CROSS/TESSITORE & ASSOCIATES, P.A.

4763 S. CONWAY ROAD, SUITE F
ORLANDO, FLORIDA 32812
407/851-1484

September 24, 1990

Mr. Bruce Mitchell
Florida Department of Environmental Regulation
Division of Air Resources Management
Permitting and Standards Section
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Florida Mining and Materials
Construction Permit Application to Burn Flolite in Kiln No. 1.

Dear Bruce:

Attached is the subject application as requested in C. H. Fancy's letter of June 8, 1990. Also included is the additional processing fee as requested.

If you have any questions and/or require any additional data, please do not hesitate to call upon me.

Sincerely,

Joseph L. Tessitore

Joseph L. Tessitore, P.E.
Vice President

JLT/dlk
Enc. a/s
C3319.Doc

APPLICATION TO AMEND PERMIT A027-169616 FOR UTILIZATION OF FLOLITE IN CEMENT KILN NO. 1

FLORIDA MINING AND MATERIALS
BROOKSVILLE, FLORIDA

September 24, 1990

Cross/Tessitore & Associates, P.A.
4763 South Conway Road, Suite F
Orlando, Florida 32712
(407)851-1484

$200 pd.
9-25-90
Rcpt. #151176

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

AC 27-146923

Bob Martinez
GOVERNOR
Dale Twachtman
SECRETARY
Alex Alexander
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Portland Cement Plant [ ] New[1] [X] Existing[1]

APPLICATION TYPE: [ ] Construction [ ] Operation [X] Modification

COMPANY NAME: Moore McCormack, Inc. d/b/a Florida Mining & Materials COUNTY: Hernando

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) No. 1 Cement Kiln

SOURCE LOCATION: Street U.S. Highway 98 City N.W. of Brooksville

UTM: East 17-356.00 North 3169.89

Latitude 28 ° 38 ' 34 "N Longitude 82 ° 28 ' 25 "W

APPLICANT NAME AND TITLE: H. E. Andre, Vice President, Operations Cement and Aggregates

APPLICANT ADDRESS: P.O. Box 6, Brooksville, Florida 34605-0006

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Moore McCormack, Inc. d/b/a Florida Mining & Materials

I certify that the statements made in this application for a Modification 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: H. E. Andre

H.E. Andre, Vice President, Operations Cement and Aggregates
Name and title (Please type)

Date: 9/20/90 Telephone No. (904)796-7241

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)

SEP 21 1990

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 Joseph L. Tessitore

Joseph L. Tessitore, P.E.
Name (Please Type)

Cross/Tessitore and Associates, P.A.
Company Name (Please Type)

4763 S. Conway Road, Orlando, Florida 32812
Mailing Address (Please Type)

Florida Registration No. 23374 Date: 9/24/90 Telephone No. (407)851-1484

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 Attached Project Description

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction Existing Completion of Construction Existing

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.) The following information represents the initial costs associated with the existing baghouse system. No additional air pollution equipment will be required for the subject modification.

Baghouse Equipment	$ 582,000.00
Erection	$ 640,000.00
TOTAL	$1,286,000.00

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

See Table II-1

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? If yes, see Section VI. NO

3. Does the State "Prevention of Significant Deterioriation" (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? YES

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		
Limestone	Particulate	0.02	207,640	
Sand/Clay	Particulate	0.08	20,774	SEE SUPPLEMENTAL
Fly Ash	Particulate	0.14	26,182	INFORMATION:
Staurolite	Particulate	1.40	2,704	Section V
Mill Scale	Particulate	1.40	2,704	Figure V-4

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): 260,000

2. Product Weight (lbs/hr): 159,250

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/hr	T/yr	
			See Table III-1				

[1] See Section V, Item 2.

[2] Reference 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)

[3] Calculated from operating rate and applicable standard.

[4] Emission, 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 Dracco				
Joy Western baghouse	Particulate	99.5%	≥ 10 Micron	Manufacturer's Data

E. Fuels --- See Table III-2

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis: See Table III-2

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average _____ Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

Solids collected from the fabric filter during normal operation will be returned to the kiln feed and recycled through the system.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 70 ft. Stack Diameter: 3.0 (each vent) ft.

Gas Flow Rate: 250,000 ACFM / DSCFM Gas Exit Temperature: ~ 260 °F.

