controlled by application of dust suppressants, unless an alternative method is requested and approved, to all areas necessary to reasonably control such emissions per Florida Administrative Code Rule 17-2.610(3).

PERMITTEE:
Florida Solite Company
Kiln No. 5

Permit No.: AO10-122377
Date of Issue: 12/12/86; Revised 12/30/86
Expiration Date: August 19, 1991

7. Test the emission for the following pollutant(s) at the interval(s) indicated, notify us 14 days prior to testing, and submit the test report documentation to this office within 45 days after completion of the testing:

<u>Pollutant</u>	<u>Interval from</u>
PM	12 months from June 16, 1986
VE	12 months from June 16, 1986
SO ₂ (from coal)	12 months from June 16, 1986; submit certified ASTM analysis
SO ₂ (from LBM)	See Specific Condition #9

Tests and test reports shall comply with the requirements of Florida Administrative Code Rule 17-2.700(6) and (7), respectively.

8. In each test report, submit the maximum input/production rate at which this source was operated since the most recent test.
9. The LBM report shall contain a copy of the analyses and a copy of the composite sample log and shall be submitted within 30 days after the end of each calendar quarter; i.e., the first report will be due on July 30, 1987. The log shall include as a minimum the sample date, load number, received from whom and date received. The as-fired composite sample shall be accumulated in a container in increments according to ASTM Practice D 4057 or ASTM Method D 4177. The composite sample shall be analyzed by the appropriate ASTM Methods for the sulfur, lead, and PCB content once per month. Also indicate the ASTM Methods used in each report.
10. Submit an annual operation report for this source on the form supplied by the Department for each calendar year on or before March 1.
11. Any revision(s) to a permit (and application) must be submitted and approved prior to implementing.
12. Forms for renewal will be sent 5 months prior to August 19, 1991 and the completed forms with test results are due 90 days prior to August 19, 1991.

Issued this 12 day of December, 1986
Revised December 30, 1986

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION



Ernest E. Frey, District Manager



Project Summary

Evaluation of Hazardous Waste Incineration in an Aggregate Kiln: Florida Solite Corporation

D. R. Day, L. A. Cox, J. A. Peters, and R. E. Mournighan

Aggregate kiln incineration of chlorinated liquid organic waste was investigated in a one-week program at Florida Solite Company. POHCs (toluene, tetrachloroethylene, methyl ethyl ketone, and methyl isobutyl ketone) were monitored in waste and stack emissions. In addition, stack emissions were monitored for particulate matter, particulate trace metals, HCl, SO₂, and NO_x. Process samples were collected and analyzed for trace metals and chloride. The destruction and removal efficiency of POHCs and the fate of trace metals and chloride ion in the kiln process were determined.

Consistent achievement of greater than 99.99% DRE was demonstrated for each POHC. Emissions of other pollutants ranged as follows: particulates—4.4 to 6.5 kg/hr; HCl—0.008 to 0.034 kg/hr; SO₂—72.2 to 99.6 kg/hr; NO_x—1.9 to 11.7 kg/hr. Between 60 and 90% of the element chlorine is fed to the kiln from the waste fuel and scrubber influent water, while 95% of the chlorine is discharged from the process as chloride ion in the scrubber effluent water.

This Project Summary was developed by EPA's Hazardous Waste Engineering Research Laboratory, Cincinnati, OH, to announce key findings of the research project that is fully documented in a separate report of the same title (see Project Report ordering information at back).

Introduction

Cofiring of hazardous wastes in high temperature industrial processes is an attractive alternative to hazardous waste

incineration. The alternative makes use of the waste's heat content. Many cofiring processes, which include cement and dolomite kilns, glass furnaces, steel furnaces, and some industrial boilers, provide temperatures and residence times similar to those required for incinerators dedicated to incineration of hazardous wastes. In addition to the savings derived from the heat value, the use of existing industrial equipment does not require the capital required if a separate incinerator to process a given amount of hazardous waste is to be built, and it may provide an environmentally acceptable alternative to conventional hazardous waste disposal.

Aggregate kilns, because of their high energy use, are an excellent example of this concept. Such kilns typically operate at temperatures over 1100°C (2000°F), have gas residence times in excess of 1.5 seconds, and have a highly turbulent combustion zone. However, the need exists for data that shows the effect of cofiring hazardous waste on the emissions from the aggregate process.

The sampling and analysis program included evaluation of: (1) the effects of cofiring coal and waste fuel on the destruction and removal efficiency (DRE) of principal organic hazardous constituents (POHCs); (2) the concentrations of particulate matter, SO₂, NO_x, HCl, and metals in stack emission, and (3) the concentration and fate of metals and chlorine in the process streams.

