LONESTAR FLORIDA PENNSUCO, INC.

6451 N. Federal Highway
Fort Lauderdale, Florida 33308
Post Office Box 6097
Fort Lauderdale, Florida 33310
(305) 491-0900

February 8, 1980

Warren G. Strahm, P.E.
Subdistrict Manager
Florida Department of Environmental Regulation
P.O. Box 3858
West Palm Beach, Florida 33402

Dear Mr. Strahm:

Please find enclosed four (4) air permit applications for construction and modification to allow a conversion from natural gas to coal as a primary fuel source at our Portland Cement Plant in Dade County, Florida. Three (3) of the applications relate to existing cement kilns at our Pennsuco plant which the company desires to fire with coal at the earliest possible date. The fourth application addresses the coal handling and grinding facility which must also be constructed as soon as possible to affect this necessary measure.

I am sure you are aware of several obvious advantages to these proposals. Although coal is plentiful Lonestar is presently utilizing natural gas as a primary energy source at these facilities. Supplies of natural gas are becoming increasingly uncertain and more expensive. The same is true of fuel oil as the company uses on a limited basis as a back-up energy source. These factors are particularly critical since the cement industry is extremely energy intensive. Energy costs amount to almost one half of the production costs of the finished product. With todays energy situation, and predictions that the nations energy problems will become worse, its mandatory that the company convert the plant to coal and at the earliest possible date.

As shown in the enclosed applications and supporting documentation the environmental impacts of this energy conversion will be minimal. Particularly emissions from the kilns will not increase and baghouses will be employed to control dust emissions from the coal handling and grinding facilities. Ambient concentrations of both SO2 and particulates will be insignificant and NOx will be substantially reduced.

I look forward to working closely with you and your staff toward processing these applications as expeditiously as possible. We would like to meet with your staff soon to discuss these applications in detail and quickly resolve any questions you may have on this important project.

Sincerely,

Albert W. Townsend
Coordinator of
Environmental Planning

Encl.
AWT/jh
cc: Ewart Anderson
DCERM

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

PAID
FEB - 8 1980

RECEIVED FEB 1980 BUREAU AQM
Dept. of Environmental Reg. West Palm Beach

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Portland Cement Kiln #1 [ ] New[1] [X] Existing[1]

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

COMPANY NAME: Lonestar Florida/Pennsuco, Inc. COUNTY: Dade

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) Kiln # 1 with electrostatic precipitator

SOURCE LOCATION: Street 11000 N.W. 121 St. City Hialeah

UTM: East 562.75 North 2861.25

Latitude ____ ° ____ ' ____ "N Longitude ____ ° ____ ' ____ "W

APPLICANT NAME AND TITLE: Albert W. Townsend, Coordinator Ecological Planning

APPLICANT ADDRESS: P.O. Box 2035, P.V.S., Hialeah, FL 33012

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Lonestar Florida/Pennsuco, Inc.

I certify that the statements made in this application for a fuel conversion (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: Albert W. Townsend

Albert W. Townsend, Coordinator Ecological Plannir
Name and Title (Please Type)

Date: 2-8-80 Telephone No. (305)823-8800

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 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.

RECEIVED FEB 8 1980 Dept. of Environmental Reg. West Palm Beach

(Affix Seal)

Signed: David A. Buff

David A. Buff
Name (Please Type)

Environmental Science and Engineering, Inc.
Company Name (Please Type)

P.O. Box 13454, Gainesville, FL 32604
Mailing Address (Please Type)

Florida Registration No. 19011 Date: 2-8-80 Telephone No. (904) 372

[1]See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

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 ATTACHMENT

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

Start of Construction As soon as permit issued Completion of Construction 12/31/81

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.)

NA

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

AO 13-8960 issued May 12, 1978 expires May 1, 1983

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? ____ Yes X No

F. Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ; if power plant, hrs/yr ____ ;

if seasonal, describe: ____

G. 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? Yes
   a. If yes, has "offset" been applied? No
   b. If yes, has "Lowest Achievable Emission Rate" been applied? No
   c. If yes, list non-attainment pollutants.
      Ozone
2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. Yes
3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI and VII. Yes
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

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that may be considered questionable.

See Attached Sheet

ATTACHMENT, P. 2, ITEM II-A

Kiln # 1 will be modified to utilize coal as a primary fuel source, rather than natural gas or fuel oil. Particulate emissions, which will not increase due to this proposed modification, will be controlled by an existing electrostatic precipitator. SO_2 emissions will be substantially reduced through limestone absorption during combustion. The modification will result in full compliance with applicable standards.

SECTION II, ITEM G: SUPPORTIVE INFORMATION AND JUSTIFICATIONS

1. Dade County has been designated as a nonattainment area for ozone (Federal Register, Vol. 44, No. 9.) The area is in attainment for all other pollutants.
   a. Non-methane hydrocarbon emissions will not increase as a result of this modification, therefore offsets are not required (Federal Register, Vol. 44, No. 11).
   b. Not applicable, see Item (a).

2. U.S. EPA Requirements: Allowable emissions of all pollutants, except sulfur dioxide, will not increase by greater than 50 tons per year, and are therefore exempt from BACT review (Federal Register, Vol. 43 No. 118).

   FDER Requirements: BACT review is required if any increase over the baseline concentration results due to the modification.

   Since only sulfur dioxide emissions will increase as the result of this modification, BACT is required only for this pollutant.

3. Potential emissions of sulfur dioxide will be greater than 100 tons per year and allowable emissions of sulfur dioxide will increase by greater than 50 tons per year. (see emission estimates).

4. New Source Performance Standards (NSPS) for Portland Cement plants apply only to emissions of particulate matter. This application does not encompass any physical change or change in operation which will increase particulate emissions. A "modification" as that term is used to apply NSPS, only includes changes which increase emissions of a pollutant to which a standard applies. Since this application does not propose such a change, state standards for existing Portland Cement plants are applicable and will be complied with.

5. Self Explanatory

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	6.66*	71,037	
Staurolite	Particulate	0.44*	4,698	
Bottom Ash (Mineral Aggregates)	Particulate	0.29*	3,078	
Sand	Particulate	0.55*	2,187	

*Based on the proportion of estimated uncontrolled emissions From AP-42

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

1. Total Process Input Rate (lbs/hr): 81,000 (not including coal utilization)

2. Product Weight (lbs/hr): 50,000

C. Airborne Contaminants Emitted:

See Attachment

Name of Contaminant	Emission[1]		Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential Emission[4]		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles[5] Size Collected (in microns)	Basis for Efficiency (Sec. V, It[5])
Koppers Electrostatic	Particulate	99+	0.1 - 80	Attached
Precipitator (Existing)				Stack Test

[1] See Section V, Item 2.

[2] Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. — 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)

[5] If Applicable

Section III, Item C Airborne Contaminants Emitted

Name of Contaminant	Emissions Maximum #/Hr.	Emissions Actual T/Yr.	Allowed Emissions Rate Per Chapter 17-2, F.A.C.	Allowable Emissions #/Hr. Coal	Allowable Emissions #/Hr. Gas/Oil	Potential Emissions #/Hr.	Potential Emissions T/Yr.	Relate To Flow Diagram
Particulate	32.2	140.9	17-2.05 (2) Process Weight Table	32.2	31.3	5,700	24,966	A
Coal Fired								
Sulfur Dioxide	56.7	248.4	NA	NA	NA	56.7	248.4	A
Nitrogen Oxide	42.3	185.3	NA	NA	NA	42.3	185.3	A
Hydrocarbons	Neg	Neg	NA	NA	NA	NA	NA	A
Carbon Monoxide	Neg	Neg	NA	NA	NA	NA	NA	A
Gas Fired								
Sulfur Dioxide	4.5	19.7	NA	NA	NA	4.5	19.7	A
Nitrogen Oxide	169.3	741.3	NA	NA	NA	169.3	741.3	A
Hydrocarbons	Neg	Neg	NA	NA	NA	NA	NA	A
Carbon Monoxide	Neg	Neg	NA	NA	NA	NA	NA	A
Oil Fired								
Sulfur Dioxide	45.3	198.6	NA	NA	NA	45.3	198.6	A
Nitrogen Oxides	112.1	491.0	NA	NA	NA	112.1	491.0	A
Hydrocarbon	Neg	Neg	NA	NA	NA	NA	NA	A
Carbon Monoxide	Neg	Neg	NA	NA	NA	NA	NA	A

Section V, Item 2: Emission Estimates

Particulates:

Coal, Gas and Oil: The fuel switch to coal will decrease the required bottom ash input to make clinker; therefore, particulate emissions from this fuel switch will not increase. The stack test attached (June, 1979) accurately predicts the expected particulate emissions.

Maximum = Allowable (Process Weight Table) = $17.31\ P^{0.16} = 17.31\ (48)^{0.16}$ = 32.2 #/hr.

Annual = 32.2 #/hr. x 8760 hrs/yr ÷ 2000 #/ton = 140.85 TPY

Potential: Based on AP-42 Uncontrolled emission factor of 228 #/ton
228 #/ton x 25 ton/hr = 5700 #/hr.
5700 #/hr x 8760 hr/yr ÷2000 #/ton = 24,966 TPY

Section V, Item 2 Emission Estimates (continued)

Sulfur Dioxide

Calculations based upon 0.08% SO_3 in raw feed, 2.0% S coal, and 91.3% SO_2 removal inherent in process based upon stack test results.

Coal:

Feed: 81,000 #/hr. x 0.0008 x $\frac{32}{80}$ = 25.92 #S/hr.

Fuel: 15,000 #/hr. x 0.02 = 300.0 #S/hr.

Total Input SO_2: = $\frac{\text{x } 2}{651.84\ \#SO_2/hr.}$

Maximum emitted = 651.84 x (1 - 0.913) = 56.7 $\#SO_2$/hr.
Annual & Potential = 56.7 #/hr x 8760 hr/yr ÷ 2000 #/ton
= 248.4 TPY

Gas:

Feed: 81,000 #/hr x 0.0008 x $\frac{32}{80}$ = 25.92 #S/hr.

Total Input = $\frac{\text{x2}}{51.84\ \#SO_2/hr.}$

Maximum Emitted = 51.84 #/hr x (1 - 0.913) = 4.5 $\#SO_2$/hr.
Annual & Potential = 4.5#/hr x 8760 ÷ 2000 = 19.7 TPY

Oil: Base on recent stack test (June, 1979)

Maximum emitted = 0.2519 #/MM BTu x 180 MM BTu/hr = 45.3 # SO_2/hr
Annual & Potential = 45.3 #/hr x 8760 ÷ 2000 = 198.6 TPY

Nitrogen Oxides:

Coal:

From NO_x stack tests (see attached summary sheet), NO_x emissions on gas were 565 #/hr @ 83.4 TPH clinker production, or 6.77 #/ton.

Attached literature, "NO Reductions in the Portland Cement Industry With Conversion to Coal Firing," cites a 75% reduction in NO_x when converting from gas to coal.

Maximum emissions: 6.77 #/ton x 0.25 x 25 TPH = 42.3 #/hr
Annual = 42.3 #/hr x 8760 ÷ 2000 = 185.3 TPY

Gas:

Used June, 1979 stack test on Kiln #3 and proportioned with heat input.

6.77 #/ton x TPH = 169.3 # NO_x/hr.

Annual & Potential = 169.3 #/hr. x 8760 ÷ 2000 = 741.3 TPY

Oil:

Used June, 1979 stack test on Kiln #3 and proportioned with heat input.