Water Vapor Content: ~ 10 % Velocity: 69 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			NOT APPLICABLE				
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		NOT APPLICABLE			
Secondary Chamber					

Stack Height: _____ ft. Stack Diamter: _____ 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:

NOT APPLICABLE

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

NOT APPLICABLE

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

See Table V-1 and Emissions Calculations

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)]

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.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

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.)

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).

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.

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).

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.

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

NOT APPLICABLE

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:

[1]Explain method of determining efficiency.
[2]Energy 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:

[1] Explain method of determining efficiency.
[2] Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration
NOT APPLICABLE	

(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
NOT APPLICABLE	

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]Applicant 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

A. Company Monitored Data NOT APPLICABLE

1. _____ no. sites _____ TSP _____ ( ) SO^{2*} _____ 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).

NOT APPLICABLE

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

. 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.

J. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate	
TSP	_____	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.

. Attach all other information supportive to the PSD review.

. 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.

PROJECT DESCRIPTION

The subject of this application is the proposed addition of Flolite to the fuels currently used by the Florida Mining & Materials No. 1 Kiln. Flolite is a re-refined "on-spec" product which is similar to No. 5 fuel oil.

As proposed, Flolite would be mainly used during start-up of kiln operations and during periods when raw materials feed is stopped and the kiln temperature must be maintained. Flolite would be used at rates of up to 2069 gal/hr during these periods and for approximately 250 hrs/yr.

The proposed utilization of Flolite will not result in an increase in emissions of particulate, sulfur dioxide, carbon monoxide, volatile organic compounds or nitrogen dioxide (NOx).

The sulfur content of Flolite is consistent with that of the coal currently used, therefore emissions of sulfur dioxide should remain unchanged. Emissions of nitrogen dioxide (NOx) may actually decrease, due to the reduced excess air required for combustion of liquid rather than solid fuels.

TABLE II-1

PERMITTING AND COMPLIANCE ACTIVITIES

Activity	Number	Issued	Expired
Construction Permit	AC27-2255	December 18, 1973	March 1, 1976
Construction Permit Extension	AC27-2255	--	--
Operating Permit	A027-20213	August 13, 1979	August 7, 1984
Operating Permit	A027-89814	October 5, 1984	October 3, 1989
Operating Permit	A027-169616	January 24, 1990	January 18, 1995

TABLE III-1

REGULATED EMISSIONS SUMMARY

Parameter	Current Allowable Emissions lbs/hr	Current Allowable Emissions T/yr	Allowed Emission Rate Per Rule 17-2	Potential Emissions lbs/hr	Potential Emissions T/yr
Particulate	36.0	----	N/A	36.0	151.2
Opacity	10%	----	Rule 17-2.660	10%	----

TABLE III-2

FUELS DATA

Fuel Type	Heat Capacity		Sulfur Content[2]	Maximum Usage Rate	Maximum Heat Input (Btu/hr)
Current:					
Coal	12,500	Btu/lb	1.0 %	12 T/hr	3.0×10^8
No. 6 Diesel Oil	152,000	Btu/gal	0.77 %	1974 T/hr	3.0×10^8
Proposed:					
Flolite[1]	145,000	Btu/gal	1.0 %	2069 gal/hr	3.0×10^8
Coal	12,500	Btu/lb	1.0 %	12 T/hr	3.0×10^8
No. 6 Diesel Oil	152,000	Btu/gal	0.77 %	1974 T/hr	3.0×10^8

(1) Flolite would be mainly used during start-up of kiln operations and during periods when raw materials feed is stopped and kiln temperature must be maintained, and Flolite is normally used only as a substitute for coal. In cases where Flolite and coal are used concurrently, the maximum heat input rate will not exceed 3.0×10^8 Btu/hr.

(2) Values shown are approximate.

EXHIBIT III-1

FLOLITE MANUFACTURER'S DATA

FLOLITE

TYPICAL SPECIFICATIONS

GENERAL - Flolite has the normal specifications of #5 fuel oil; however, it has a constant viscosity designed to meet the needs of individual customers.

