CENTRAL POWER & LIME, INC.

December 9, 1994

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Bureau of
Air Regulation

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

Subject: Application to Construct (Modify)
Air Pollution Sources
CPL Power Plant
Brooksville, Florida

Mr. Fancy:

Enclosed are four (4) copies of the construction/modification application for the subject facility.

Please call me if you have any questions.

Sincerely,

Tom Mountain
Environmental Manager

Copy: Larry Curtain, H&K

P.O. BOX 1508 / 10311 CEMENT PLANT ROAD / BROOKSVILLE, FL 34605-1508 / PHONE (904) 799-7881 / FAX (904) 796-6281

Florida Department of Environmental Protection

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

APPLICATION TO ~~OPERATE~~/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Coal Fired Power Plant [ ] New[1] [x] Existing[1]

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

COMPANY NAME: Central Power & Lime, Inc. COUNTY: Hernando

Identify the specific emission point source(s) addressed in this application (i.e., Lime Kiln No. 4 with Venturi Scrubbers; Peaking Unit No. 2, Gas Fired) Power Plant

SOURCE LOCATION: Street 10311 Cement Plant Road City Brooksville

UTM: East (17) 360.008 km North 3162.392.1 km

Latitude 28 ° 34 ' 57 "N Longitude 82 ° 25 ' 53 "W

APPLICANT NAME AND TITLE: Mr. Joe Piermatteo, Senior Vice President

APPLICANT ADDRESS: P.O. Box 1508, Brooksville, Florida 34605-1508

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Central Power & Lime, Inc. 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: Joseph A Piermatteo

Joe Piermatteo, Senior Vice President
Name and Title (Please Type)

Date: 12/9/94 Telephone No. (904) 799-7881

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 xxxxxx/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: 12/8/94 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.

A permit application to increase the generating rate and the heat input rate to an existing coal fired power plant with no change in emissions. Also see page 2a of 12.

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

Start of Construction N/A Completion of Construction N/A

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 - $12,220,000 - existing baghouse

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

PSD-FL-090

PA 82-17

SECTION IIA: PROJECT INFORMATION

The steam generator at the Central Power and Lime, Inc. (CPL) plant originally went into service in 1949 at the American Electric Power Corporation Twin Branch station in Mishawaka, Indiana. The generator was retired in 1980, relocated to the CPL site and reconfigured. The reconfiguration did not constitute a major modification.

During the permitting of the plant, emission limiting standards for sulfur dioxide were imposed and were reduced several times to respond to concerns of interested parties. The originally proposed limits represented BACT and the reductions in the limits represented improvements to BACT. Emission limiting standards were also imposed for particulate matter, nitrogen oxides and the opacity of emissions. The emission limiting standards in the Final Conditions of Certification (PA 82-17, June 29, 1986) are:

Power Plant Only

SO_2 - 1.2 lb/MMBtu boiler heat input, maximum 2-hour average and 770 lb/hr, 3-hour average.

NOx - 0.7 lb/MMBtu boiler heat input not to exceed 846 lb/hr.

PM - 0.03 lb/MMBtu boiler heat input.

VE - 20% opacity, 6-minute average except for one 6-minute period per hour of not more than 27% opacity.

Power and Cement Plants

SO_2 - 1.2 lb/MMBtu boiler heat input, maximum 2-hour average and 781 lb/hr, maximum 3-hour average.

NOx - 0.7 lb/MMBtu boiler heat input plus 2.9 lb/ton kiln feed, not to exceed 1205 lb/hr.

PM - 0.03 lb/MMBtu boiler heat input plus 0.4 lb/ton kiln feed (for kiln and cooler).

VE - 10% opacity, 6-minute average, except for one 6-minute period per hour of not more than 27% opacity.

The emission limiting standards in PSD-FL-090 are:

Power Plant Only

SO_2 - the lesser of these: 1.2 lb/MMBtu boiler heat input, maximum 2-hour average; 0.9 lb/MMBtu boiler heat input, maximum 3-hour average; and 915 lb/hour, maximum 3-hour average.

NOx - 0.7 lb/MMBtu boiler heat input.

PM - 0.03 lb/MMBtu boiler heat input.

VE - 20% opacity, 6-minute average except for one 6-minute period per hour of not more than 27% opacity.

Heat Input Rate - When the power plant boiler is operating alone and the cement plant is not in operation, the maximum heat input rate of the boiler shall not exceed the site specific limit of 1,000 MMBtu per hour, maximum 3-hour average.

Power and Cement Plants

SO_2 - 50 lb/hr, maximum 3-hour average plus the lesser of these: 1.2 lb/MMBtu boiler heat input, maximum 2-hour average; 0.9 lb/MMBtu boiler heat input, up to 1000 MMBtu, then decreasing linearly to 0.74 lb/MMBtu boiler heat input at 1234 MMBtu/hr, maximum 3-hour average; and 915 lb/hr, 3-hour average.

NOx - 0.7 lb/MMBtu boiler heat input plus 2.9 lb/ton kiln feed.

PM - 0.03 lb/MMBtu boiler heat input plus 0.3 lb/ton of kiln feed from the cement kiln and 0.1 lb/ton of kiln feed from the clinker cooler.

VE - 10% opacity, 6-minute average, except for one 6-minute period per hour of not more than 17% opacity.

By letter dated October 3, 1994, CPL requested approval from the Department to conduct tests demonstrating there would be no increase in actual emissions as the power generating rate of the plant increased from nominally 100 mw, net (near the 1000 MMBtu/hr limit with the power plant operating alone, imposed by PSD-FL-090) to nominally 133 mw, net. The approval was granted by amendment to PSD-FL-090(A) on October 6, 1994, and the tests were conducted during the period October 6-14, 1994.

The tests demonstrated there is no correlation between the power generating rate (heat input rate) and emission rates and demonstrated the plant could operate at generating rates within 90 to 100 percent of 150 mw, net, without exceeding presently permitted emission limits. Furthermore, the tests showed there was no increase in sulfur dioxide and nitrogen oxides emissions as the generating rate increased and only a slight (but not significant) increase in particulate matter emissions. The test report has been submitted to the Department.

The plant was able to achieve the increased generating rate without a significant increase in emission rates by increasing the limestone injection rate to control sulfur dioxide, by modulating the combustion air to control nitrogen oxides and by baghouse design to control particulate matter.