374 #NO_x/hr ÷ 83.4 TPH = 4.48 #NO_x/ton

4.48 #/ton x 25.0 TPH = 112.1 #NO_x/hr

Annual & Potential =112.1 #/hr. x 8760 ÷ 2000 = 491.0 TPY

EMISSION ESTIMATES

Results of Nitrogen Oxides Stack Tests on Kiln No. 3 at LSF/P

Date	Process Rate (dry tons/hr)	Fuel	Run	Oxygen Content in Kiln (%)	NO_2 Emissions (lbs/hr)	NO_2 Emissions (ppm)
3/27/79	150.9	Gas	1	1.7	544*	544
	150.9	Gas	2	1.7	864*	863
	150.9	Gas	3	1.7	514*	514
	150.9	Gas	4	1.7	790*	789
	150.9	Gas	5	1.7	295*	294
	150.9	Gas	6	1.7	382*	381
AVERAGE					565*	564
3/30/79	150.1	Oil	1	2.1	312	288
	150.1	Oil	2	2.1	331	306
	150.1	Oil	3	2.1	279	258
	150.1	Oil	4	2.1	478	442
	150.1	Oil	5	2.1	469	434
AVERAGE					374	346

*Based on the same gas flow rate as oil firing.

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Coal	12,000	15,000	180 (144 ave)
Gas	0.14	.18	180
Fuel Oil	23.6	29.6	180

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:	Coal	Gas	Oil		Coal	Gas	Oil
Percent Sulfur:	2.0	0.0	2.37	Percent Ash:	10-12%	0	<1%
Density:	N/A	N/A	8.34 lbs/gal	Typical Percent Nitrogen:	~~3%~~ N/A	0	<1%
Heat Capacity:	12000	N/A	17,386 BTU/lb		N/A	N/A	145,000 BTU/gal

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

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.

Captured dust is reintroduced into system or sold. No liquid waste

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

Stack Height: 200 ft. Stack Diameter: 6.89 ft.

Gas Flow Rate: 118,899 ACFM Gas Exit Temperature: 390 °F.

Water Vapor Content: 24 % Velocity: 51 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.)
Lbs/hr Incinerated							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ days/week _____

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.):

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight – show derivation.
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, 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 8½" 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 8½" 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 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

ATTACHMENT: SECTION V, ITEM 5, PAGE 5

Calculations from attached stack test:

No. 1 Kiln

Raw Feed - 39.35 T/hr. (dry) @ 0.08% SO_3

Feed to Clinker ratio = 1.62

Clinker Production = 24.3 T/hr.

Energy Consumption = 6.6 MM BTU/ T. Clinker

Fuel Oil - 18,360 BTU/# @ 2.38% S.

Fuel Oil Consumption

$$\frac{6.6 \times 24.3}{0.01836} = 8{,}735 \text{ \#/hr.}$$

Sulfur into the system

Feed -

$39.35 \times 2000 \times 0.0008 \times \frac{32}{80} = 25.2$ #/hr.

@ 1% sulfur in coal 25.2

Fuel -

8,735 x 0.0238 = 207.9 #/hr. 103.95

Total S. = 233.1 #/hr. 129.15

Total in as SO_2 = 466.2 #/hr. 258.3

SO_2 Emission

Test data = 0.2519 #SO_2/MM BTU

Total SO_2 Emission = 0.2519 x 24.3 x 6.6 = 40.4 #/hr.

Absorption Factor

$$\frac{466.2 - 40.4}{466.2} = 91.3\%$$

9. An application fee of $20, unless exempted by Section 17-4.05(3), F.A.C. 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

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
[ ] Yes [X] No

Contaminant	Rate or Concentration
Sulfur Dioxide	No Standard

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) [ ] Yes [X] No

Contaminant	Rate or Concentration
SO_2	100% of potential emission rate

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration
SO_2	100 % of potential emission rate

D. Describe the existing control and treatment technology (if any).

1. Control Device/System: See attached stack test and absorption calculations which document the high rate of removal of SO_2 inherent in the kiln.
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:
5. Useful Life:
6. Operating Costs:
7. Energy:
8. Maintenance Cost
9. Emissions:

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

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. Due to the inherent removal of SO_2 (91.3% as documented in the attached stack test) it is considered impractical and economically unfeasible to evaluate other treatment technology

a. Control Device: Other technologies such as a baghouse would not significantly reduce

b. Operating Principles: SO_2 emissions and would require substantial cash outlays and replacement of the existing E.S.P.

c. Efficiency*: d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy*: 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*: d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy**: h. Maintenance Costs:

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:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power – KWH design rate.

3.

a. Control Device:

b. Operating Principles:

c. Efficiency*: d. Capital Cost:

e. Life: f. Operating Cost:

g. Energy: h. Maintenance Cost:

*Explain method of determining efficiency above.

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*:

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

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: See Section VI. E. above

1. Control Device:

2. Efficiency*:

3. Capital Cost:

4. Life:

5. Operating Cost:

6. Energy:

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

b.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

10. Reason for selection and description of systems:

Sulphur dioxide emissions will be controlled by utilizing coal having a sulphur contect of no greater than 2%. In addition, any SO_2 emissions from burning this low sulphur coal will be reduced through limestone absorption in the cement clinker product. This inherent removal of SO_2 is estimated to be 91.3% efficient or greater based upon stack tests performed on this kiln.

Alternative controls for SO_2 were rejected since retrofitting the existing kiln with additional control devices would have only a minimal effect on emissions and would prohibit the company from implementing the conversion to coal.

*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 N/A

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.

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. 5 Year(s) of data from 1 / 1 / 70 to 12 / 31 / 74
month day year month day year

2. Surface data obtained from (location) Miami

3. Upper air (mixing height) data obtained from (location) Miami

4. Stability wind rose (STAR) data obtained from (location) NA

C. Computer Models Used

1. CRSTER Single Source Modified? If yes, attach description.

2. PTMTP-W 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	See Section III, C. grams/sec
SO^2	See Section III, C. grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description on 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.

*Specify bubbler (B) or continuous (C).

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.

See Attached

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

Page 10, Item VII (G)

The switch to coal as a primary fuel will have a minimal impact on air quality and at the same time will assume a plentiful supply of fuel for years to come. Supplies of oil and natural gas are of uncertain duration, and the cost of these scarce resources continues to rise. Without the fuel conversion, an interruption in oil or gas deliveries could result in plant shutdowns, or production curtailments with enormous economic consequences.

The abundance of coal, in comparison with oil and natural gas, is well documented. Coal constitutes approximately 90% of the nation's known energy reserves, yet currently supplies only 18% of the nation's energy consumption. The policy of the federal government is committed to increased coal utilization by industry. Conversions such as the modification proposed herein is in accord with this national policy, and at the same time will have minimal environmental impacts.

State of Florida

Department of State

I certify from the records of this office that LONESTAR FLORIDA PENNSUCO, INC. is a corporation organized under the laws of the State of Delaware, authorized to transact business within the State of Florida, qualified on January 4, 1978.

The charter number for this corporation is 839774.

I further certify that said corporation has filed all annual reports and paid all annual report filing fees due this office through December 31, 1979, and its status is active.

Given under my hand and the Great Seal of the State of Florida, at Tallahassee, the Capital, this the 6th day of Feb., 1980

George Firestone
Secretary of State

CER 101 Rev. 5-79

LONESTAR FLORIDA/PENNSUCO, INC.
6451 N. Federal Highway
Ft. Lauderdale, Florida 33308

February 15, 1979

State of Florida
Department of Environmental Regulation
and/or
Various Counties Within Florida

Gentlemen:

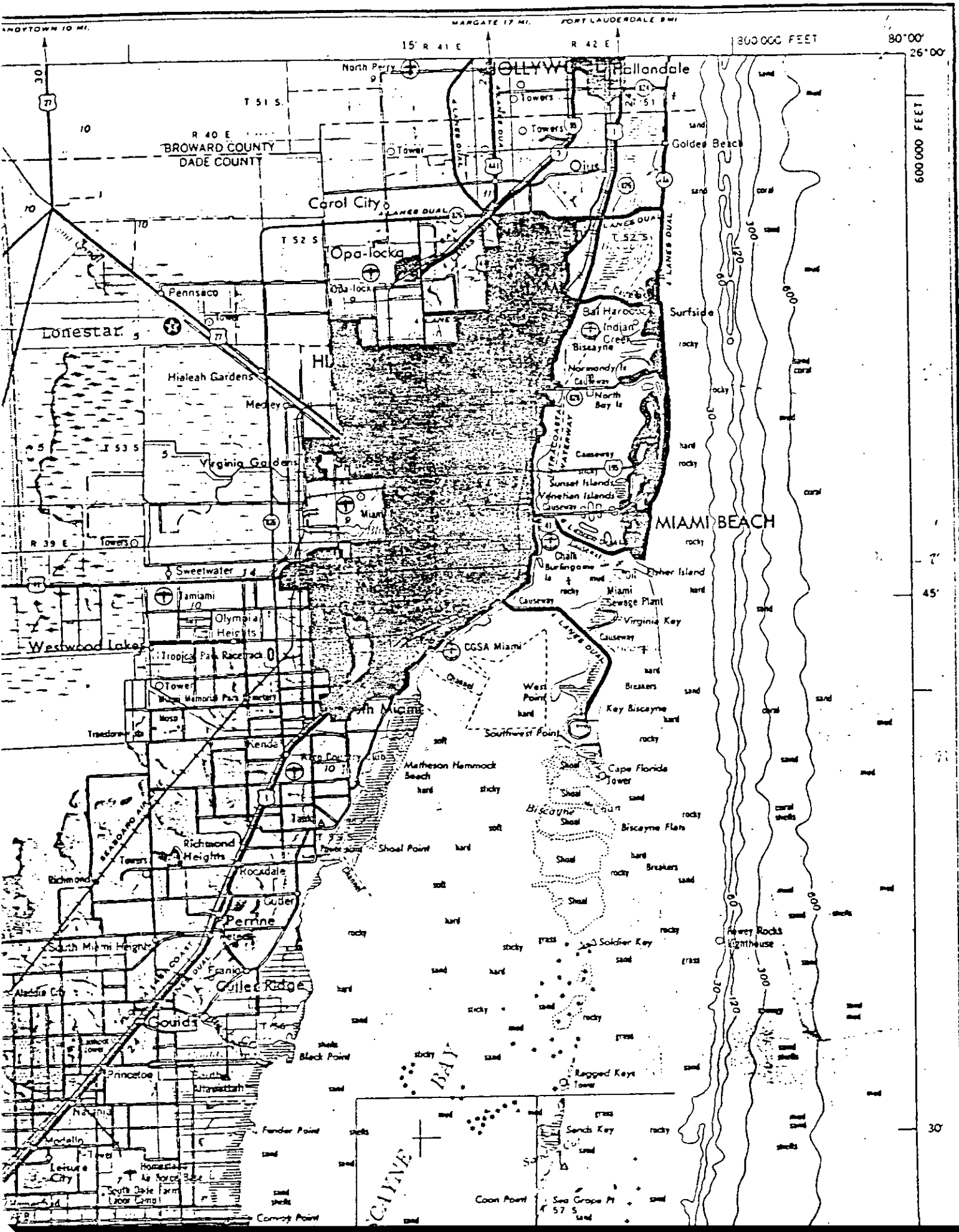
This letter authorizes the signatures of either Mr. Albert W. Townsend, Coordinator of Ecological Planning or Mr. Carl R. Metzgar, Manager Administrative Services, for the purpose of permit changes, applications and renewals.

Very truly yours,

LONESTAR FLORIDA PENNSUCO, INC.