Facility and Process Description

The Florida Solite Company operates an aggregate kiln in Green Cove Springs, Florida, which is located approximately 20 miles south of Jacksonville. Annual

production of the expanded lightweight inorganic material used as aggregate in a cement mix is approximately 5.45×10^7 kg (60,000 tons) per year.

This industrial process involves the heating of clay to 1100°C in a horizontal rotary kiln to prepare an expanded lightweight inorganic material used as aggregate in cement mix.

The kiln, with refractory linings, is 2.7 m (9 ft) in diameter and 45.7 m (150 ft) long. The kiln rotates slowly (90 revolutions per hour), has a gentle slope (6.25 cm/m) to allow material to pass through by gravity. The kiln operates in a counter current flow pattern; i.e., solid materials travel in one direction and hot gases and dust travel in the opposite direction. Clay is fed into the kiln at the upper end at a rate of approximately 12,260 kg/hr (27,000 lb/hr). At the opposite end of the kiln, a mixture of coal and waste fuel is burned at rates of approximately 700 kg/hr (1,540 lb/hr) and 0.87 m³/hr (230 gal/hr), respectively, to provide a heat input of approximately 220 kw (0.74 million Btu/hr). As the clay feed travels down the inclined rotating kiln, it passes through various temperature ranges which cause transformation of the clay into the lightweight aggregate product. The lightweight aggregate is produced at a rate of approximately 9,080 kg/hr (20,000 lb/hr). After heating and transformation in the kiln, the aggregate is graded and large clumps are crushed for sizing. The final product is stored in large piles until sold.

The kiln exhaust gases pass through a pair of mechanical dust collectors, whose dust is recycled into the kiln, then into a horizontal cross-flow water scrubber of fiber-reinforced-plastic (FRP) construction. The series of water sprays cleans the particulate matter and reduces the gas temperature from about 370°C to 70°C (700°F to 160°F) before the gases reach the knockout chamber and fiberglass stack. The scrubber discharge released from the knockout chamber is a mixture of raw steam and water with the entrapped particulate matter. This discharge stream is released to an open ditch which drains to a pond. There is no recycle of the scrubber water.

The fuel used to fire the kiln is an unblended combination of crushed coal and waste organic liquids. The liquid wastes, which are trucked directly from the generators, consist primarily of solvents, alcohols, ethers, still bottoms, and a small fraction of chlorinated hydrocarbons. Any manifested wasteload that contains pesticides, PCBs, acids, caustics, cyanides, sulfides, mercaptans, electro-

plating wastes, or metal finishing wastes is rejected and returned to the generator. The organic waste mixture makes up from 50% to 100% of the fuel used. During the test period, the waste fuel made up approximately 54% of the total fuel input.

Experimental Program

The sampling and analytical program was designed to identify the major pollutants from burning waste fuel in an aggregate kiln, quantify their respective emission rates, determine the destruction and removal efficiency (DRE) of the POHCs, and provide information for a mass balance around the process for metals and chlorine. Measured stack pollutants include POHCs (toluene, tetrachloroethylene, methyl ethyl ketone, and methyl isobutyl ketone), particulate matter, particulate trace metals, carbon dioxide, hydrogen chloride, sulfur dioxide, and nitrogen oxides. In addition, the distribution of the metals and the element chlorine were measured in all of the process input and output streams; i.e., the coal feed, waste fuel feed, clay feed, scrubber influent water, aggregate product, and scrubber effluent water. Waste fuel and coal samples were submitted for analyses of sulfur, ash, and Btu content. Waste fuel and scrubber effluent water also were analyzed for principal organics. Table 1 summarizes the overall test program and lists each sampling and analytical method used.

Results and Discussions

Waste Fuel

A detailed summary of the waste fuel composition for two waste fuel samples collected is shown in Table 2. Tables 3 and 4 show the concentration of each POHC and other properties for the five waste fuel samples (one sample per day, Runs 1-5).

POHC Destruction and Removal Efficiencies

The complex combustion chemistry for organic materials becomes perplexing when a broad range of organic compounds present in a liquid waste are burned. On a weight basis, most of the organic carbon in the waste is oxidized to CO₂ in the combustion process, but trace amounts of organic chemicals survive the oxidation process.

The four POHCs were sampled in the exhaust gas by the volatile organic sam-

pling train (VOST) and analyzed by gas chromatography/mass spectrometry (GC/MS). Due to sampling and analysis problems, the number of acceptable VOST runs made each day are as follows: day 1—0 runs; day 2—6 runs; day 3—6 runs; day 4—8 runs; day 5—5 runs. The average and range for DRE is shown in Table 5.