ANALYSIS	TYPICAL SPECIFICATIONS
API GRAVITY @ 60°F	18 - 29
SULFUR % WT	1.0% Maximum
B S & W	1.0% Maximum
WATER BY DISTILLATION	1.0% Maximum
BTU/GAL	Approx. 145,000 +
VANADIUM	50 - 100 PPM
TOX	Below 500 PPM
PCB's	Below detectable limits (0.5 PPM)
CCR	1.5%
ASPHALTENES	0.5%
METALS	Below EP toxicity Maximum levels.

7-24-89

INTERNATIONAL PETROLEUM CORPORATION

October 25, 1989

Cross/Tessitore & Associates, P.A.
Attn: Mr. Greg Gonzales
4763 South Conway Road, Suite F
Orlando, Florida 32812

Subject: International Petroleum Corporation "Flolite"

Dear Mr. Gonzales:

Our "Flolite" product is a blend of "on-specification" re-refined oil and virgin fuel oils. We do not sell any off specification product. The precise formulation is propietary information; however, virgin fuel normally constitutes less than 50% of the blended product. I am attaching a release from the Federal E.P.A. which states their position that our finished product is equivalent to virgin fuel oils.

The feedstock for our finished product is predominantly used motor oils. This feedstock undergoes four filtration steps, an atmospheric distillation process and a vacuum distillation process.

A copy of a certified analysis of our finished product is attached and is indicative of our typical specifications for finished product.

A copy of the D.E.R. approval for use of our product is also attached.

The following comments are in response to your specific questions.

1. "Flolite" is "on-spec" product and has the physical characteristics of # 5 oil.

2. "BS&W" refers to "Bottom Sediment and Water". This is a normal test for fuel oils. Product is usually heavily discounted if it exceeds 1.0% because it provides less BTU/gallon and is more difficult to burn. The lowest percentage is the best product. "CCR" is an abbreviation for "Conradson Carbon Residue". This is a frequently used test where a specific amount of fuel is heated and burned for a specified time. The unburned protion is the carbon residule. Most # 5 oils run in the 7 - 12% range. The lowest % is the best product.

105 South Alexander Street, Plant City, Florida 33566
Area Code (813) 229-1739 Fla WATS 800-282-9585

3. PNA's are present in all fuel oils at varying levels. The cost of the test to determine precise percentages is very expensive and requires very elaborate, complex equipment and highly trained personnel. Heavy hydro-treating, which is sometimes used in processing oils, reduces but does not eliminate PNA's. These hydro-treated oils usually become lubricating oils and make up part of our feedstock. Our distillation processes remove the more volatile materials and a high percentage of aromatics which causes the PNA content of our re-refined product to be lower than virgin oils.

Sincerely,

Don Van Sickle
Director of Marketing

DVS:pw

Encl.

INTERNATIONAL PETROLEUM CORPORATION

MATERIAL SAFETY DATA SHEET

INTERNATIONAL PETROLEUM CORPORATION FUEL OIL - FLOLITE

DANGER!

PROLONGED AND REPEATED CONTACT WITH SKIN
CAN BE HARMFUL
COMBUSTIBLE
KEEP OUT OF REACH OF CHILDREN

TYPICAL COMPOSITION

A mixture of Petroleum Residual (atmospheric or vacuum) and Cutter Stocks (lt. cycle oils, diesel, jet or re-refined oil) blended to meet specifications.

EXPOSURE STANDARD

No OSHA exposure standard of Threshold Limits Value has been established for this material. However, due to the possible carcinogenic effect, exposure should be reduced to the lowest feasible leve.

PHYSIOLOGICAL & HEALTH EFFECTS

Expected to cause no more than minor irritation.

Not expected to be irritating to the skin but minor irritation may be noted following prolonged or frequently repeated contact. Prolonged or repeated contact with the skin may eventually lead to skin cancer. See additional Health Data.

Not expected to be acutely toxic by inhalation.

t expected to be acutely toxic by Ingestion.

EMERGENCY & FIRST AID PROCEDURES

Eyes

Wash eyes with fresh water for eye at least 15 minutes. If irritation continues, see a doctor.

Skin

Remove and launder contamined clothing. Wash thoroughly with soap and water following skin contact.

Inhalation

Since this material is not expected to be an inhalation problem, no first aid procedures are required.

Ingestion

If swallowed, give a large amount of water to drink, make person vomit and call a doctor.