As a result of the data developed during the October 6-14, 1994, test period and the contracted electric power commitment of CPL, CPL is requesting a permit modification to allow a maximum electric power

generating rate of 150 mw, net, whether the power plant is operating in conjunction with the cement plant or operating with the cement plant out of service. The test data demonstrate there is no increase in sulfur dioxide or nitrogen oxides emissions and less than a significant increase in particulate matter emissions as the generating rate is increased to 150 mw, net:

Target Emission Rate (mw, net)	Test Emission Rate (mw, net)	Measured Emission Rate					
		SO2		NOx		PM	
		(lb/hr)	(tpy)(1)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
100	106	695.2	3045	757.1	3316	6.22	27.2
150	137	599.8	2627	706.7	3095	7.65	33.5
Increase in Actual Emissions		< 0		< 0		6.3	
Significant Increase		40		40		15(2)	

(1) Based on 8760 hours per year.
(2) PM10 significant level.

CPL is requesting that the most restrictive of the presently permitted emission limits remain in effect as these limits reflect BACT and satisfy the air quality review of the PSD permitting process. The proposed permit limits are:

Power Plant Only

SO_2 - 0.90 lb/MMBtu boiler heat input up to 850 MMBtu per hour boiler heat input, then decreasing linearly to 0.42 lb/MMBtu at 1850 MMBtu per hour(1) boiler heat input and 770 lb/hr, all 3-hour averages.

NOx - 0.70 lb/MMBtu boiler heat input up to 1200 MMBtu per hour boiler heat input, then decreasing linearly to 0.46 lb/MMBtu at 1850 MMBtu per hour(1) boiler heat input and 846 lb/hr, averaging time per 40 CFR 60.46.

PM - 0.03 lb/MMBtu boiler heat input up to 1200 MMBTU per hour boiler heat input, then decreasing linearly to 0.02 lb/MMBtu at 1850 MMBtu per hour(1) boiler heat input and 37.0 lb/hr, averaging time per 40 CFR 60.46.

VE - 20% opacity, 6-minute average except for one 6-minute period per hour of not more than 27% opacity.

Heat Input - When the power plant is operating alone and the cement plant is not in service, the maximum heat input rate to the boiler shall not exceed 1850 MMBtu per hour(1), maximum 3-hour average.

(1) The 1850 MMBtu per hour heat input rate is the maximum expected heat input rate necessary to generate 150 mw, net, with the power plant operating at the lowest efficiency.

Power and Cement Plants

SO_2 - 50 lb/hr plus 0.90 lb/MMBtu boiler heat input up to 850 MMBtu per hour boiler heat input, then decreasing linearly to 0.42 lb/MMBtu at 1850 MMBtu per hour(1) boiler heat input and 781 lb/hr, all 3-hour averages.

NOx - 0.70 lb/MMBtu boiler heat input up to 1200 MMBtu per hour boiler heat input, then decreasing linearly to 0.46 lb/MMBtu at 1850 MMBtu per hour(1) boiler heat input plus 2.9 lb/ton of kiln feed (dry basis) and 1205 lb/hr, averaging time per 40 CFR 60.46.

PM - 0.03 lb/MMBtu boiler heat input up to 1200 MMBTU per hour boiler heat input, then decreasing linearly to 0.02 lb/MMBtu at 1850 MMBtu per hour(1) boiler heat input plus 0.3 lb/ton of kiln feed (dry basis) from the cement kiln and 0.1 lb/ton of kiln feed (dry basis) from the clinker cooler and 86.5 lb/hr, averaging time per 40 CFR 60.46.

VE - 10% opacity, 6-minute average except for one 6-minute period per hour of not more than 17% opacity.

Heat Input - When the power plant and the cement plant are operating together, the maximum heat input rate to the boiler shall not exceed 1850 MMBtu per hour(1), maximum 3-hour average.

(1) The 1850 MMBtu per hour heat input rate is the maximum expected heat input rate necessary to generate 150 mw, net, with the power plant operating at the lowest efficiency.

It should be noted that the increase in the electric power generating rate and the demonstrated control of sulfur dioxide, nitrogen oxides and particulate matter can be achieved with no physical changes to the steam boiler or air pollution control systems. It should also be noted that the plant will continue to operate in compliance with all applicable regulations and permit conditions.

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;

if power plant, hrs/yr 8760 ; if seasonal, describe: _____

F. If this is a new source or major modification, answer the following questions. (Yes or No)
Minor modification to an existing source.

1. Is this source in a non-attainment area for a particular pollutant? No

   a. If yes, has "offset" been applied? NA

   b. If yes, has "Lowest Achievable Emission Rate" been applied? NA

   c. If yes, list non-attainment pollutants. NA

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. Yes (1)

3. Does the State "Prevention of Significant Deterioration" (PSD) requirement apply to this source? If yes, see Sections VI and VII. Yes (1)

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? N/A

   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.

(1) The minor modifications proposed herein is a change in the permitted electric power generating rate and the corresponding heat input rate with no physical modification to the plant and no significant change in emissions. The modification does not affect the previously determined BACT nor does it trigger another PSD review.

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		
Not applicable				

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

1. Total Process Input Rate (lbs/hr): Not applicable

2. Product Weight (lbs/hr): Not applicable

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Power Plant alone (emission rates for power/cement plant operations remain unchanged)

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	
P.M.	37.0	162	BACT	See proposed	6168	27016	
SO_2	770	3373	BACT	emission	2197	9623	
NOx	846	3706	BACT	limits in	1673	7328	
				Section IIA			
				(p. 2A of 12)			

[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 (1)	Range of Particle Sizes Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Baghouse	PM	99.4	>2μm	(2)
Limestone injection	SO_2	65.0	NA	(2)
B&W Low No_x Dual register burner	NO_x	49.4	NA	(2)

(1) These are required efficiencies at maximum generating rate for power plant operations only.

(2) Calculated efficiencies documented by testing.

E. Fuels - For Plant Only

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Coal	70.0 tph	77.1 tph	1850

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

Fuel Analysis: Coal

Percent Sulfur: 0.75 Percent Ash: 8.0

Density: -- lbs/gal Typical Percent Nitrogen: 1.4

Heat Capacity: 12,000 BTU/lb --

Other Fuel Contaminants (which may cause air pollution): None

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

Annual Average NA Maximum NA

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

Fly ash and bottom ash generated in the power plant is used as a raw material in the cement plant.

Stack gas characteristics for power plant only:

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

Stack Height: 320 ft. **Stack Diameter:** 16 ft at top ft.

Gas Flow Rate: 840,000 ACFM 540,000 DSCFM **Gas Exit Temperature:** 300 °F.

Water Vapor Content: 7.5 % **Velocity:** 69.6 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
See Attached Pages

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 per- mit 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" 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.

SECTION V. SUPPLEMENTAL INFORMATION

1. Operating Conditions

A. Generating Rate, net - 150 mw
Auxiliary Loads - 15 mw
Generating Rate, gross - 165 mw

B. Heat Input Rate - The heat input rate will vary with plant efficiency. The efficiency is a function of cooling water temperature and other operating factors. The heat input rate at the lowest expected plant efficiency is 1850 MMBtu/hour or 11,212 Btu/kw, gross.