Paul N. Stoms
President

CRM/jh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Lonestar
Hialeah Gardens
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Sweetwater
Tamiami
Olympia Heights
Westwood Lakes
Tropical Park Racetrack
Kendall
Richmond Heights
Rockdale
Cutler
Perrine
South Miami Heights
Goulds
Princeton
Naranja
Homestead Air Force Base
Leisure City
South Dade Farm Labor Camp
Bal Harbour
Surfside
Indian Creek
Biscayne
Normandy Is
North Bay Is
Sunset Islands
Venetian Islands
MIAMI BEACH
Chalk Burlingame Is
Fisher Island
Miami Sewage Plant
Virginia Key
CGSA Miami
West Point
Key Biscayne
Southwest Point
Matheson Hammock Beach
Cape Florida Tower
Biscayne Flats
Shoal Point
Soldier Key
Fowey Rocks Lightbulb
Black Point
Ragged Keys Tower
Sands Key
Coon Point
Sea Grape Pt
Conroy Point
Biscayne Bay
BROWARD COUNTY
DADE COUNTY
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MARGATE 17 MI.
FORT LAUDERDALE 8 MI.
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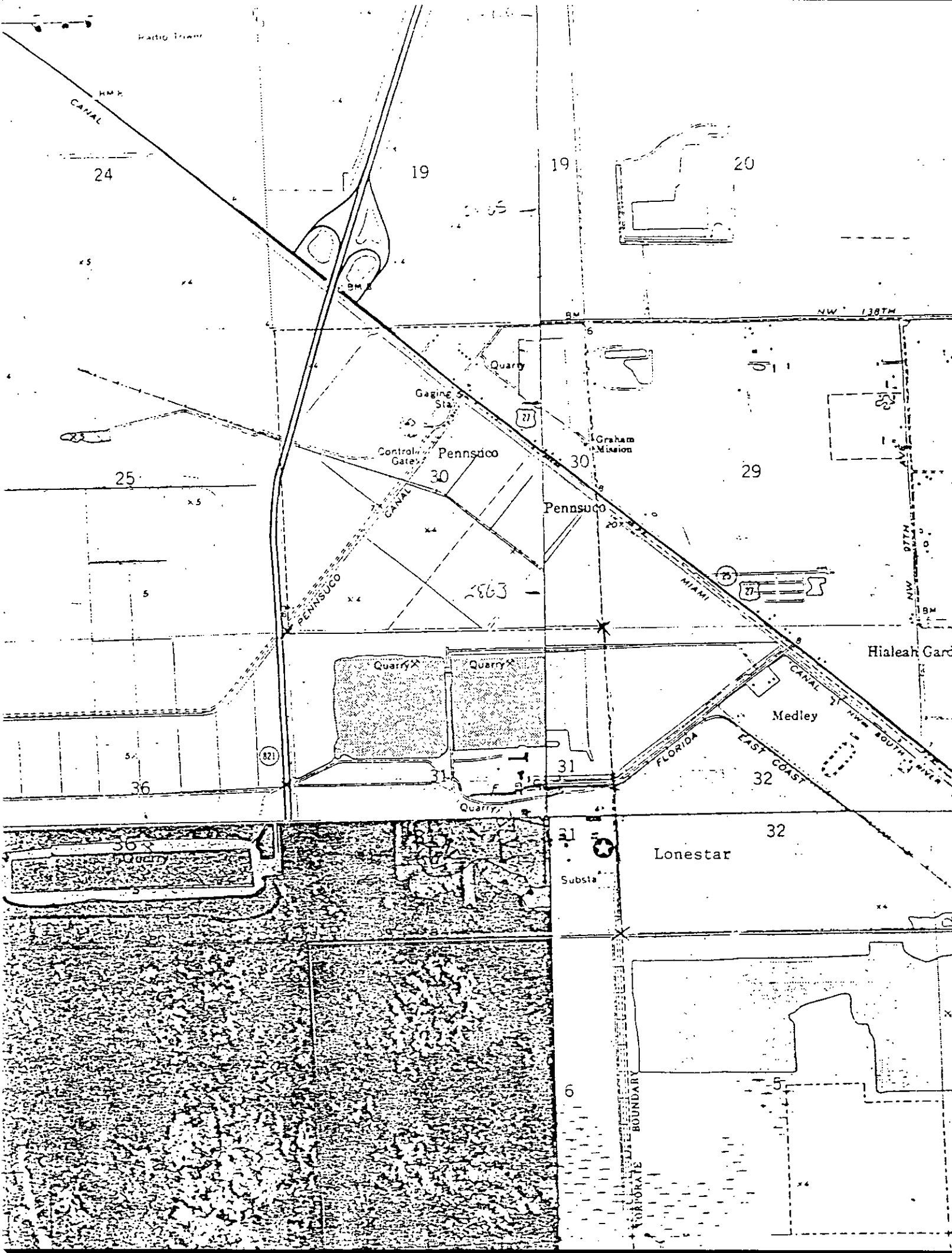
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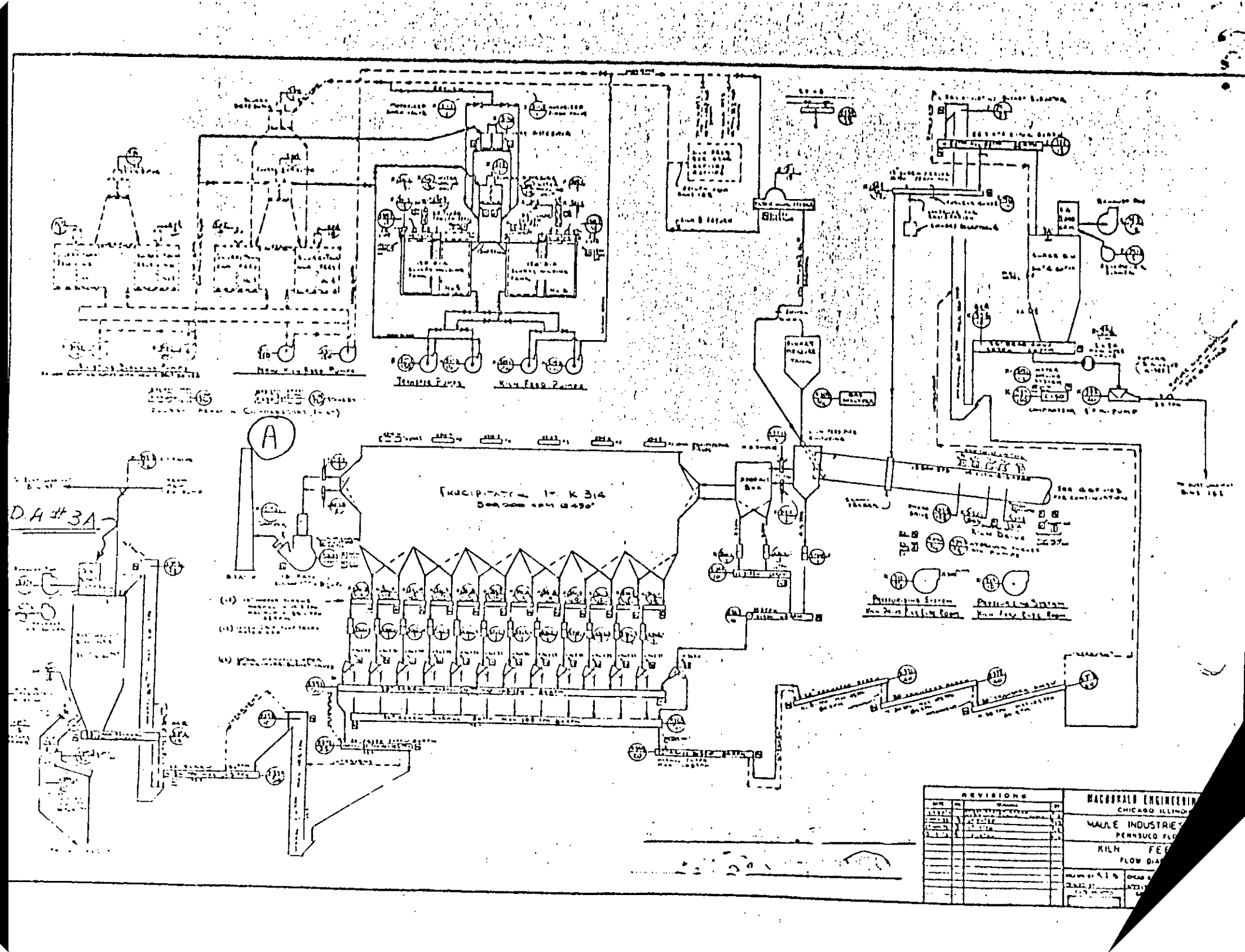
CORPORATE BOUNDARY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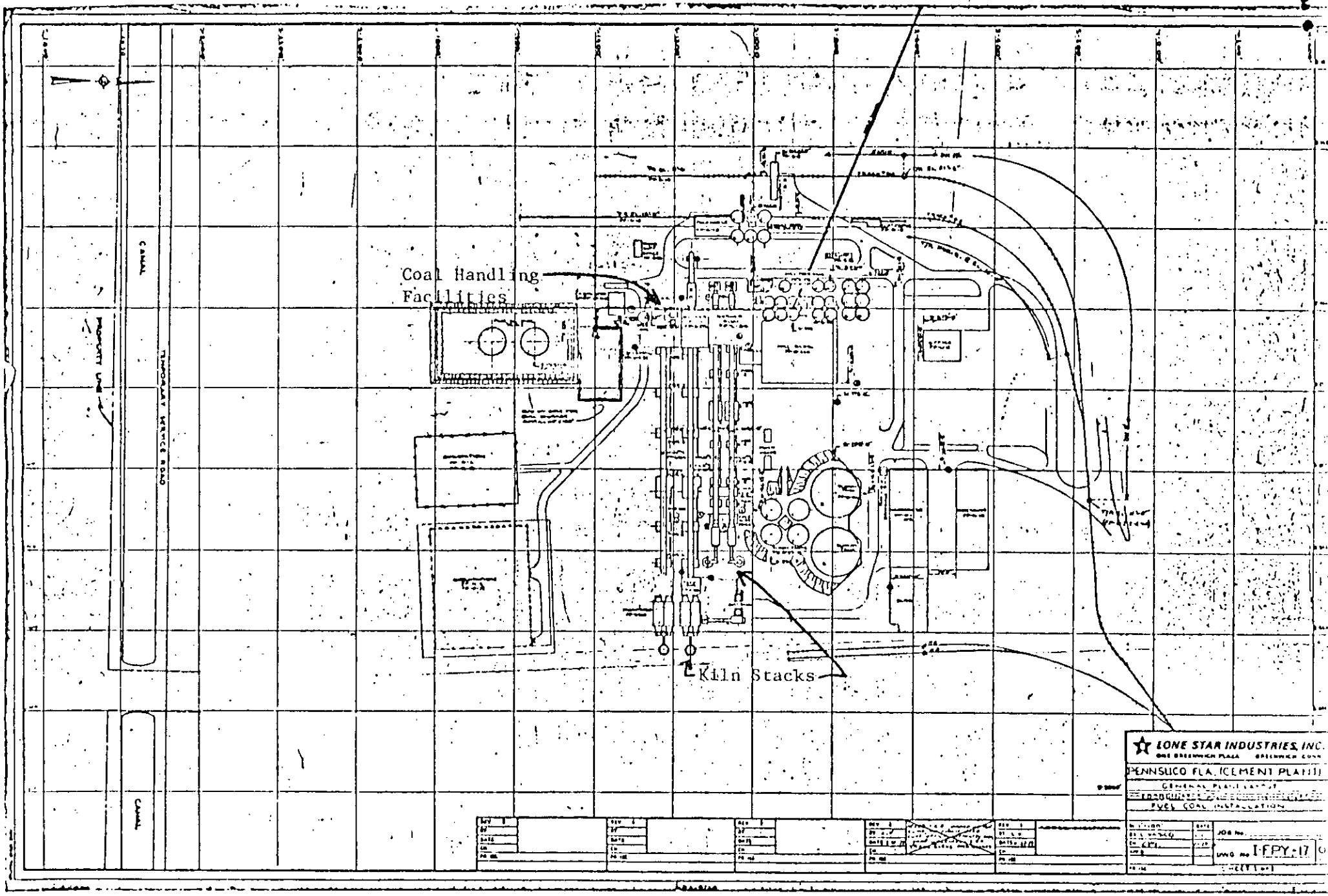
D.A #3A
REVISIONS
MAULE INDUSTRIES
PENNSUCO FL
KILN FE
FLOW DIA


Coal Handling
Facilities
Kiln Stacks
CANAL
PROPERTY LINE
TEMPORARY WEDGE ROAD
CANAL
LONE STAR INDUSTRIES, INC.
PENNSUCO FLA. (CEMENT PLANT)
FUEL COAL INSTALLATION
DWG No. 1-FPY-17

Kiln # 1

ATTACHMENT: SECTION V, ITEM 5, PAGE 5

Calculations from attached stack test:

No. 1 Kiln

Raw Feed - 39.35 T/hr. (dry) @ 0.08% SO_3
Feed to Clinker ratio = 1.62
Clinker Production = 24.3 T/hr.
Energy Consumption = 6.6 MM BTU/ T. Clinker
Fuel Oil - 18,360 BTU/# @ 2.38% S.