Methyl ethyl ketone was destroyed and removed to at least 99.99% efficiency. Only three runs showed DREs less than 99.999%: Runs 4A, 3A³, and 3B³. Runs 3A³ and 3B³ were side-by-side runs (with 3A and 3B) that were split with the EPA QA contractor. Runs 3A³ and 3B³ do not show good comparison with Runs 3A and 3B for MEK, possibly owing to high blank contamination problems on the QA contractor field blanks. Run 3B³ is an outlier and is not considered a significant part of the data. The overall DRE average for MEK for all 5 days was 99.998% \pm 0.006% (95% confidence limits).

DREs for methyl isobutyl ketone (MIBK) ranged from 99.986% to \geq 99.999%. The 99.986% value was the only DRE less than 99.992%. The overall average for MIBK was 99.998% \pm 0.006% (95% confidence limits).

DREs for tetrachloroethylene (Perc) ranged from 99.993% to \geq 99.999%. Excellent consistency was found for each day of sampling. Split samples on Day 3 (Runs 3A³, 3B³, and 3D¹) all showed low relative difference. The overall DRE average for Perc was 99.997% \pm 0.004% (95% confidence limits).

DREs toluene ranged from 99.995% to $>$ 99.999%. The overall average for toluene was 99.999% \pm 0.002% (95% confidence limits), making toluene the easiest POHC to destroy and remove.

Stack Samples

Results for particulates, hydrogen chloride, sulfur dioxide, and nitrogen oxides are summarized in Table 6. The stack rate averaged 652 m³/min (23,320 ft³/min) and the dry stack rate averaged 419 dscm/min (14,780 dscf/min). Particulate emissions of 5.3 kg/hr (11.7 lbs/hr) were less than air permit regulations for this site issued by the Florida Department of Environmental Regulations (DER) of 8.82 kg/hr (19.43 lb/hr). The first SO₂ test result had a low value of 270 ppm and is considered an outlier when compared to the remaining seven SO₂ test results which ranged 1,030 to 1,470 ppm. The low NO_x value of 40 ppm was expected as it occurred on Day 3 during startup of the kiln.

Table 1. Summary of Florida Solite Aggregate Kiln Sampling and Analytical Program

Parameter	Sampling Method	Analytical Method
Stack Gas		
● POHCs (tetrachloroethylene, toluene, MEK, MIBK)	Volatile organic sampling train (VOST)	GC/MS, thermal desorption and SIM
● Particulate matter	EPA 5	EPA 5
● Metals on particulate	EPA 5	ICP
● Hydrogen chloride	Impinger absorption in 0.5 M NaOAc (back half of EPA 5)	Specific ion electrode
● CO ₂ and O ₂	EPA 3	Fyrite
● Nitrogen oxides	EPA 7	EPA 7
● Sulfur dioxide	EPA 6	EPA 6
Waste Fuel		
● Principal organics	Grab — composite	GC/MS
● Metals	Grab — composite	ICP
● Chlorine, sulfur	Grab — composite	XRF
● Btu content	Grab — composite	ASTM D240-64
● Ash content	Grab — composite	ASTM D482-IP4
Scrubber Discharge^a		
● POHCs	Grab — composite	GC/MS
● Metals	Grab — composite	ICP
● Lead	Grab — composite	AAS
● Hexavalent chromium	Grab — composite	APHA312B
● Chlorine	Grab — composite	XRF
Aggregate Product		
● Metals	Grab — composite	ICP
● Chlorine	Grab — composite	XRF
Clay Feed		
● Metals	Grab — composite	ICP
● Chlorine	Grab — composite	XRF
Coal		
● Metals	Grab — composite	ICP
● Chlorine, sulfur	Grab — composite	XRF
● Btu and ash content	Grab — composite	ASTM D240-64
Scrubber Influent		
● Metals	Grab — composite	ICP
● Chlorine	Grab — composite	XRF

^aThe scrubber discharge was split into sludge and supernatant fractions and was analyzed separately where applicable.

Conclusions

The results of the program were as follows:

- The aggregate kiln appears to be suitable for destruction of the type of hazardous waste tested in this program. DRE and HCl met the RCRA subpart O incinerator standards.
- Emissions of conventional pollutants were determined and ranged as follows: particulates—4.4 to 6.5 kg/hr;

HCl—0.008 to 0.034 kg/hr; SO₂—72.2 to 99.6 kg/hr; and NO_x—1.9 to 11.7 kg/hr.

- Approximately 60-90% of the element chlorine is fed to the kiln from the waste fuel, while virtually all the element is discharged from the process as chloride in the scrubber effluent water.
- The major percentage of metals is fed to the kiln from the clay feed and waste fuel, while the major percentage of the metals leave the process in the aggregate product and scrubber effluent. Very little is discharged to the air.