C. Coal Use Rate - The coal feed rate will be a function of the heating value of the coal. During tests conducted over the period October 6-14, 1994, the heating value of coal ranged from 11,514 to 12,541 Btu/lb. For purposes of this application, a nominal heating value of 12,000 Btu/lb has been selected. The nominal maximum coal use rate at a heat input rate of 1850 MMBtu/hr is 77.1 tph.

2/3. Controlled and Uncontrolled Emissions

Particulate Matter (AP-42, Section 1.1)

Uncontrolled Emissions

= 10 A lb/ton of coal, where A is the ash content of the coal (A = 8.0%)

= 10 (8.0) x 77.1 tph coal

= 6168 lb/hr

x 8760/2000

= 27,016 tpy

Controlled Emissions

= 37.0 lb/hr (current permit limit)

x 8760/2000

= 162 tpy

Sulfur Dioxide (AP-42, Section 1.1)

Uncontrolled Emissions

= 38 S lb/ton of coal, where S is the sulfur content of the coal (S = 0.75%)

= 38 (0.75) x 77.1 tph coal

= 2197 lb/hr

x 8760/2000

= 9623 tpy

Controlled Emissions

= 770 lb/hr (current permit limit)

x 8760/2000

= 3373 tpy

Nitrogen Oxides (AP-42, Section 1.1)

Uncontrolled Emissions

= 21.7 lb/ton of coal for a dry-bottom wall fired furnace

= 21.7 lb/ton x 77.1 tph coal

= 1673 lb/hr

x 8760/2000

= 7328 tpy

Controlled Emissions

= 846 lb/hr (current permit limit)

x 8760/2000

= 3706 tpy

Other Emissions - will be at present permitted or actual emission rates. When both the power plant and cement plant operate, PSD-FL-090 and 091 imposes the following emission limits which will be complied with:

Total fluorides	-	0.7 lb/hr
Sulfuric acid mist	-	1.7 lb/hr
Beryllium	-	0.0005 lb/hr
Mercury	-	0.03 lb/hr

4/5. Control Equipment Specifications and Efficiencies

Particulate Matter

Baghouse E-20

Number of bags	-	3876
Bag Length	-	37 ft.
Bag Diameter	-	12 inches
Total Cloth Area	-	450,500 ft^2
Air/Cloth Ratio	-	2.3/1 with power and cement plants
Cleaning	-	Reverse air; variable cycle

Efficiency required with power plant only

$$E_p = (6168 - 37) \times 100/6168 = 99.4\%$$

Sulfur Dioxide

Limestone injection

Efficiency required with power plant at maximum rate

$$E_3 = (2197 - 770) \times 100/2197 = 65.0\%$$

Nitrogen Oxides

B & W Low NOx Dual Register Burners

Efficiency required with power plant at maximum rate.

$$E_n = (1673 - 846) \times 100/1673 = 49.4\%$$

6. Flow Diagram - See Attachment 1

7. Location Map - See Attachment 2

8. Site Map - See Attachment 3

9. Application Fee of $250 for minor modification to be deducted from $10,000 fee paid for Site Certification modification.

10. Not Applicable.

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:

[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 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:

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

(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:

[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 - Not Applicable

A. Company Monitored Data

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).

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	_____ 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.

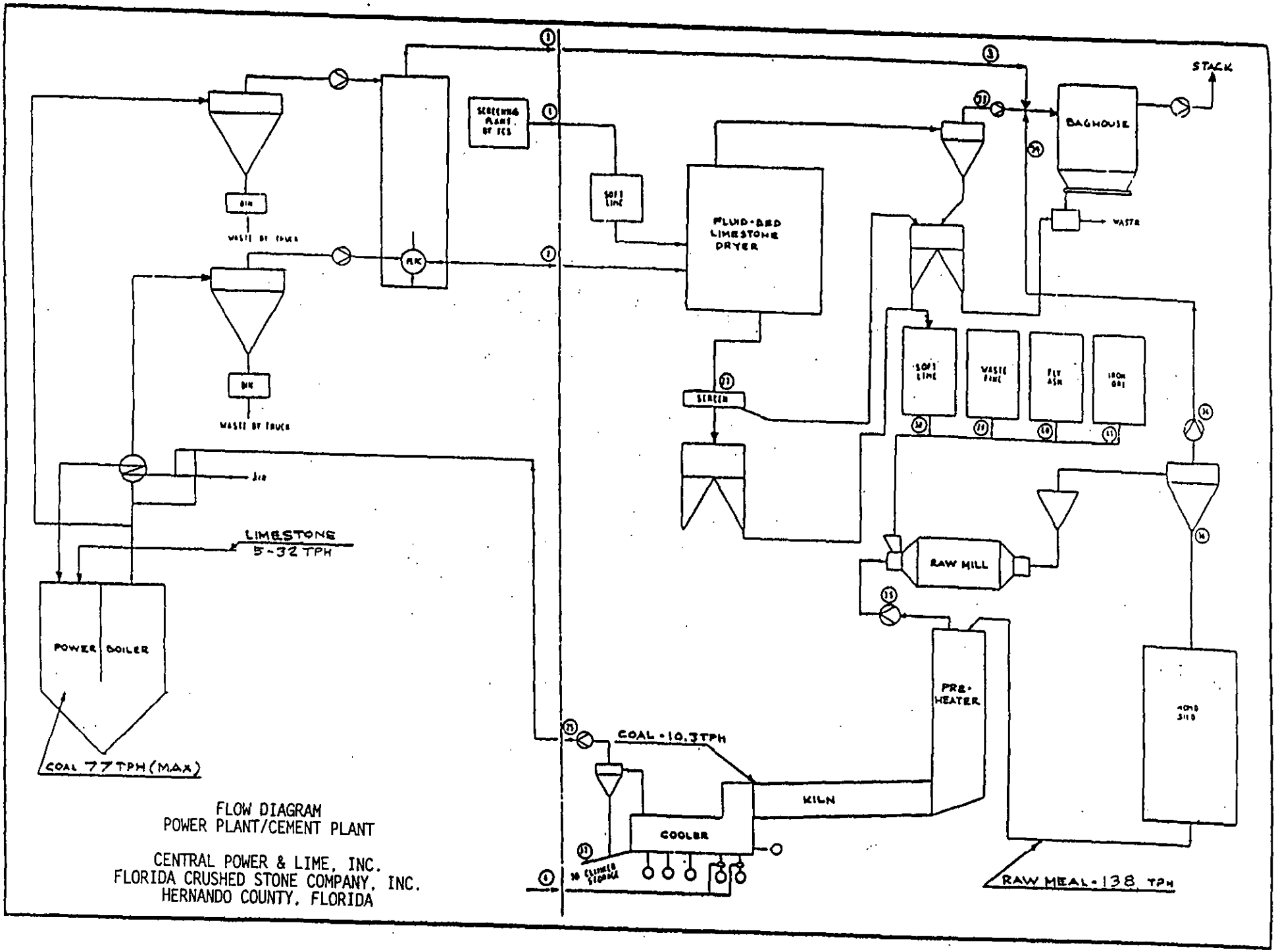
F. Attach all other information supportive to the PSD review.