Fuel Oil Consumption

$$\frac{6.6 \times 24.3}{0.01836} = 8,735 \text{ \#/hr.}$$

Sulfur into the system

Feed -

$$39.35 \times 2000 \times 0.0008 \times \frac{32}{80} = 25.2 \text{ \#/hr.}$$

Fuel -

$8,735 \times 0.0238 =$ 207.9 #/hr.

Total S. = 233.1 #/hr.

Total in as SO_2 = 466.2 #/hr.

SO_2 Emission

Test data = 0.2519 #SO_2/MM BTU

Total SO_2 Emission = $0.2519 \times 24.3 \times 6.6 = 40.4$ #/hr.

Absorption Factor

$$\frac{466.2 - 40.4}{466.2} = 91.3\%$$

kiln # 1

kiln # 2 same as 1

Section V, Item 2 Emission Estimates (continued)

Sulfur Dioxide

Calculations based upon 0.08% SO_3 in raw feed, 2.0% S coal, and 91.3% SO_2 removal inherent in process based upon stack test results.

Coal:

Feed: 81,000 #/hr. x 0.0008 x $\frac{32}{80}$ = 25.92 #S/hr. ✓

Fuel: 15,000 #/hr. x 0.02 = 300.0 #S/hr. ✓

Total Input SO_2: = $\frac{\times 2}{651.84\ \#SO_2/hr.}$

Maximum emitted = 651.84 x (1 - 0.913) = 56.7 $\#SO_2/hr.$ ✓

Annual & Potential = 56.7 #/hr x 8760 hr/yr ÷ 2000 #/ton
= 248.4 TPY

Gas:

Feed: 81,000 #/hr x 0.0008 x $\frac{32}{80}$ = 25.92 #S/hr.

Total Input = $\frac{\times 2}{51.84\ \#SO_2/hr.}$

Maximum Emitted = 51.84 #/hr x (1 - 0.913) = 4.5 $\#SO_2/hr.$

Annual & Potential = 4.5#/hr x 8760 ÷ 2000 = 19.7 TPY

Oil: Base on recent stack test (June, 1979)

Maximum emitted = 0.2519 #/MM BTu x 180 MM BTu/hr = 45.3 # SO_2/hr

Annual & Potential = 45.3 #/hr x 8760 ÷ 2000 = 198.6 TPY

kiln # 3

ATTACHMENT: SECTION V, ITEM 5, PAGE 5

Calculations from attached stack test:

No. 3 Kiln

Raw Feed - 135.1 T/hr. (dry) @ 0.08% SO_3

Feed to Clinker ratio 1.62 to 1

Clinker Production = 83.4 T/hr.

Energy Consumption 5.6 MM BTU/T. Clinker

Fuel Oil - 18,360 BTU/# @ 2.38 % S.

Fuel Oil Consumption

$$\frac{5.6 \text{ MM BTU} \times 83.4 \text{ T. Clinker}}{\text{T.Clinker} \times 0.01836 \text{ MM BTU/\#} \quad \text{hr.}} = 25,438 \text{ \#/hr. of fuel oil}$$

Sulfur into the system

Feed -

$$135.1 \times 2000 \times 0.0008 \times \frac{32}{80} = 36.4 \text{ \#/hr.}$$

Fuel -

$25,438 \times .0238 = 605.4$ #/hr.

Total S. = 691.8 #/hr.

As SO_2 = 1,383.6 #/hr.

SO_2 Emission

Test Data = 0.397 #SO_2/MM BTU

Total SO_2 Emission = 0.397 x 83.4 x 5.6 = 18.5 #/hr.

Absorption Factor

$$\frac{1383.6 - 18.5}{1383.6} = 98.7 \%$$

Kiln # 3

Section V, Item #2: Emission Estimates

Sulfur Dioxide:

Calculation based upon 0.08% SO_3 in raw feed, 2.0% coal and 98.7% SO_2 removal inherent inprocess based upon stack test results.

Coal: based on recent stack test on similar sulfur content oil

Sulfur input:
feed: 283,500 lbs/hr x 0.0008 x 32/80 = 90.72 #/hr
fuel: 46,000 lbs/hr x 0.02 = 920.00 #/hr

1010.72 #/hr. sulfur

Total input: x2

=2021.44 #/hr SO_2

Maximum emitted=2021.44 #/hr x (1-.987) = 26.28 #/hr.
Annual & Potential=26.28 #/hr x 8760 ÷ 2000 = 115.1 TPY

Gas: 283,500 lbs/hr x 0.0008 x 32/80 x 2 x (1-.987) = 2/36 #/hr SO_2
Annual & Potential =2.36 #/hr x 8760 ÷ 2000 = 10.3 TPY

Oil: Based on recent stack test at 2.37% sulfur, #6 fuel oil

0.0397 #/MMBTU x 552 MMBTU/hr. (max.) = 21.9 #/hr
Annual & Potential = 21.9 #/hr x 8760 ÷ 2000 = 95.9 TPY

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

RECEIVED FEB 13 1980 BUREAU OF AIR QUALITY

RECEIVED FEB - 5 1980 Dept. of Environmental Reg. West Palm Beach

SOURCE TYPE: Portland Cement Kiln #2 [ ] New[1] [X] Existing[1]

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

COMPANY NAME: Lonestar Florida/Pennsuco, Inc. COUNTY: Dade

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) Kiln #2 with electrostatic precipitator

SOURCE LOCATION: Street 11000 N.W. 121 St. City Hialeah

UTM: East 562.75 North 2861.25

Latitude ____ ° ____ ' ____ "N Longitude ____ ° ____ ' ____ "W

APPLICANT NAME AND TITLE: Albert W. Townsend, Coordinator Ecological Planning

APPLICANT ADDRESS: P.O. Box 2035, P.V.S., Hialeah, FL 33012

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Lonestar Florida/Pennsuco, Inc.

I certify that the statements made in this application for a fuel conversion (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: Albert W. Townsend

Albert W. Townsend, Coordinator Ecological Planning
Name and Title (Please Type)

Date: 2-8-80 Telephone No. (305) 823-8800

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 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.

RECEIVED FEB 8 1980 Dept. of Environmental Reg. West Palm Beach

(Affix Seal)

Signed: David A. Buff

David A. Buff
Name (Please Type)

Environmental Science and Engineering, Inc.
Company Name (Please Type)

P.O. Box 13454, Gainesville, FL 32604
Mailing Address (Please Type)

Florida Registration No. 19011 Date: 2-8-80 Telephone No. (904) 372-3318

[1] See Section 17-2.02(13) and (22), Florida Administrative Code, (F.A.C.)

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 ATTACHMENT

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

Start of Construction As soon as permit issued Completion of Construction 12/31/81

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.)

NA

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

AO 13-8961 issued June 1, 1978 expires May 1, 1983

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? ____ Yes X No

F. Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ; if power plant, hrs/yr ____ ;

if seasonal, describe: ____

G. 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? Yes
   a. If yes, has "offset" been applied? No
   b. If yes, has "Lowest Achievable Emission Rate" been applied? No
   c. If yes, list non-attainment pollutants.
      Ozone
2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. Yes
3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI and VII. Yes
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

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

See Attached Sheet

ATTACHMENT, P. 2, ITEM II-A

Kiln # 2/1 will be modified to utilize coal as a primary fuel source, rather than natural gas or fuel oil. Particulate emissions, which will not increase due to this proposed modification, will be controlled by an existing electrostatic precipitator. SO_2 emissions will be substantially reduced through limestone absorption during combustion. The modification will result in full compliance with applicable standards.

SECTION II, ITEM G: SUPPORTIVE INFORMATION AND JUSTIFICATIONS

1. Dade County has been designated as a nonattainment area for ozone (Federal Register, Vol. 44, No. 9.) The area is in attainment for all other pollutants.
   a. Non-methane hydrocarbon emissions will not increase as a result of this modification, therefore offsets are not required (Federal Register, Vol. 44, No. 11).
   b. Not applicable, see Item (a).

2. U.S. EPA Requirements: Allowable emissions of all pollutants, except sulfur dioxide, will not increase by greater than 50 tons per year, and are therefore exempt from BACT review (Federal Register, Vol. 43 No. 118).

   FDER Requirements: BACT review is required if any increase over the baseline concentration results due to the modification.

   Since only sulfur dioxide emissions will increase as the result of this modification, BACT is required only for this pollutant.

3. Potential emissions of sulfur dioxide will be greater than 100 tons per year and allowable emissions of sulfur dioxide will increase by greater than 50 tons per year. (see emission estimates).

4. New Source Performance Standards (NSPS) for Portland Cement plants apply only to emissions of particulate matter. This application does not encompass any physical change or change in operation which will increase particulate emissions. A "modification" as that term is used to apply NSPS, only includes changes which increase emissions of a pollutant to which a standard applies. Since this application does not propose such a change, state standards for existing Portland Cement plants are applicable and will be complied with.

5. Self Explanatory

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	6.66*	71,037	
Staurolite	Particulate	0.44*	4,698	
Bottom Ash (Mineral Aggregates)	Particulate	0.29*	3,078	
Sand	Particulate	0.55*	2,187	

*Based on the proportion of estimated uncontrolled emissions From AP-42

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

1. Total Process Input Rate (lbs/hr): 81,000 (not including coal utilization)

2. Product Weight (lbs/hr): 50,000

C. Airborne Contaminants Emitted:

See Attachment

Name of Contaminant	Emission[1]		Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential Emission[4]		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles[5] Size Collected (in microns)	Basis for Efficiency (Sec. V, It[5]
Koppers Electrostatic	Particulate	99+	0.1 - 80	Attached
Precipitator (Existing)				Stack Test

[1] See Section V, Item 2.