105 South Alexander Street, Plant City, Florida 33566
[illegible] WATS 800-282-9585

This product may contain significant amounts of polynuclear aromatic hydrocarbons (PNA's) which have been shown to cause skin cancer after prolonged and frequent contact with the skin of test animals. Brief or intermittent skin contact with this product is not expected to have serious effects if the skin is washed off. While skin cancer is unlikely to occur in human beings following use of this product, skin contact should be reducted to a minimum.

SPECIAL PROTECTIVE INFORMATION

Eye Protection: Chemical safety goggles must be worn if there is a likelihood of exposure.
Skin Protection: When handling this material, wear impervious protective clothing, which may include neoprene or rubber gloves, apron, overshoes, goggles and complete facial protection.
Respiratory Protection: This material may be an inhalation hazard and unless ventilation is adequate, the use of an approved respirator is recommended.
Ventilation: Use this material only in well ventilated areas.
Other: If eye or skin contact does occur, washing facilities for eyes and skin should be available nearby.

FIRE PROTECTION

Liquid evaporates and forms vapor which can catch fire and burn with exposive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature raises above 85 F.
Flash Point: (P-M) 55 C (Min.)
Autoignition Temp.: NDA
Flammability Limits: NDA
Extinguishing Media: CO , Dry Chemical, Foam, Water Spray.
Special Fire Fighting Procedures: For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including selfcontained breathing apparatus. See Hazardous Decomposition products. Read the entire bulletin.

Environmental Impact: This material may be classed as a water pollutant and should be kept out of sewage and drainage systems and all bodies of water.

Precautions if Material is Released or Spilled: Eliminate all open flames in vicinity of spill or released vapor. Clean up spills as soon as possible. Absorb large spills with absorbent clay, diatomaceous earth or other suitable material.

Waste Disposal Methods: Place contaminated materials in disposable containers and bury in an approved dumping area.

REACTIVITY DATA

Stability (Thermal, Light, Etc.): Stable.

Incompatibility (Materials to avoid): May react with strong oxidizing materials.

Hazardous Decomposition Products: Normal combustion forms carbon dioxide and water vapor and oxides of sulfur; incomplete combustion can produce carbon monoxide.

Hazardous Polymerization: Will not occur.

PHYSICAL PROPERTIES

Solubility: Insoluble in water; miscible with hydrocarbons.

Appearance (Color, Odor, etc.): Black liquid.
Boiling Point: NDA
Melting Point: n/a
Gravity (API): NDA
Vapor Pressure (mm Hg & Temp.): NDA
Vapor Density (Air=1): NDA
Percent Volatile (Volume %): NDA
Evaporation (=1): NDA
Pour Point: Below +6 C
Viscosity: 4.4 to 38.0 cSt @ 50 C
45 to 300 SUS @ 100 F
% Sulfur: 1.9 (Max.)
n/a = Not Applicable
NDA = No Data Available

SPECIAL PRECAUTIONS

DO NOT USE OR STORE near flame, sparks or hot surfaces. USE ONLY IN WELL VENTILATED AREA.

The above information is based on data of which we are aware and is believed to be correct as of the date hereof. Since the information contained herein may be applied under conditions below our control and with which we may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we donot assume any responsibility for the results of its use. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for this particular purpose.

TABLE V-1
PROCESS DATA

Kiln Feed Rate	130	T/hr
Clinker Production Rate	79.6	T/hr
Maximum Heat Input	3.0×10^8	Btu/hr

EMISSIONS CALCULATIONS

PARTICULATE

The anticipated emissions rate for particulate is the same as the currently permitted level. In order to determine the efficiency of the air pollution control device, the potential emission loading to the baghouse is calculated based on an emissions factor from the EPA Guidance Document AP-42, Table 8.6-1.

Calculation of Allowable Emissions:

Allowable Emissions	= 36.0 lb/hr (Permit AO27-169616)