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

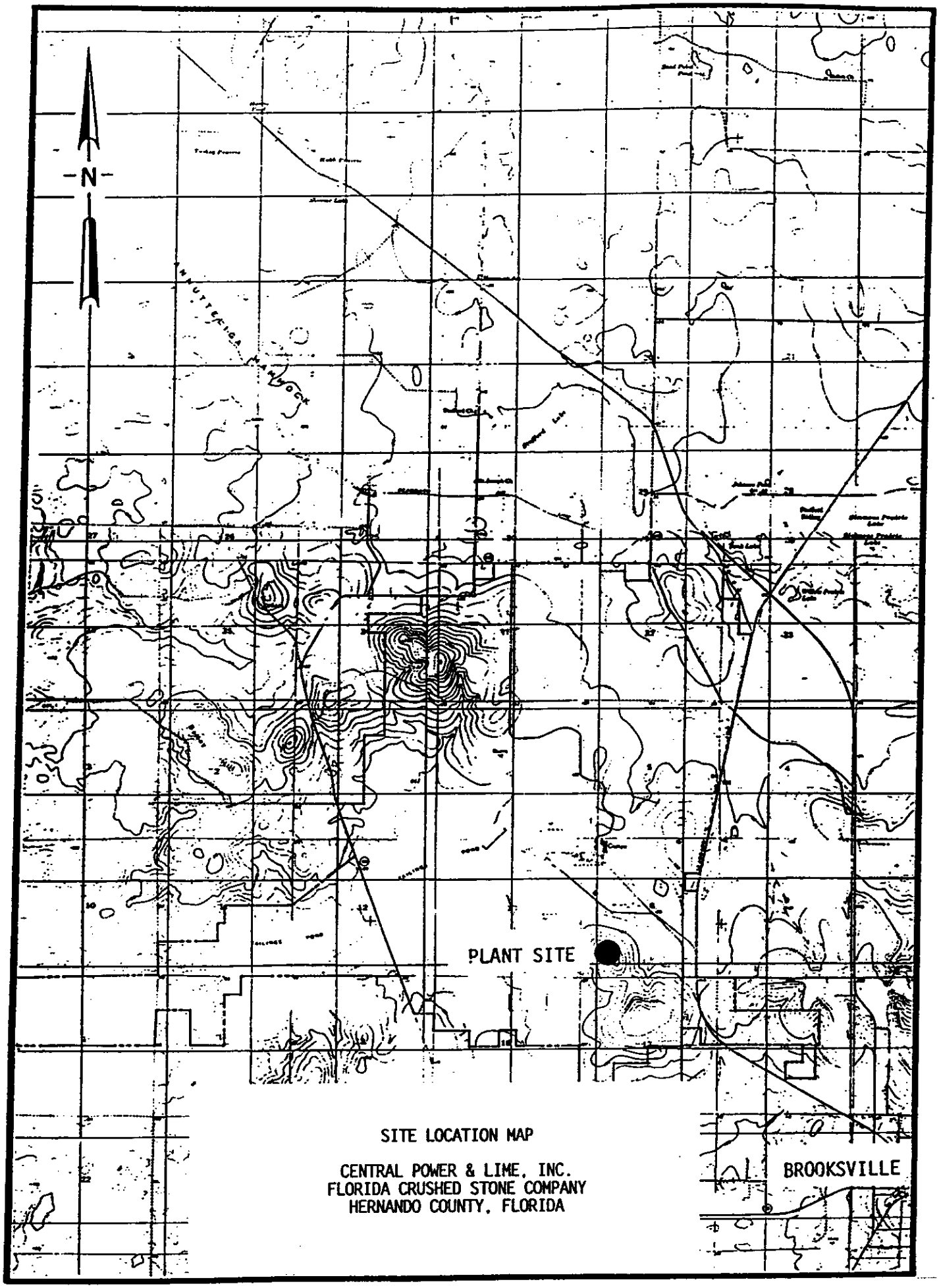
KOOGLER & ASSOCIATES



FLOW DIAGRAM
POWER PLANT/CEMENT PLANT

CENTRAL POWER & LIME, INC.
FLORIDA CRUSHED STONE COMPANY, INC.
HERNANDO COUNTY, FLORIDA

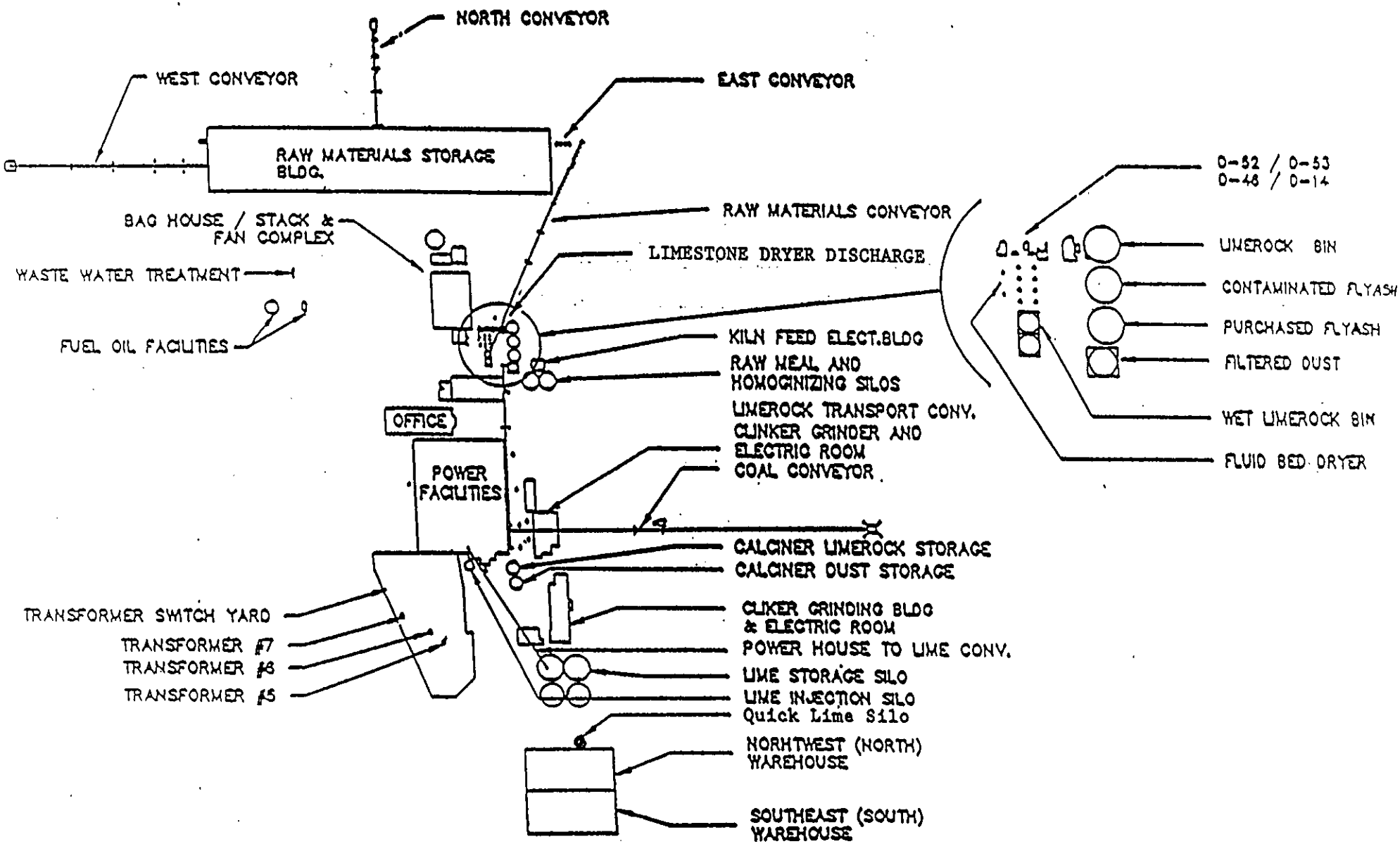
ATTACHMENT 2



SITE LOCATION MAP

CENTRAL POWER & LIME, INC.
FLORIDA CRUSHED STONE COMPANY
HERNANDO COUNTY, FLORIDA

ATTACHMENT 3



SITE MAP

CENTRAL POWER & LIME, INC.
FLORIDA CRUSHED STONE COMPANY, INC.
HERNANDO COUNTY, FLORIDA

PERMIT APPLICATION

ATTACHMENT A

FUEL ANALYSIS RESULTS

COAL

ELECTRIC
FUELS
CORPORATION

AL LABORATORY
TH AVENUE SOUTH, ST. PETERSBURG, FL 33701. (813) 824-6725

REPORT OF ANALYSIS

Central Power and Lime Inc.
Attn: Butch Wheeler
P.O. Box 1508
Brooksville, Florida 33512

August 4, 1994

Sample Identification: Submitted coal sample, July, 1994
Monthly
Our Laboratory Number: 27985

	Basis		
	As Received	Dry	DAF
Moisture	8.10%	xxxxx	
Ash	9.14%	9.95%	
Volatile Matter	33.53%	36.49%	40.52%
Fixed Carbon	49.23%	53.56%	
Sulfur	0.70%	0.76%	
Btu/lb	12340	13428	14911

Carbon	77.11%
Hydrogen	5.03%
Nitrogen	1.58%
Oxygen	5.57%

Ash Fusion Temperatures (Deg F)

	Reducing
Initial	2700+
Softening	2700+
Hemispherical	2700+
Fluid	2700+

Base Acid Ratio	0.11
Slagging Factor	0.08
Fouling Factor	0.07

Mineral Ash Analysis
Ignited Basis

Silica as SiO2	57.14%
Alumina as Al2O3	29.20%