[2] Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 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)

[5] If Applicable

Section III, Item C Airborne Contaminants Emitted

Name of Contaminant	Emissions Maximum #/Hr.	Emissions Actual T/Yr.	Allowed Emissions Rate Per Chapter 17-2, F.A.C.	Allowable Emissions #/Hr. Coal	Allowable Emissions #/Hr. Gas/Oil	Potential Emissions #/Hr.	Potential Emissions T/Yr.	Relate To Flow Diagram
Particulate	32.2	140.9	17-2.05 (2) Process Weight Table	32.2	31.3	5,700	24,966	A
Coal Fired								
Sulfur Dioxide	56.7	248.4	NA	NA	NA	56.7	248.4	A
Nitrogen Oxide	42.3	185.3	NA	NA	NA	42.3	185.3	A
Hydrocarbons	Neg	Neg	NA	NA	NA	NA	NA	A
Carbon Monoxide	Neg	Neg	NA	NA	NA	NA	NA	A
Gas Fired								
Sulfur Dioxide	4.5	19.7	NA	NA	NA	4.5	19.7	A
Nitrogen Oxide	169.3	741.3	NA	NA	NA	169.3	741.3	A
Hydrocarbons	Neg	Neg	NA	NA	NA	NA	NA	A
Carbon Monoxide	Neg	Neg	NA	NA	NA	NA	NA	A
Oil Fired								
Sulfur Dioxide	45.3	198.6	NA	NA	NA	45.3	198.6	A
Nitrogen Oxides	112.1	491.0	NA	NA	NA	112.1	419.0	A
Hydrocarbon	Neg	Neg	NA	NA	NA	NA	NA	A
Carbon Monoxide	Neg	Neg	NA	NA	NA	NA	NA	A

Section V, Item 2: Emission Estimates

Particulates:

Coal, Gas and Oil: The fuel switch to coal will decrease the required bottom ash input to make clinker; therefore, particulate emissions from this fuel switch will not increase. The stack test attached (June, 1979) accurately predicts the expected particulate emissions.

Maximum = Allowable (Process Weight Table) = $17.31\ P^{0.16} = 17.31\ (48)^{0.16}$ = 32.2 #/hr.

Annual = 32.2 #/hr. x 8760 hrs/yr ÷ 2000 #/ton = 140.85 TPY

Potential: Based on AP-42 Uncontrolled emission factor of 228 #/ton
228 #/ton x 25 ton/hr = 5700 #/hr.
5700 #/hr x 8760 hr/yr ÷2000 #/ton = 24,966 TPY

Section V, Item 2 Emission Estimates (continued)

Sulfur Dioxide

Calculations based upon 0.08% SO_3 in raw feed, 2.0% S coal, and 91.3% SO_2 removal inherent in process based upon stack test results.

Coal:

Feed: 81,000 #/hr. x 0.0008 x $\frac{32}{80}$ = 25.92 #S/hr.

Fuel: 15,000 #/hr. x 0.02 = 300.0 #S/hr.

Total Input SO_2: = $\frac{\times 2}{651.84\ \#SO_2/hr.}$

Maximum emitted = 651.84 x (1 - 0.913) = 56.7 $\#SO_2$/hr.
Annual & Potential = 56.7 #/hr x 8760 hr/yr ÷ 2000 #/ton
= 248.4 TPY

Gas:

Feed: 81,000 #/hr x 0.0008 x $\frac{32}{80}$ = 25.92 #S/hr.

Total Input = $\frac{\times 2}{51.84\ \#SO_2/hr.}$

Maximum Emitted = 51.84 #/hr x (1 - 0.913) = 4.5 $\#SO_2$/hr.
Annual & Potential = 4.5#/hr x 8760 ÷ 2000 = 19.7 TPY

Oil: Base on recent stack test (June, 1979)

Maximum emitted = 0.2519 #/MM BTu x 180 MM BTu/hr = 45.3 # SO_2/hr
Annual & Potential = 45.3 #/hr x 8760 ÷ 2000 = 198.6 TPY

Nitrogen Oxides:

Coal:

From NO_x stack tests (see attached summary sheet), NO_x emissions on gas were 565 #/hr @ 83.4 TPH clinker production, or 6.77 #/ton.

Attached literature, "NO Reductions in the Portland Cement Industry With Conversion to Coal Firing," cites a 75% reduction in NO_x when converting from gas to coal.

Maximum emissions: 6.77 #/ton x 0.25 x 25 TPH = 42.3 #/hr
Annual = 42.3 #/hr x 8760 ÷ 2000 = 185.3 TPY

Gas:

Used June, 1979 stack test on Kiln #3 and proportioned with heat input.

6.77 #/ton x TPH = 169.3 # NO_x/hr.

Annual & Potential = 169.3 #/hr. x 8760 ÷ 2000 = 741.3 TPY

Oil:

Used June, 1979 stack test on Kiln #3 and proportioned with heat input.

374 #NO_x/hr ÷ 83.4 TPH = 4.48 #NO_x/ton

4.48 #/ton x 25.0 TPH = 112.1 #NO_x/hr

Annual & Potential =112.1 #/hr. x 8760 ÷ 2000 = 491.0 TPY

EMISSION ESTIMATES

Results of Nitrogen Oxides Stack Tests on Kiln No. 3 at LSF/P

Date	Process Rate (dry tons/hr)	Fuel	Run	Oxygen Content in Kiln (%)	NO_2 Emissions (lbs/hr)	NO_2 Emissions (ppm)
3/27/79	150.9	Gas	1	1.7	544*	544
	150.9	Gas	2	1.7	864*	863
	150.9	Gas	3	1.7	514*	514
	150.9	Gas	4	1.7	790*	789
	150.9	Gas	5	1.7	295*	294
	150.9	Gas	6	1.7	382*	381
AVERAGE					565*	564
3/30/79	150.1	Oil	1	2.1	312	288
	150.1	Oil	2	2.1	331	306
	150.1	Oil	3	2.1	279	258
	150.1	Oil	4	2.1	478	442
	150.1	Oil	5	2.1	469	434
AVERAGE					374	346

*Based on the same gas flow rate as oil firing.

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Coal	12,000	15,000	180
Gas	0.14	.18	180
Fuel Oil	23.6	29.6	180

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:	Coal	Gas	Oil		Coal	Gas	Oil
Percent Sulfur:	2.0	0.0	2.37	Percent Ash:	10-12%	0	<1%
Density:	N/A	N/A	8.34 lbs/gal	Typical Percent Nitrogen:	3%	0	<1%
Heat Capacity:	12000 BTU/lb	N/A	17,386 BTU/gal		N/A	N/A	145,000

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

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.

Captured dust is reintroduced into system or sold. No liquid waste

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

Stack Height: 200 ft. Stack Diameter: 6.89 ft.

Gas Flow Rate: 118,889 ACFM Gas Exit Temperature: 360 °F.

Water Vapor Content: 24 % Velocity: 50.9 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.)
Lbs/hr Incinerated							

Description of Waste ____

Total Weight Incinerated (lbs/hr) ____ Design Capacity (lbs/hr) ____

Approximate Number of Hours of Operation per day ____ days/week ____

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.):

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight – show derivation.
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, 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 8½" 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 8½" 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 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

ATTACHMENT: SECTION V, ITEM 5, PAGE 5

Calculations from attached stack test:

No. 1 Kiln

Raw Feed - 39.35 T/hr. (dry) @ 0.08% SO_3

Feed to Clinker ratio = 1.62

Clinker Production = 24.3 T/hr.

Energy Consumption = 6.6 MM BTU/ T. Clinker

Fuel Oil - 18,360 BTU/# @ 2.58% S.

Fuel Oil Consumption

$$\frac{6.6 \times 24.3}{0.01836} = 8,735 \text{ \#/hr.}$$

Sulfur into the system

Feed -

$$39.35 \times 2000 \times 0.0008 \times \frac{32}{80} = 25.2 \text{ \#/hr.}$$

Fuel -

$8,735 \times 0.0238 =$ 207.9 #/hr.

Total S. = 233.1 #/hr.

Total in as SO_2 = 466.2 #/hr.

SO_2 Emission

Test data = 0.2519 #SO_2/MM BTU

Total SO_2 Emission = $0.2519 \times 24.3 \times 6.6 = 40.4$ #/hr.

Absorption Factor

$$\frac{466.2 - 40.4}{466.2} = 91.3\%$$

9. An application fee of $20, unless exempted by Section 17-4.05(3), F.A.C. 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

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
[ ] Yes [X] No

Contaminant	Rate or Concentration
Sulfur Dioxide	No Standard

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) [ ] Yes [ ] No

Contaminant	Rate or Concentration
SO_2	100% of potential emission rate

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration
SO_2	100% of potential emission rate

D. Describe the existing control and treatment technology (if any).

1. Control Device/System: See attached stack test and absorption calculations which document the high rate of removal of SO_2 inherent in the kiln.
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:
5. Useful Life:
6. Operating Costs:
7. Energy:
8. Maintenance Cost:
9. Emissions:

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

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. Due to the inherent removal of SO_2 (91.3% as documented in the attached stack test) it is considered impractical and economically unfeasible to evaluate other treatment technology.

a. Control Device: Other technologies such as a baghouse would not significantly reduce

b. Operating Principles: SO_2 emissions and would require substantial cash outlays and replacement of the existing E.S.P.

c. Efficiency*: d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy*: 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 prooosed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency*: d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy**: h. Maintenance Costs:

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:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power – KWH design rate.

3.

a. Control Device:

b. Operating Principles:

c. Efficiency*: d. Capital Cost:

e. Life: f. Operating Cost:

g. Energy: h. Maintenance Cost:

*Explain method of determining efficiency above.

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*:

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

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: See Section VI. E. above

1. Control Device:

2. Efficiency*:

3. Capital Cost:

4. Life:

5. Operating Cost:

6. Energy:

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

b.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

10. Reason for selection and description of systems:

Sulphur dioxide emissions will be controlled by utilizing coal having a sulphur contect of no greater than 2%. In addition, any SO_2 emissions from burning this low sulphur coal will be reduced through limestone absorption in the cement clinker product. This inherent removal of SO_2 is estimated to be 91.3% efficient or greater based upon stack tests performed on this kiln.

Alternative controls for SO_2 were rejected since retrofitting the existing kiln with additional control devices would have only a minimal effect on emissions and would prohibit the company from implementing the conversion to coal.

*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 N/A

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.

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. 5 Year(s) of data from 1 / 1 / 70 to 12 / 31 / 74
month day year month day year

2. Surface data obtained from (location) Miami

3. Upper air (mixing height) data obtained from (location) Miami

4. Stability wind rose (STAR) data obtained from (location) NA

C. Computer Models Used

1. CRSTER Single Source Modified? If yes, attach description.

2. PTMTP-W 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	See Section III, C. grams/sec
SO^2	See Section III, C. grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description on 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.

*Specify bubbler (B) or continuous (C).

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.

See Attached

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

Page 10, Item VII (G)

The switch to coal as a primary fuel will have a minimal impact on air quality and at the same time will assume a plentiful supply of fuel for years to come. Supplies of oil and natural gas are of uncertain duration, and the cost of these scarce resources continues to rise. Without the fuel conversion, an interruption in oil or gas deliveries could result in plant shutdowns, or production curtailments with enormous economic consequences.

The abundance of coal, in comparison with oil and natural gas, is well documented. Coal constitutes approximately 90% of the nation's known energy reserves, yet currently supplies only 18% of the nation's energy consumption. The policy of the federal government is committed to increased coal utilization by industry. Conversions such as the modification proposed herein is in accord with this national policy, and at the same time will have minimal environmental impacts.

State of Florida

Department of State

I certify from the records of this office that LONESTAR FLORIDA PENNSUCO, INC. is a corporation organized under the laws of the State of Delaware, authorized to transact business within the State of Florida, qualified on January 4, 1978.

The charter number for this corporation is 839774.

I further certify that said corporation has filed all annual reports and paid all annual report filing fees due this office through December 31, 1979, and its status is active.