Table 2. Results of Capillary GC/MS Analysis of Major Components of Waste Fuels Number 1 and Number 4

Waste Fuel Component	Concentration, wt %	
	Number 1 ^a	Number 4 ^a
Ethanol	1.55	1.83
2-Propanol	4.55	1.97
1-Butanol	1.78	0.77
Ethyl acetate	0.68	0.72
Methyl ethyl ketone (POHC)	2.03	2.81
Methyl isobutyl ketone (POHC)	1.52	1.12
Toluene (POHC)	8.40	8.06
Tetrachloroethylene (POHC)	0.19	0.07
Ethylbenzene	1.23	2.28
Xylene (isomer No. 1)	4.47	7.89
Styrene	0.71	0.28
Xylene (isomer No. 2)	1.29	2.52
2-Ethoxyethyl acetate	2.03	1.20
C ₃ -Benzene (isomer No. 1) ^b	0.47	0.33
C ₃ -Benzene (isomer No. 2) ^b	0.57	0.35
C ₁₀ -Alkane (isomer) ^c	0.83	0.76
C ₁₁ -Alkane (isomer) ^d	0.72	0.60
n-Propyl acetate	1.50	1.00
2-Propanol, 1-(2-methoxy-1-methylethoxy)-isomer No. 1	0.46	0.14
2-Propanol, 1-(2-methoxy-1-methylethoxy)-isomer No. 2	0.49	0.16
2-Cyclohex 4-1-one, trimethyl (isomer)	1.28	0.54

^aAverage of split sample.

^bCompounds containing three carbons associated with a benzene ring.

^cCompounds containing ten carbons associated with an alkane.

^dCompounds containing eleven carbons associated with an alkane.

Table 3. POHCs in Waste Fuel

POHC	Waste fuel concentration, %					Waste fuel mass rate (W _{in}), g/min				
	1	2	3	4	5	1	2	3	4	5
Methyl ethyl ketone	1.99	1.78	1.83	2.81	4.25	332	390	254	328	564
Methyl isobutyl ketone	1.53	1.70	1.41	1.12	3.90	255	373	195	131	518
Tetrachloroethylene	0.19	0.19	0.17	0.06	0.03	31	43	24	7	4
Toluene	8.38	9.27	8.21	7.99	7.54	1,397	2,033	1,137	932	1,000

Table 4. Waste Fuel Conditions

Run number	Chlorine, %	Sulfur, %	PCB ppm	Heat value, Btu/lb	Ash, %	Specific gravity, g/cc	Feed rate, gal/min	Mass rate, g/min
1	1.08	0.41	ND ^a	12,550	7.74	0.966	4.56	16,670
2	1.08	0.41	10	11,450	7.28	0.922	5.84	21,930
3	1.04	0.39	ND	12,740	7.47	0.978	3.74	13,850
4	0.55	0.26	ND	9,530	15.5	1.07	2.88	11,660
5	0.55	0.42	ND	12,670	6.18	0.966	3.63	13,270

^aND—not detected, detection limit = 0.1 ppm.

Table 5. Destruction and Removal Efficiencies of POHCs

Run number	DRE, %			
	POHC 1 (MEK)	POHC 2 (MIBK)	POHC 3 (Perc)	POHC 4 (Toluene)
Day 2				
Range	99.999 >99.999	99.999 >99.999	99.999 >99.999	99.999 >99.999
Average	99.999	99.999	99.999	99.999
Day 3				
Range	99.968 99.999	99.998 99.999	99.998 99.999	99.999 99.999
Average	99.992	99.999	99.999	99.999
Day 4				
Range	99.998 99.999	99.986 99.998	99.993 99.998	99.995 99.999
Average	99.999	99.995	99.997	99.998
Day 5				
Range	99.999 >99.999	99.999 99.999	99.991 99.997	99.998 99.999
Average	99.999	99.999	99.995	99.999
Overall Average	99.998	99.998	99.997	99.999

Table 6. Average Results for Stack Gas, Particulates, HCl, SO₂ and NO_x Emissions

Parameter and Unit	Range	Average	Standard Deviation
Stack rate, m ³ /min	623 - 673	652	19
Stack moisture, %	21.5 - 28.8	26.2	3.3
Stack velocity, m/sec	16.6 - 17.1	16.8	0.2
Particulates			
mg/dscm	163 - 273	215	48
kg/hr	4.4 - 6.5	5.3	1.0
HCl, ppm	0.15 - 0.68	0.46	0.22
SO ₂ , ppm	270 - 1,470	1,130	380
NO _x , ppm	40 - 227	162	67