Ferric Oxide as Fe2O3	4.14%
Magnesia as MgO	0.88%
Calcium Oxide as CaO	2.01%
Potassium Oxide as K2O	2.25%
Sodium Oxide as Na2O	0.62%
Titania as TiO2	1.59%
Phosphorus as P2O5	0.21%
Sulphur Trioxide	1.66%
Undetermined	0.30%

* Total moisture submitted by client

Submitted by,
Thomas M Gaston
Thomas M. Gaston
Laboratory Supervisor

FUEL OIL

ELECTRIC
FUELS
CORPORATION

AL LABORATORY
H AVENUE SOUTH, ST. PETERSBURG, FL 33701, (813) 824-6725

REPORT OF ANALYSIS

Central Power and Lime Inc.
Attn: Butch Wheeler
P.O. Box 1508
Brooksville, Florida 33512

August 4, 1994

Sample Identification: Submitted fuel oil sample #0794
July, 1994

Our Laboratory Number: 27986

Sulfur	0.28%
Btu/lb	19,309
Btu/gal @ 60 deg F	137,866
Carbon	87.33%
Hyrogen	9.37%
Nitrogen	0.31%

Submitted by,

Thomas M. Gaston
Laboratory Supervisor

ON-SPEC. USED OIL

Progress Environmental Laboratories
4420 Pendola Point Road
Tampa, Florida 33619
(813) 247-2805
FAX: (813) 248-1537

- CERTIFICATE OF ANALYSIS -
(HRS #E84207 and FDER CompQap #900306G)

To: Florida Crushed Stone
10311 Cement Plant Road

Brooksville, FL 34601

Attn: Butch Wheeler

Report Date: 7/06/94
Page: 1

PEL Lab # : 9406-00159-1
Client ID : Waste Oil
Project ID :
Location : Central Power & Lime
Matrix : Oil
**Density on sample: .90

Collection Information:
Sample Date: 6/24/94
Sample Time: 0:00
Sampled By : Client
Sample Quality:

ND = Less than MDL

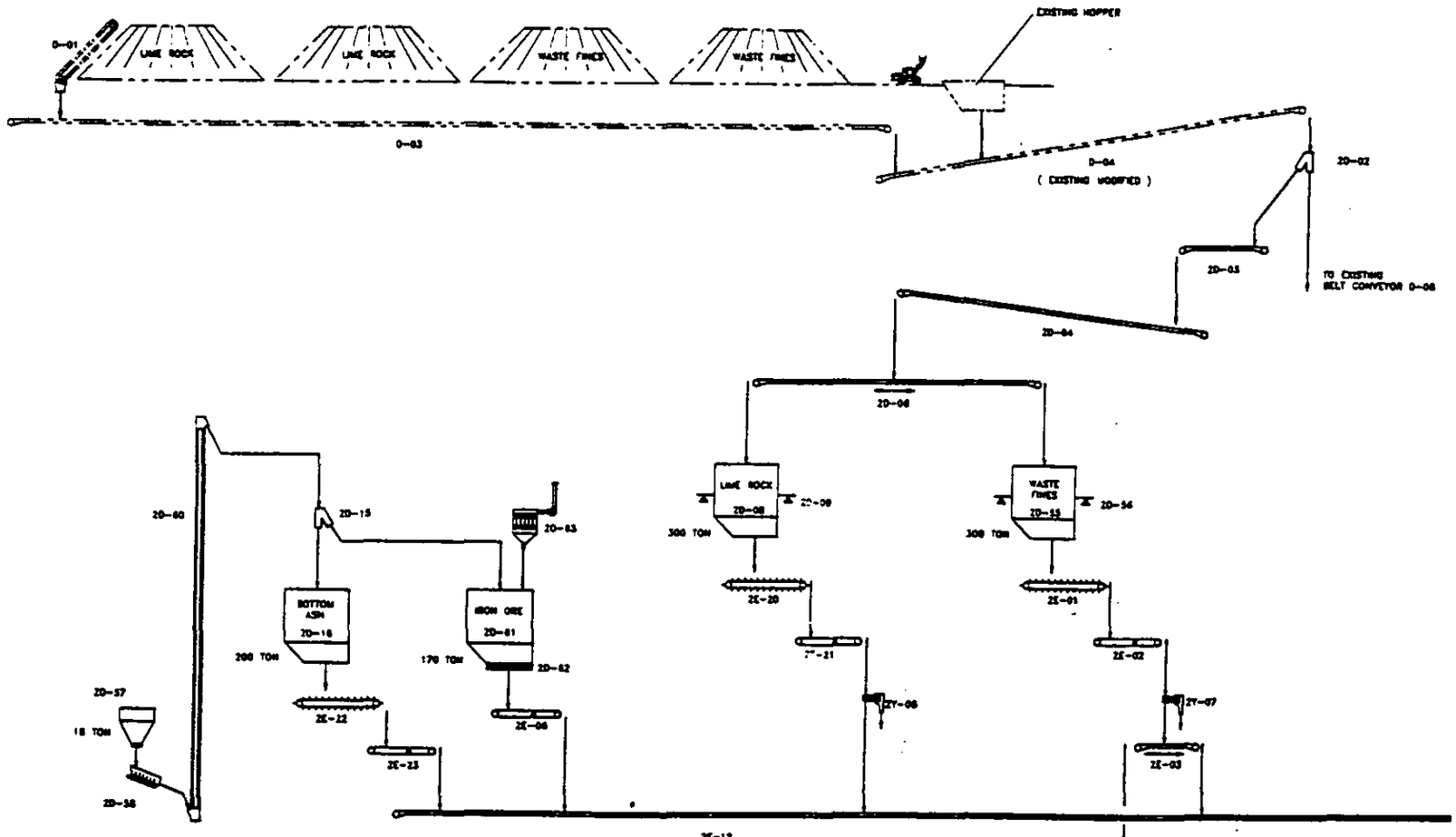
Parameter	Method	Results	Units	MDL
Cadmium	EPA 6010	ND	mg/kg	0.1
Chromium	EPA 6010	ND	mg/kg	0.2
Arsenic	EPA 6010	ND	mg/kg	0.23
Lead	EPA 6010	1.87	mg/kg	0.37
Total Organic Halogens	EPA 9252	680.	mg/kg	500.0
Flash Point	EPA 1010	>200.	Deg.F	1.0
*Sulfur	ASTM D4239 M-C	.52%	%	0.01
*BTU	ASTM D240-92	139050.0	BTU/Gallon	

Respectfully submitted,
Vincent M. Giampa, Laboratory Supervisor.