Given under my hand and the Great Seal of the State of Florida, at Tallahassee, the Capital, this the 6th day of Feb., 1980

George Firestone
Secretary of State

CER 101 Rev. 5-79

LONESTAR FLORIDA/PENNSUCO, INC.
6451 N. Federal Highway
Ft. Lauderdale, Florida 33308

February 15, 1979

State of Florida
Department of Environmental Regulation
and/or
Various Counties Within Florida

Gentlemen:

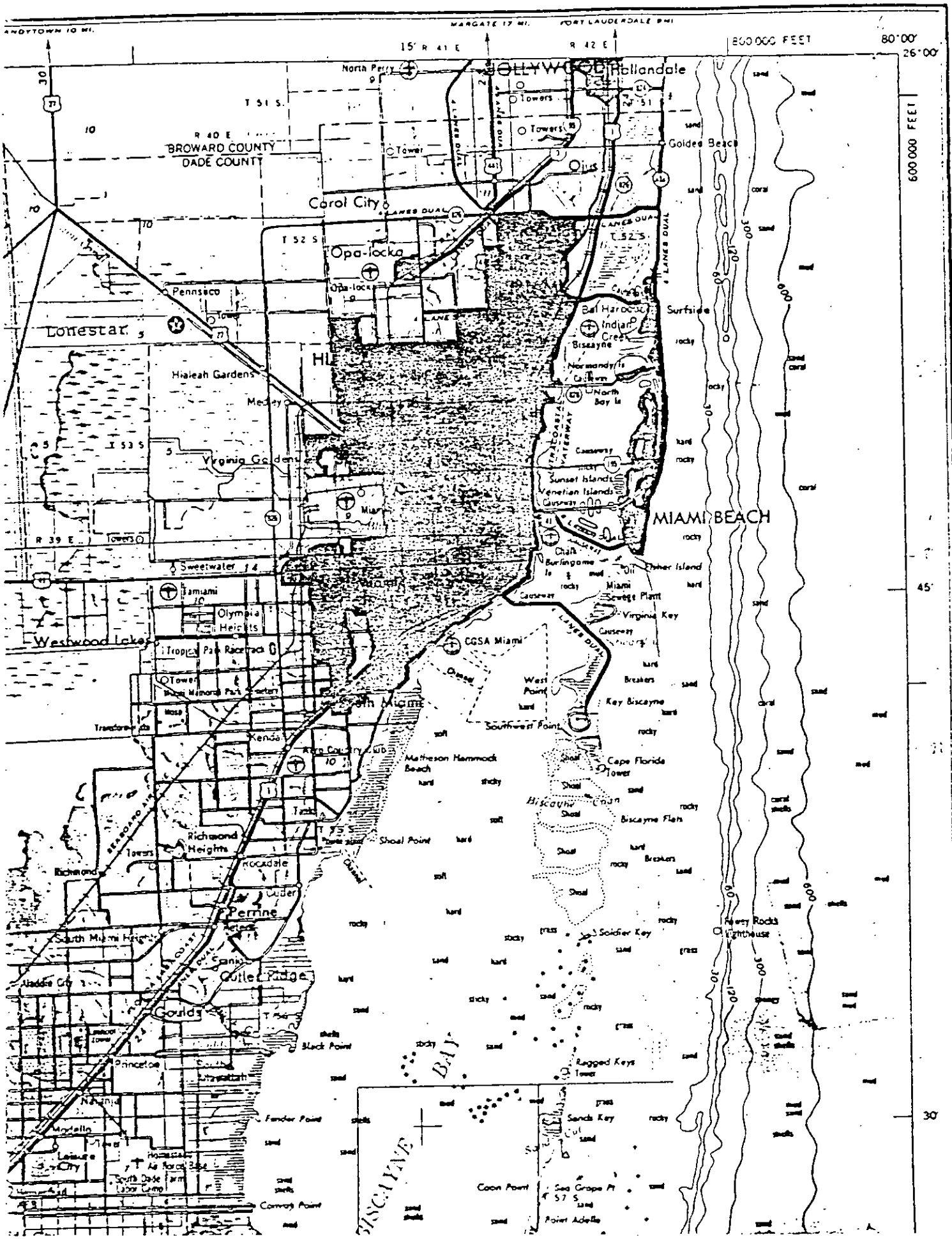
This letter authorizes the signatures of either Mr. Albert W. Townsend, Coordinator of Ecological Planning or Mr. Carl R. Metzgar, Manager Administrative Services, for the purpose of permit changes, applications and renewals.

Very truly yours,

LONESTAR FLORIDA PENNSUCO, INC.

Paul N. Stoms
President

CRM/jh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ANDYTOWN 10 MI.
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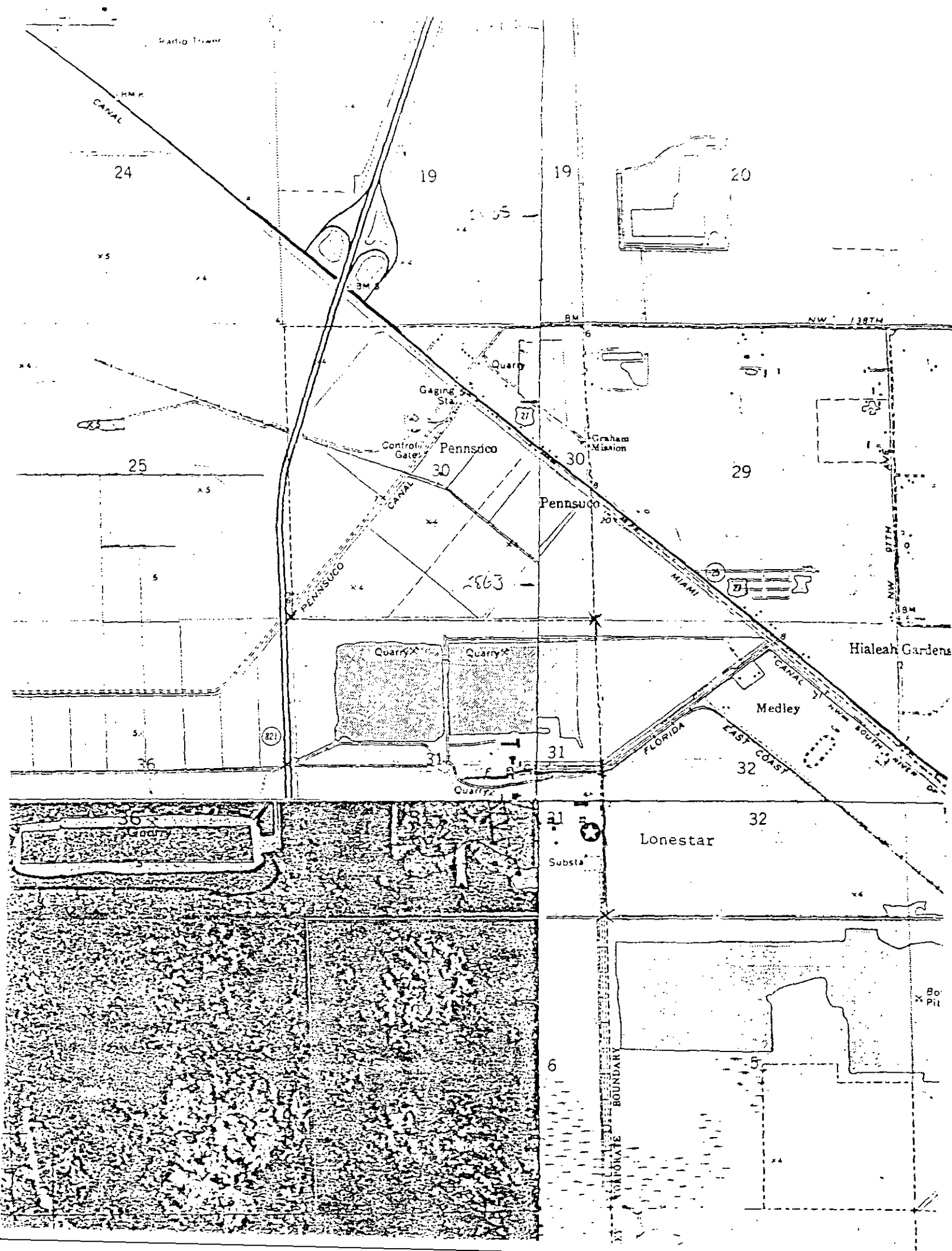
Hollandale
North Perry
Towers
T 51 S.
R 40 E
BROWARD COUNTY
DADE COUNTY
Golden Beach
Oleta
Carol City
T 52 S
Opa-locka
Pennsuco
Lonestar
Surfside
Bal Harbour
Indian Creek
Biscayne
Normandy Is
North Bay Is
Causeway
Hialeah Gardens
Medley
T 53 S
Virginia Gardens
Sunset Islands
Venetian Islands
Miami
MIAMI BEACH
R 39 E
Sweetwater
Tamiami
Olympia Heights
Westwood Lakes
Tropical Park Racetrack
Miami Memorial Park
Transformer Sta
Kendall
Kings County Club
South Miami
Matheson Hammock Beach
Cape Florida Tower
Biscayne Chan
Biscayne Flats
Shoal Point
Richmond Heights
Richmond
Rockdale
Cutler
Perrine
South Miami Heights
Saga
Cutler Ridge
Gordon
Princeton
Naranja
Homestead
Leisure City
Homestead Air Force Base
South Dade Labor Camp
Conroy Point
Fender Point
Black Point
Soldier Key
Rocky Rocks Lighthouse
Rugged Keys Tower
Sands Key
Coon Point
Sea Grape Pt
Point Adelle
BISCAYNE BAY
CGSA Miami
West Point
Southwest Point
Key Biscayne
Virginia Key
Miami Sewage Plant
Chaser Island
Burlingame Is
Dumping Ground
INTRACOASTAL WATERWAY
4 LANES DUAL
45'
30'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Control Gate
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CANAL
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PENNSUCO
MIAMI
NW 97TH
BM
Hialeah Gardens
Quarry
Quarry
CANAL
Medley
FLORIDA EAST COAST
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Lonestar
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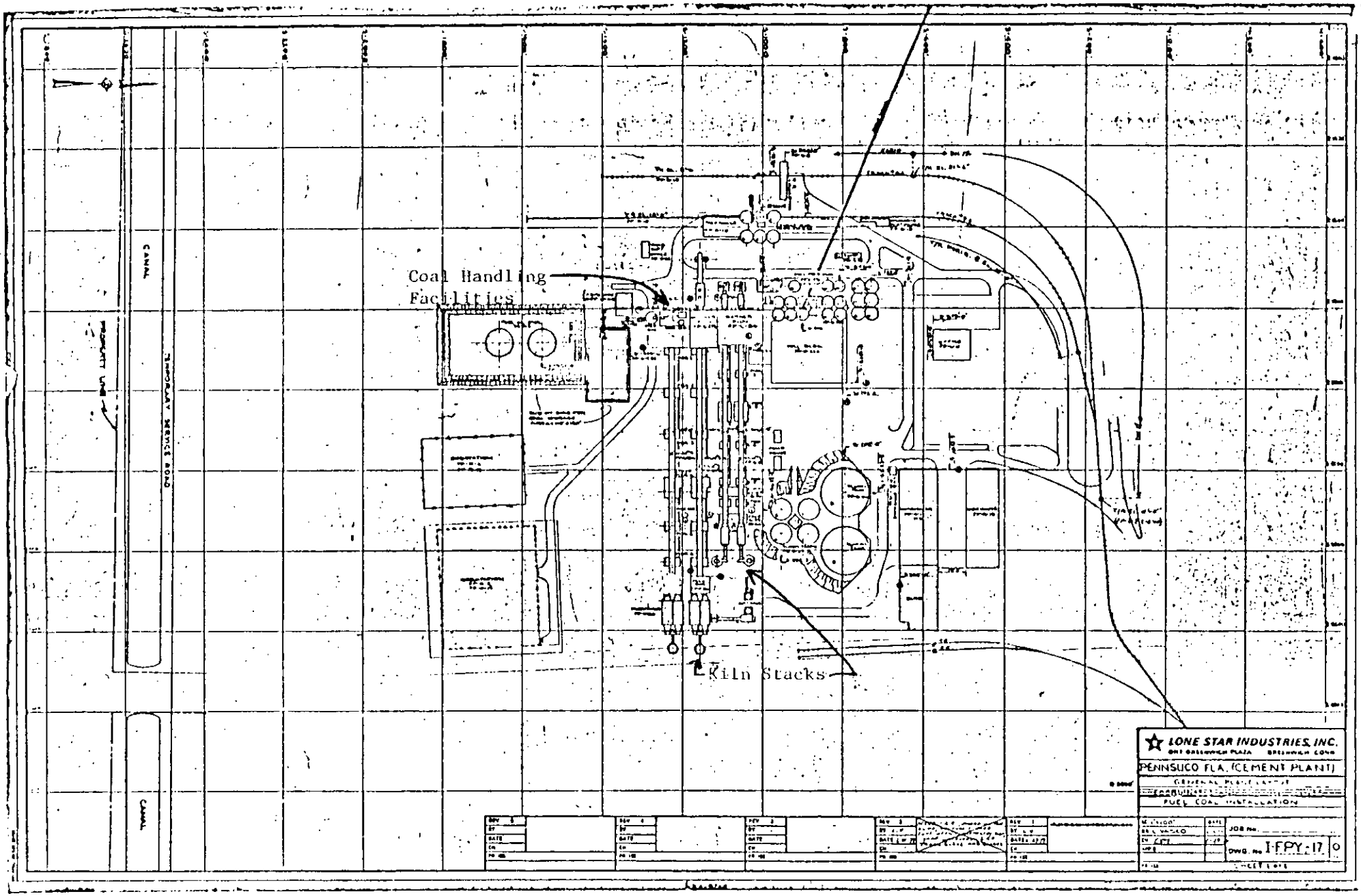
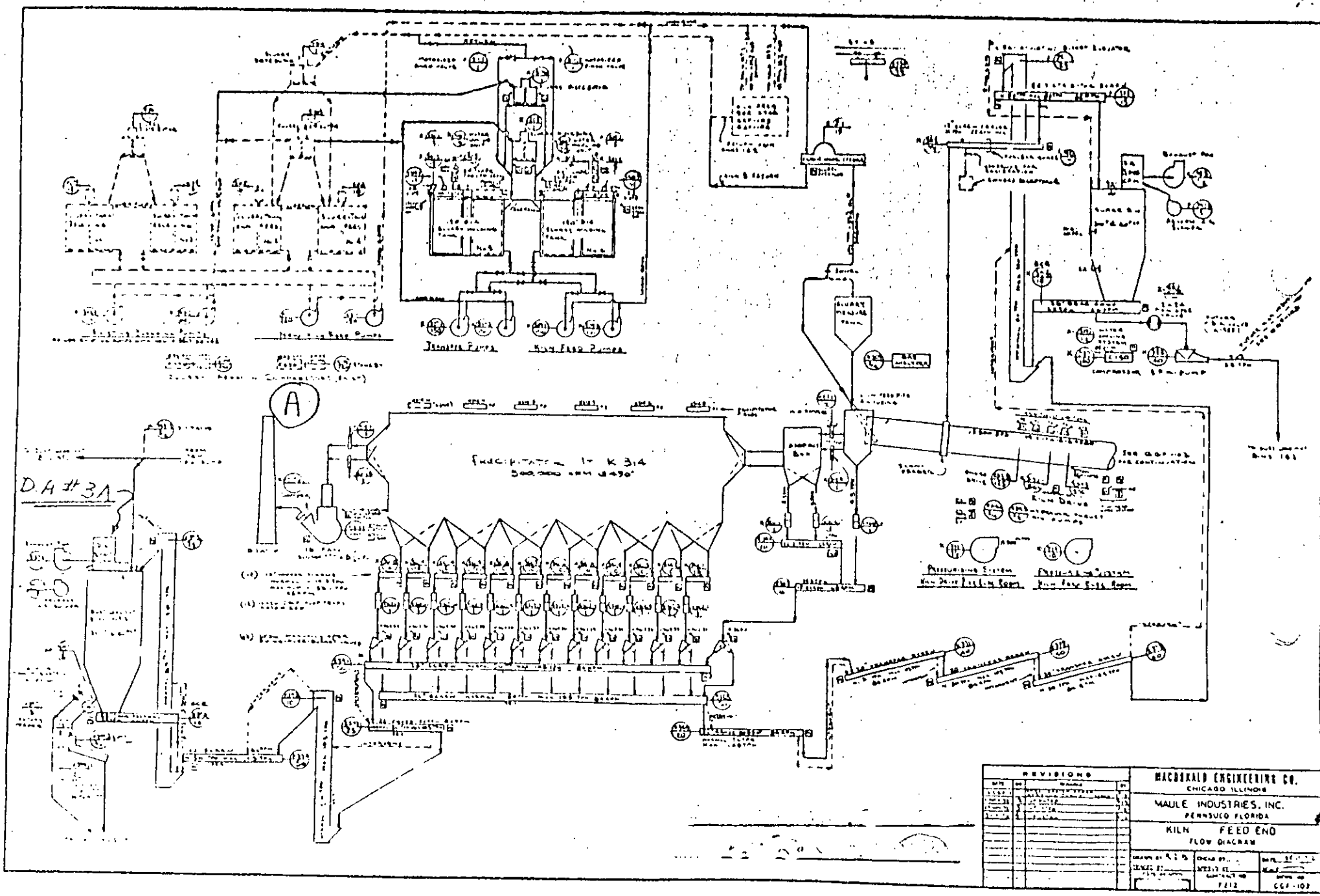
BOUNDARY