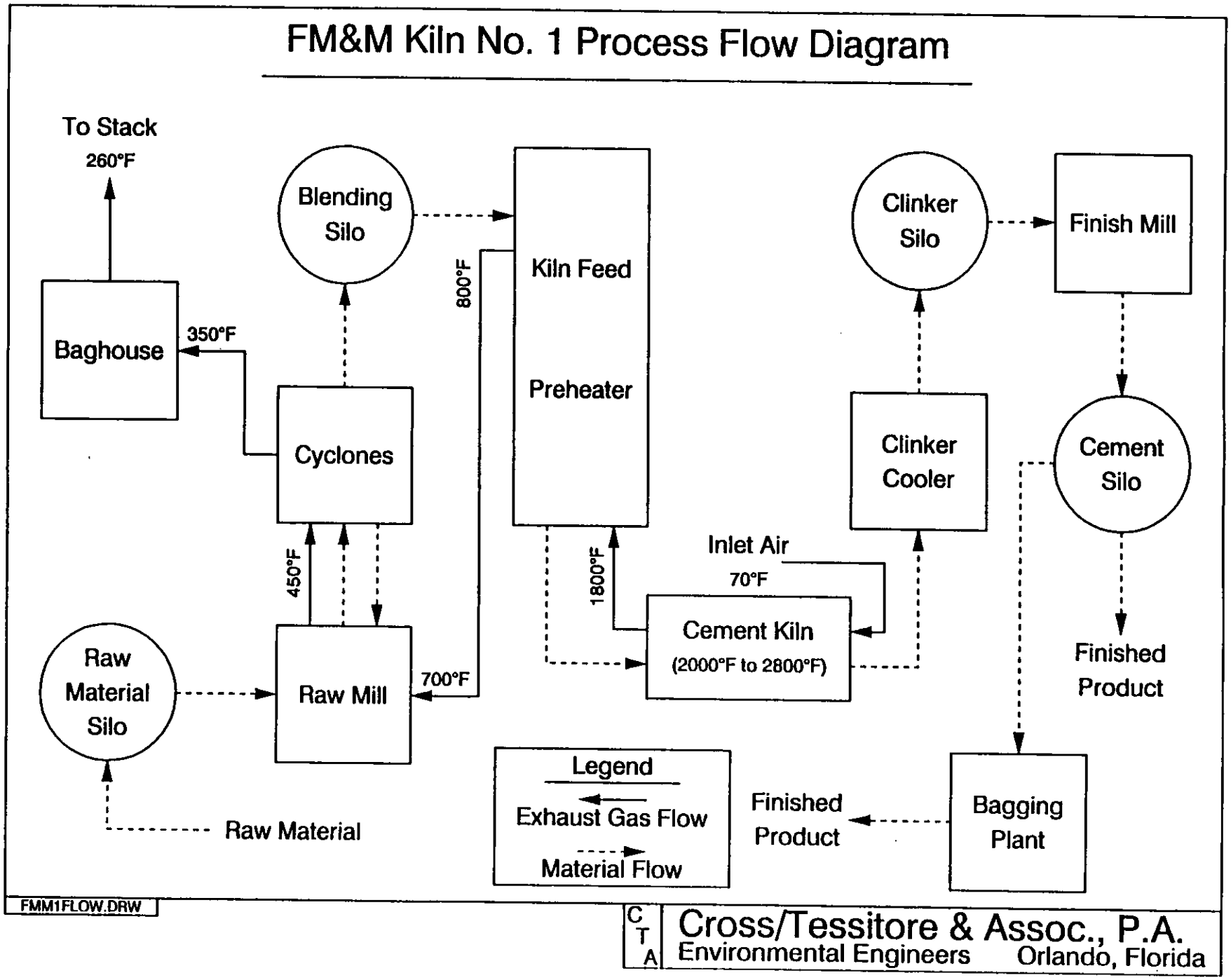
Calculation of Potential Emissions:

Potential Emissions	= 36.0 lb/hr
	= 157.7 T/yr

Calculation of Control Device Removal Efficiency:

Uncontrolled Emissions Factor	= 245.0 lb/ton clinker
Production Rate	= 79.6 T/hr clinker
Potential Emission Loading to Baghouse	= (245 lb/ton) x (79.6 T/hr)
	= 19,502.0 lb/hr
Control Device Removal Efficiency	= (19,502 lb/hr - 36.0 lb/hr) - (19,502 lb/hr)
	= 99.8%

FIGURE V-1


FM&M Kiln No. 1 Process Flow Diagram
To Stack
260°F
Blending Silo
Kiln Feed
Preheater
800°F
Clinker Silo
Finish Mill
Baghouse
350°F
Cyclones
Clinker Cooler
Cement Silo
450°F
1800°F
Inlet Air
70°F
Cement Kiln
(2000°F to 2800°F)
Finished Product
Raw Material Silo
Raw Mill
700°F
Legend
Exhaust Gas Flow
Material Flow
Raw Material
Finished Product
Bagging Plant
FMM1FLOW.DRW
C T A
Cross/Tessitore & Assoc., P.A.
Environmental Engineers Orlando, Florida