PERMIT APPLICATION

ATTACHMENT B

PROCESS FLOW DIAGRAMS

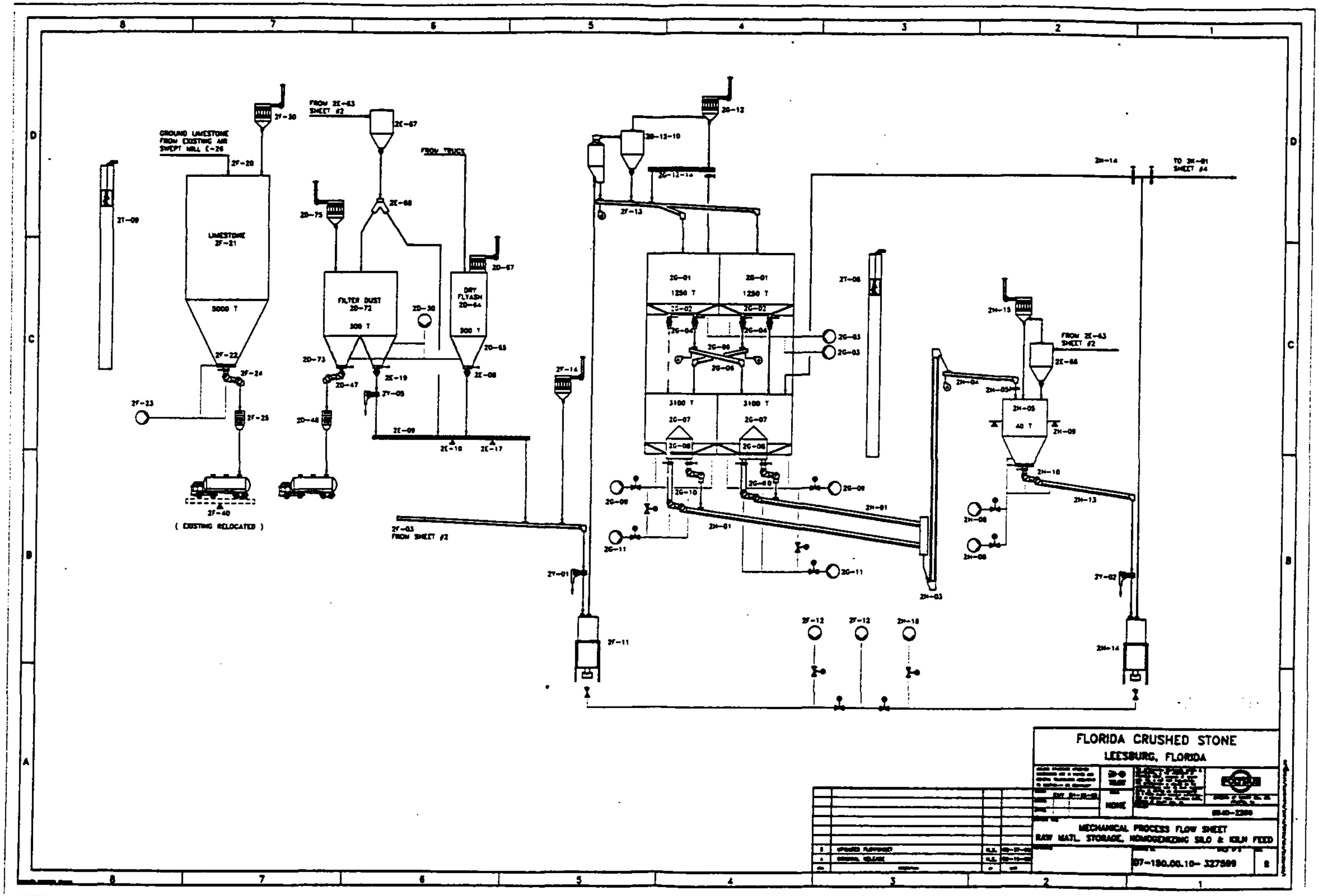


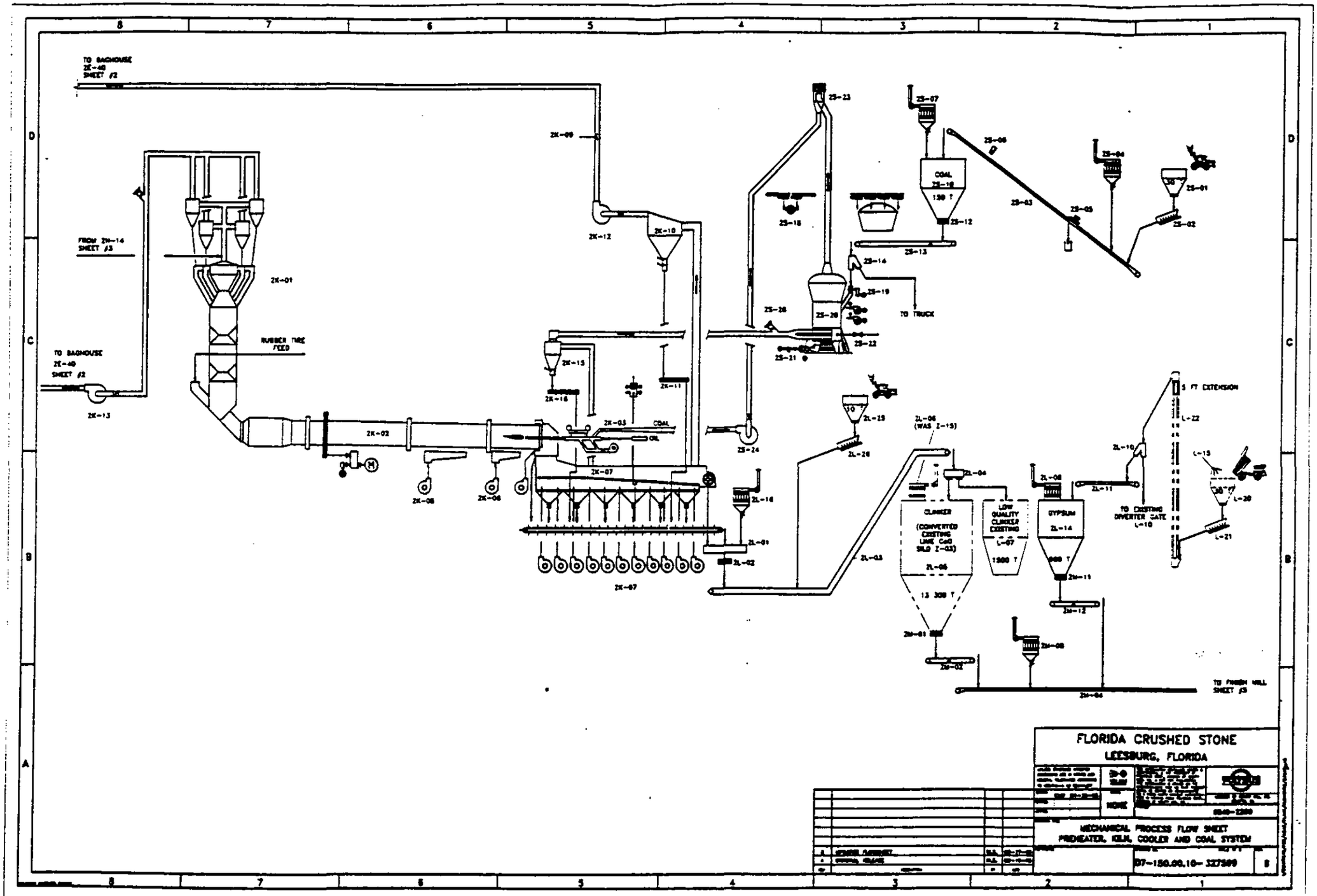
FLORIDA CRUSHED STONE
LEESBURG, FLORIDA

MECHANICAL PROCESS FLOW SHEET
RAW MATERIAL STORAGE AND HANDLING

07-150.06.10- 327599

8


GROUND LIMESTONE FROM EXISTING AIR SWEPT MILL E-26
LIMESTONE 2F-21
3000 T
FROM 2E-63 SHEET #2
FILTER DUST 2D-72
300 T
FROM TRUCK
DRY FLYASH 2D-64
300 T
2G-01
1250 T
3100 T
2G-07
TO 3H-01 SHEET #4
FROM 2E-63 SHEET #2
2H-05
40 T
2F-03 FROM SHEET #2
(EXISTING RELOCATED)
FLORIDA CRUSHED STONE
LEESBURG, FLORIDA
NONE
MECHANICAL PROCESS FLOW SHEET
RAW MATL. STORAGE, HOMOGENIZING SILO & KILN FEED
07-190.00.10- 327509