Coal Handling Facilities
Kiln Stacks
CANAL
TEMPORARY SERVICE ROAD
PROPERTY LINE
CANAL
LONE STAR INDUSTRIES, INC.
PENNSUCO FLA. (CEMENT PLANT)
FUEL COAL INSTALLATION
DWG. No. 1-FPY-17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D.A #3A
REVISIONS
MACDONALD ENGINEERING CO.
CHICAGO ILLINOIS
MAULE INDUSTRIES, INC.
PENSACOLA FLORIDA
KILN FEED END
FLOW DIAGRAM

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Portland Cement Kiln #5 [ ] New[1] [X] Existing[1]

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

COMPANY NAME: Lonestar Florida/Pennsuco, Inc. COUNTY: Dade

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) Kiln #5 With Electrostatic Precipitator

SOURCE LOCATION: Street 11000 N. W. 121 Street City Hialeah

UTM: East 562.75 North 2861.65

Latitude ____ ° ____ ' ____ "N Longitude ____ ° ____ ' ____ "W

APPLICANT NAME AND TITLE: Albert W. Townsend, Coordinator of Ecological Planning

APPLICANT ADDRESS: P. O. Box 2055, P.V.S., Hialeah, Florida 33012

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Lonestar Florida/Pennsuco, Inc.

I certify that the statements made in this application for a Fuel Conversion (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: Albert W. Townsend

Albert W. Townsend, Coordinator of Ecological Planning
Name and Title (Please Type)

Date: 2-8-80 Telephone No. (305) 823-8800

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 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: David A. Buff

David A. Buff
Name (Please Type)

(Affix Seal)

Environmental Science & Engineering, Inc.
Company Name (Please Type)

P.O. Box 13454, Gainesville, Florida 3260
Mailing Address (Please Type)

Florida Registration No. 19011 Date: 2-8-80 Telephone No. (904) 372-3318

[1]See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

SECTION III: 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 ATTACHMENT

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

Start of Construction As soon as permit issued Completion of Construction 12/31/81

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.)

NA

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

AO 13-8960 issued May 12, 1978 expires May 1, 1983

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? ____ Yes X No

F. Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ; if power plant, hrs/yr ____ ;

if seasonal, describe: ____

G. 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? Yes
   a. If yes, has "offset" been applied? No
   b. If yes, has "Lowest Achievable Emission Rate" been applied? No
   c. If yes, list non-attainment pollutants.
      Ozone
2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. Yes
3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI and VII. Yes
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

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

See Attached Sheet

ATTACHMENT, P. 2, ITEM II-A

Kiln # 3will be modified to utilize coal as a primary fuel source, rather than natural gas or fuel oil. Particualte emissions, which will not increase due to this proposed modification will be controlled by an existing electrostatic precipitator. SO_2 amissions will be substantially reduced through limestone absorption during combustion. The modification will result in full compliance with applicable standards.

SECTION II, ITEM G: SUPPORTIVE INFORMATION AND JUSTIFICATIONS

1. Dade County has been designated as a nonattainment area for ozone (Federal Register, Vol. 44, No. 9.) The area is in attainment for all other pollutants.
   a. Non-methane hydrocarbon emissions will not increase as a result of this modification, therefore offsets are not required (Federal Register, Vol. 44, No. 11)..
   b. Not applicable, see Item (a).

2. U.S. EPA Requirements: Allowable emissions of all pollutants, except sulfur dioxide, will not increase by greater than 50 tons per year, and are therefore exempt from BACT review (Federal Register, Vol.43 No.118).

   FDER Requirements: BACT review is required if any increase over the baseline concentration results due to the modification.

   Since only sulfur dioxide emissions will increase as the result of this modification, BACT is required only for this pollutant.

3. Potential emissions of particulate matter, sulfur dioxide and nitrogen oxides will be greater than 100 tons per year and allowable emissions of sulfur dioxide will increase by greater than 50 tons per year. (see emission estimates).

4. This application does not propose a change which increases particulate emissions. Accordingly, NSPS for Portland Cement Kilns is not applicable to this application. As shown on the attached stack tests, this kiln complies with NSPS; Because this application only involves a fuel switch to coal, and particulate emissions will not increase, the attached stack test results may be assumed to accurately predict particulate emissions resulting from this change.

   By using coal as a primary fuel, less bottom ash (in the raw feed) is required for clinker production. This reduction in bottom ash requirements inherently negates the potential to create additional particulate emissions will remain unchanged or could be reduced as a result of the fuel switch.

5. Self explanatory.

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	6.66*	248629.5	Drawing 66F-102 K-311
Staurolite	Particulate	0.44*	16443.0	Drawing 66F-102
Bottom Ash (Mineral Aggregates)	Particulate	0.29*	10773.0	Drawing 66F-102
Sand	Particulate	0.55*	7654.5	Drawing 66F-102

*Based on the proportion of estimated uncontrolled emissions From AP-42

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

1. Total Process Input Rate (lbs/hr): 283,500

2. Product Weight (lbs/hr): 175,000

C. Airborne Contaminants Emitted:

See Attachment

Name of Contaminant	Emission[1]		Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential Emission[4]		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles[5] Size Collected (in microns)	Basis for Efficiency (Sec. V, It[5]
Koppers Electrostatic	Particulate	99.97	0.1 - 80	Attached
Precipitator Model				Stack Test
#370672-75 (Existing)				

[1]See Section V, Item 2.