VENDOR NO.	INVOICE DATE	DOCUMENT NO.	REMARKS	GROSS	DISCOUNT	NET AMOUNT
15126	9 20 90	90225	FLOLITE PERMIT	200.00	.00	200.00
	9 20 90	23728	** TOTAL	200.00	.00	200.00

DETACH BEFORE DEPOSITING

FLORIDA MINING & MATERIALS
A SOUTHDOWN COMPANY

P.O. BOX 6
BROOKSVILLE, FLORIDA 34605-0006

United Bank of Grand Junction, N.A.
GRAND JUNCTION, COLORADO 81501
PAYABLE IF DESIRED THROUGH
WELLS FARGO BANK, N.A.

FLORIDA MINING & MATERIALS
A SOUTHDOWN COMPANY
P.O. BOX 6
BROOKSVILLE, FLORIDA 34605-0006

82-91
1021

No. 023728

DATE OF CHECK	CHECK NO.	AMOUNT OF CHECK
9 20 90	23728	********200.00

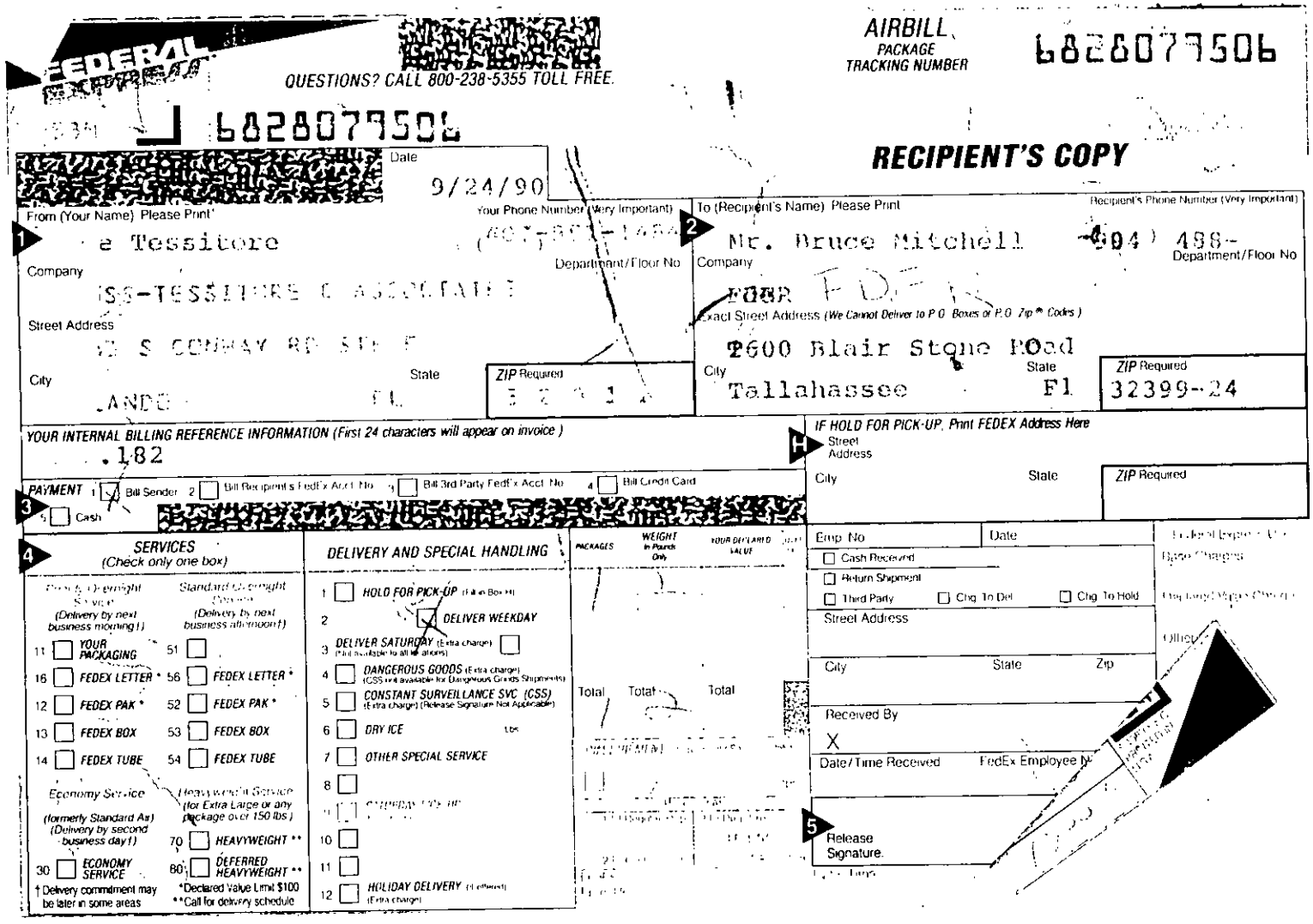
PAY TO THE ORDER OF
FLA DEPT OF ENVIRONMTL REGLTN
4520 OAK FAIR BLVD
TAMPA FL 33610