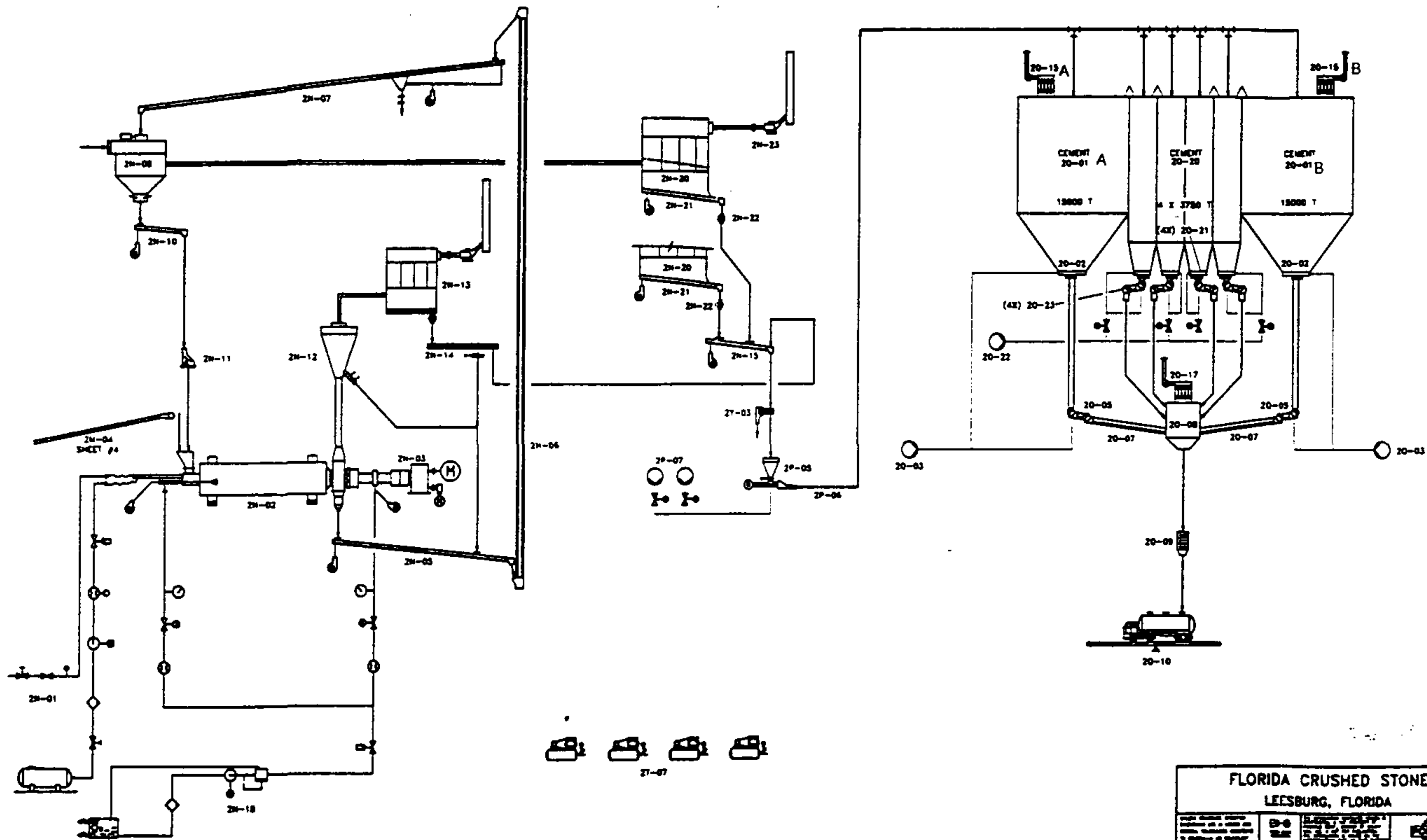
FLORIDA CRUSHED STONE

LEESBURG, FLORIDA

NONE

MECHANICAL PROCESS FLOW SHEET
PREHEATER, KILN, COOLER AND COAL SYSTEM

97-150.00.10- 327389 B



FLORIDA CRUSHED STONE
LEESBURG, FLORIDA

NONE

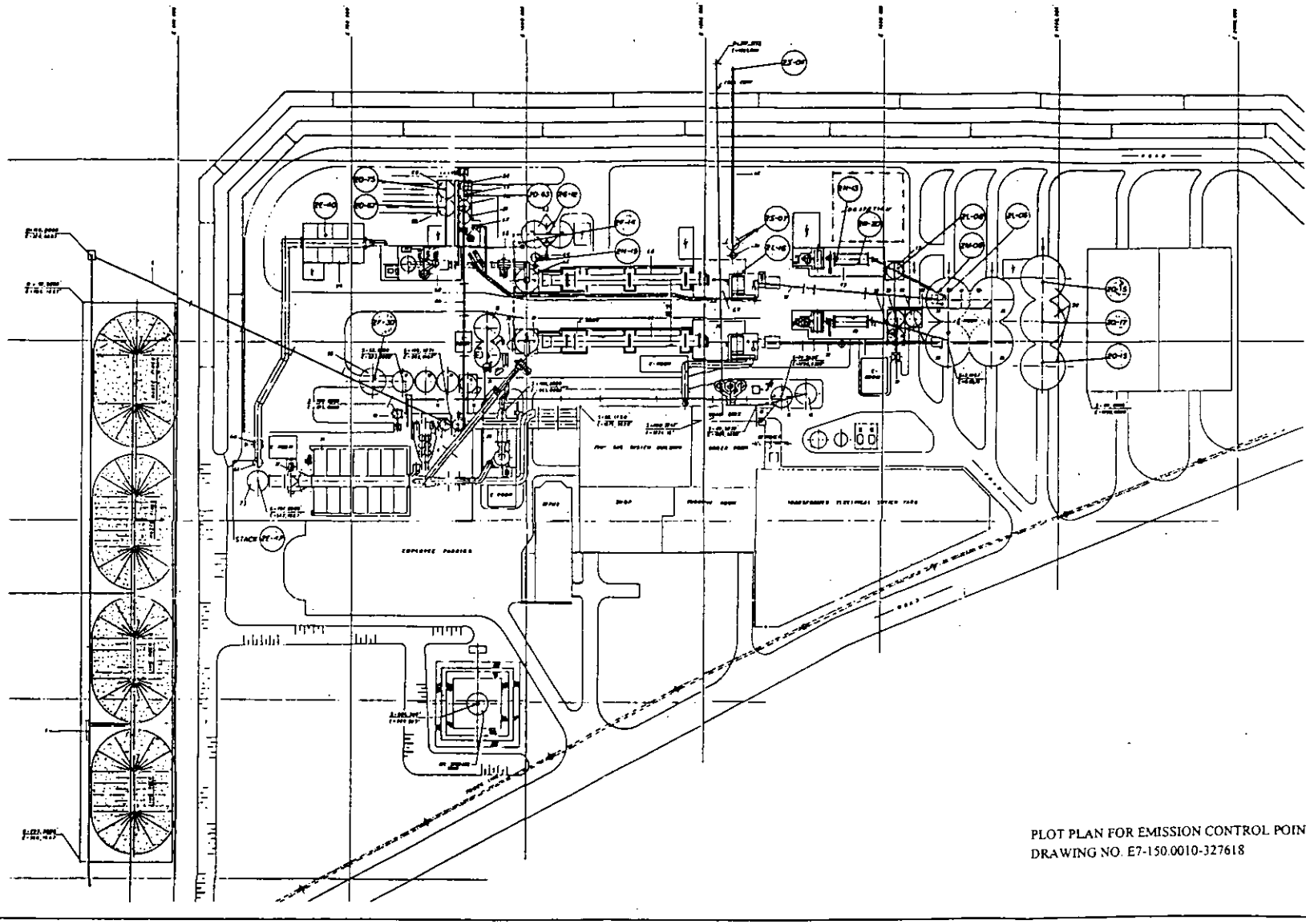
MECHANICAL PROCESS FLOW SHEET
FINISH GRINDING SYSTEM

D7-150.00.10- 327599

PERMIT APPLICATION

ATTACHMENT C

FACILITY PLOT PLAN



PLOT PLAN FOR EMISSION CONTROL POINTS
DRAWING NO. E7-150.0010-327618

RTP ENVIRONMENTAL ASSOCIATES INC.

SITE PLAN OF FLORIDA CRUSHED STONE