FLORIDA MINING & MATERIALS

Steven L. Rieder

Karen A. Twitchell

"023728" :102100918: 003 1667"



FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL
PACKAGE
TRACKING NUMBER

6828077506

6828077506

RECIPIENT'S COPY

Date: 9/24/90

From (Your Name) Please Print: e Tessitore

Your Phone Number (Very Important)

Company: ISG-TESSITORE & ASSOCIATES

Department/Floor No

Street Address: 2 S CONWAY RD STE F

City: ORLANDO

State: FL

ZIP Required

To (Recipient's Name) Please Print: Mr. Bruce Mitchell

Recipient's Phone Number (Very Important): (904) 488-

Company: FDOR FDT

Department/Floor No

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip+ Codes): 2600 Blair Stone Road

City: Tallahassee

State: Fl

ZIP Required: 32399-24

YOUR INTERNAL BILLING REFERENCE INFORMATION (First 24 characters will appear on invoice): .182

IF HOLD FOR PICK-UP, Print FEDEX Address Here

Street Address

City

State

ZIP Required

PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct No 3 [ ] Bill 3rd Party FedEx Acct No 4 [ ] Bill Credit Card 5 [ ] Cash

SERVICES (Check only one box)

Priority Overnight Service (Delivery by next business morning†)

11 [ ] YOUR PACKAGING

16 [ ] FEDEX LETTER *

12 [ ] FEDEX PAK *

13 [ ] FEDEX BOX

14 [ ] FEDEX TUBE

Standard Overnight Service (Delivery by next business afternoon†)

51 [ ]

56 [ ] FEDEX LETTER *

52 [ ] FEDEX PAK *

53 [ ] FEDEX BOX

54 [ ] FEDEX TUBE

Economy Service (formerly Standard Air) (Delivery by second business day†)

30 [ ] ECONOMY SERVICE

Heavyweight Service (for Extra Large or any package over 150 lbs.)

70 [ ] HEAVYWEIGHT **

80 [ ] DEFERRED HEAVYWEIGHT **

†Delivery commitment may be later in some areas

*Declared Value Limit $100

**Call for delivery schedule

DELIVERY AND SPECIAL HANDLING

1 [ ] HOLD FOR PICK-UP (Fill in Box H)

2 [X] DELIVER WEEKDAY

3 [ ] DELIVER SATURDAY (Extra charge) (Not available to all locations)

4 [ ] DANGEROUS GOODS (Extra charge) (CSS not available for Dangerous Goods Shipments)

5 [ ] CONSTANT SURVEILLANCE SVC (CSS) (Extra charge) (Release Signature Not Applicable)

6 [ ] DRY ICE lbs.

7 [ ] OTHER SPECIAL SERVICE

8 [ ]

9 [ ] SATURDAY PICK-UP

10 [ ]

11 [ ]

12 [ ] HOLIDAY DELIVERY (Not offered) (Extra charge)

PACKAGES | WEIGHT in Pounds Only | YOUR DECLARED VALUE

Total | Total | Total

Emp No | Date

[ ] Cash Received

[ ] Return Shipment

[ ] Third Party [ ] Chg. To Del [ ] Chg. To Hold

Street Address

City | State | Zip

Received By

X

Date/Time Received | FedEx Employee No

5 Release Signature

Base Charges

Office