[2]Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. — 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)

[5]If Applicable

Section III, Item C Airborne Contaminants Emitted

Name of Contaminant	Emissions Maximum #/Hr.	Emissions Actual T/Yr.	Allowed Emissions Rate Per Chapter 17-2, F.A.C.	Allowable Emissions #/Hr.	Potential Emissions #/Hr.	Potential Emissions T/Yr.	Relate To Flow Diagram
Particulate	42.5	186.2	17-2.05(6) Table II, F(2) 0.3 lb/ton of feed to kiln	42.5	19,950	87,381	66F 102 K 3/4
Coal Fired							
Sulfur Dioxide	26.3	115.2	N/A	N/A	26.3	115.1	66F 102 K 3/4
Nitrogen Oxide	148.1	648.7	N/A	N/A	148.1	648.7	66F 102 K 3/4
Hydrocarbons	Neg.	Neg.	N/A	N/A	N/A	N/A	
Carbon Monoxide	Neg.	Neg.	N/A	N/A	N/A	N/A	66F 102 K 3/4
Gas Fired							
Sulfur Dioxide	2.4	10.3	N/A	N/A	2.4	10.3	66F 102 K 3/4
Nitorgen Oxide	565	2474.7	N/A	N/A	565	2474.7	66F 102 K 3/4
Hydrocarbons	Neg.	Neg.	N/A	N/A	N/A	N/A	66F 102 K 3/4
Carbon Monoxide	Neg.	Neg.	N/A	N/A	N/A	N/A	66F 102 K 3/4
Oil Fired							
Sulfur Dioxide	21.9	95.9	N/A	N/A	21.9	95.9	66F 102 K 3/4
Nitrogen Oxides	374	1638.1	N/A	N/A	37.4	1638.1	66F 102 K 3/4
Hydrocarbon	Neg.	Neg.	N/A	N/A	N/A	N/A	66F 102 K 3/4
Carbon Monoxide	Neg.	Neg.	N/A	N/A	N/A	N/A	66F 102 K 3/4

Section V, Item 2: Emission Estimates

Particulates:

Coal: Particulate emissions will not increase because of the decrease in required bottom ash input to make clinker. Therefore, the stack tests attached (June, 1979) accurately predicts the acutal emissions. See note accompanying item II. G, 4, above.

Maximum emission = 42.5 #/hr = allowable based on 0.3 lb/ton
Annual = 42.5 #/hr x 8760 ÷ 2000 = 186.2 TPY

Potential: Use AP-42 uncontrolled emission factor of 228 #/ton
87.5 ton/hr x 228 #/ton = 19,950 #/hr
19,950 #/hr x 8760 ÷ 2000 - 87,381 TPY

Gas: See Stack Test June, 1979.

Oil: See Stack Test June, 1979.

Section V, Item #2: Emission Estimates

Sulfur Dioxide:

Calculation based upon 0.08% SO_3 in raw feed, 2.0% coal and 98.7% SO_2 removal inherent inprocess based upon stack test results.

Coal: based on recent stack test on similar sulfur content oil

Sulfur input:

feed: 283,500 lbs/hr x 0.0008 x 32/80 = 90.72 #/hr
fuel: 46,000 lbs/hr x 0.02 = 920.00 #/hr

1010.72 #/hr. sulfur

Total input: x2

=2021.44 #/hr SO_2

Maximum emitted=2021.44 #/hr x (1-.987) = 26.28 #/hr.
Annual & Potential=26.28 #/hr x 8760 ÷ 2000 = 115.1 TPY

Gas: 283,500 lbs/hr x 0.0008 x 32/80 x 2 x (1-.987) = 2/36 #/hr SO_2
Annual & Potential =2.36 #/hr x 8760 ÷ 2000 = 10.3 TPY

Oil: Based on recent stack test at 2.37% sulfur, #6 fuel oil

0.0397 #/MMBTU x 552 MMBTU/hr. (max.) = 21.9 #/hr
Annual & Potential = 21.9 #/hr x 8760 ÷ 2000 = **95.9 TPY**

Section V, Item: 2 : Emission Estimates

Nitrogen Oxides:

Coal: (See kiln #1 application)

Maximum emissions= 6.77 #/ton x 0.25 x 87.5 TPH = 148.1 #/hr

Annual = 148.1 #/hr x 8760 ÷ 2000 = 648.7 TPY

Gas: Based on recent stack test June, 1979

Maximum emissions = 565 #/hr. of NO_x

Annual & Potential = 565 #/hr x 24 hrs/day x 365 days/yr ÷ 2000 #/ton = 2474.7 tons/yr

Oil: Based on recent stack test June, 1979

Maximum emission = 374 #/hr of NO_x

Annual & Potential = 374 #/hr x 24 hrs/day x 365 days/yr ÷ 2000 #/ton = 1638.1 tons/yr

EMISSION ESTIMATES

Results of Nitrogen Oxides Stack Tests on Kiln No. 3 at LSF/P

Date	Process Rate (dry tons/hr)	Fuel	Run	Oxygen Content in Kiln (%)	NO_2 Emissions (lbs/hr)	NO_2 Emissions (ppm)
3/27/79	150.9	Gas	1	1.7	544*	544
	150.9	Gas	2	1.7	864*	863
	150.9	Gas	3	1.7	514*	514
	150.9	Gas	4	1.7	790*	789
	150.9	Gas	5	1.7	295*	294
	150.9	Gas	6	1.7	382*	381
AVERAGE					565*	564
3/30/79	150.1	Oil	1	2.1	312	288
	150.1	Oil	2	2.1	331	306
	150.1	Oil	3	2.1	279	258
	150.1	Oil	4	2.1	478	442
	150.1	Oil	5	2.1	469	434
AVERAGE					374	346

*Based on the same gas flow rate as oil firing.

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Coal	40,000	46,000	552
Gas	0.47	.54	552
Oil	79	90.6	552

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:	Coal	Gas	Oil		Coal	Gas	Oil
Percent Sulfur:	2.0	0.0	2.37	Percent Ash:	10-12%	0	1%
Density:	N/A	N/A	8.34 lbs/gal	Typical Percent Nitrogen:	3%	0	1%
Heat Capacity:	12,000	N/A	17,386 BTU/lb		N/A	N/A	145,000 BTU/gal

Other Fuel Contaminants (which may cause air pollution): N/A

F. If applicable, indicate the percent of fuel used for space heating. Annual Average N/A Maximum _____

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

1) Captured dust is insulflated into system.

2) No liquid waste

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

Stack Height: 200 ft. Stack Diameter: 14 ft.

Gas Flow Rate: 327,270 ACFM Gas Exit Temperature: 390 °F.

Water Vapor Content: 27 % Velocity: 35.4 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.)
Lbs/hr Incinerated	N/A						

Description of Waste N/A

Total Weight Incinerated (lbs/hr) N/A Design Capacity (lbs/hr) N/A

Approximate Number of Hours of Operation per day N/A days/week N/A

Manufacturer N/A

Date Constructed N/A Model No. N/A

	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.):

_____

_____

_____

_____

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight — show derivation.

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, 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 8½" 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 8½" 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 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

Calculations from attached stack test:

No. 3 Kiln

Raw Feed - 135.1 T/hr. (dry) @ 0.08% SO_3

Feed to Clinker ratio 1.62 to 1

Clinker Production = 83.4 T/hr.

Energy Consumption 5.6 MM BTU/T. Clinker

Fuel Oil - 18,360 BTU/# @ 2.38 % S.

Fuel Oil Consumption

$$\frac{5.6 \text{ MM BTU} \times 83.4 \text{ T. Clinker}}{\text{T.Clinker} \times 0.01836 \text{ MM BTU/\#} \quad \text{hr.}} = 25,438 \text{ \#/hr. of fuel oil}$$

Sulfur into the system

Feed -

$$135.1 \times 2000 \times 0.0008 \times \frac{32}{80} = 36.4 \text{ \#/hr.}$$

Fuel -

$25,438 \times .0238 = 605.4$ #/hr.

Total S. = 691.8 #/hr.

As SO_2 = 1,383.6 #/hr.

SO_2 Emission

Test Data = 0.397 #SO_2/MM BTU

Total SO_2 Emission = $0.397 \times 83.4 \times 5.6 = 18.5$ #/hr.

Absorption Factor

$$\frac{1383.6 - 18.5}{1383.6} = 98.7 \%$$

9. An application fee of $20, unless exempted by Section 17-4.05(3), F.A.C. 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

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
[ ] Yes [X] No

Contaminant	Rate or Concentration
Sulfur Dioxide	No Standard

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) [ ] Yes [X] No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration
SO_2	100% of potential emission

D. Describe the existing control and treatment technology (if any).

1. Control Device/System: See attached stack test and absorption calculations which document the high rate of removal of SO_2 inherent in a kiln process.
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:
5. Useful Life:
6. Operating Costs:
7. Energy:
8. Maintenance Cost:
9. Emissions:

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

10. Stack Parameters

a. Height:	200	ft.	b. Diameter:	14	ft.
c. Flow Rate:	327,270	ACFM	d. Temperature:	390	°F
e. Velocity:	35.4	FPS			

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1. Due to the inherent removal of SO_2 (98.7% as documented in the attached stack test) it is considered impractical and economically unfeasible to evaluate other treatment technology.

a. Control Device:

b. Operating Principles: Other technologies such as a baghouse would not significantly reduce SO_2 emissions and would require substantial cash outlays and replacement of the existing E.S.P.

c. Efficiency*:

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy*:

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*:

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy**:

h. Maintenance Costs:

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:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power – KWH design rate.

3.

a. Control Device:

b. Operating Principles:

c. Efficiency*:

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

h. Maintenance Cost:

*Explain method of determining efficiency above.

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*:

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

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: See Section VI. E.

1. Control Device:

2. Efficiency*:

3. Capital Cost:

4. Life:

5. Operating Cost:

6. Energy:

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

b.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

10. Reason for selection and description of systems:

Sulphur dioxide emissions will be controlled by utilizing coal having a sulphur contect of no greater than 2%. In addition, any SO_2 emissions from burning this low sulphur coal will be reduced through limestone absorption in the cement clinker product. This inherent removal of SO_2 is estimated to be 98.7% efficient or greater based upon stack tests performed on this kiln.

Alternative controls for SO_2 were rejected since retrofitting the existing kiln with additional control devices would have only a minimal effect on emissions and would prohibit the company from implementing the conversion to coal.

*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 N/A

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.

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. 5 Year(s) of data from 1 / 1 / 70 to 12 / 31 / 74
month day year month day year

2. Surface data obtained from (location) Miami

3. Upper air (mixing height) data obtained from (location) Miami

4. Stability wind rose (STAR) data obtained from (location) NA

C. Computer Models Used

1. CRSTER Single Source Modified? If yes, attach description.

2. PTMTP-W 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	See Section III, C. grams/sec
SO^2	See Section III, C. grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description on 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.

*Specify bubbler (B) or continuous (C).

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.

See Attached

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

Page 10, Item VII (G)

The switch to coal as a primary fuel will have a minimal impact on air quality and at the same time will assume a plentiful supply of fuel for years to come. Supplies of oil and natural gas are of uncertain duration, and the cost of these scarce resources continues to rise. Without the fuel conversion, an interruption in oil or gas deliveries could result in plant shutdowns, or production curtailments with enormous economic consequences.

The abundance of coal, in comparison with oil and natural gas, is well documented. Coal constitutes approximately 90% of the nation's known energy reserves, yet currently supplies only 18% of the nation's energy consumption. The policy of the federal government is committed to increased coal utilization by industry. Conversions such as the modification proposed herein is in accord with this national policy, and at the same time will have minimal environmental impacts.

State of Florida

Department of State

I certify from the records of this office that LONESTAR FLORIDA PENNSUCO, INC. is a corporation organized under the laws of the State of Delaware, authorized to transact business within the State of Florida, qualified on January 4, 1978.

The charter number for this corporation is 839774.

I further certify that said corporation has filed all annual reports and paid all annual report filing fees due this office through December 31, 1979, and its status is active.

Given under my hand and the Great Seal of the State of Florida, at Tallahassee, the Capital, this the 6th day of Feb., 1980

George Firestone
Secretary of State

CER 101 Rev. 5-79

LONESTAR FLORIDA/PENNSUCO, INC.
6451 N. Federal Highway
Ft. Lauderdale, Florida 33308

February 15, 1979

State of Florida
Department of Environmental Regulation
and/or
Various Counties Within Florida

Gentlemen:

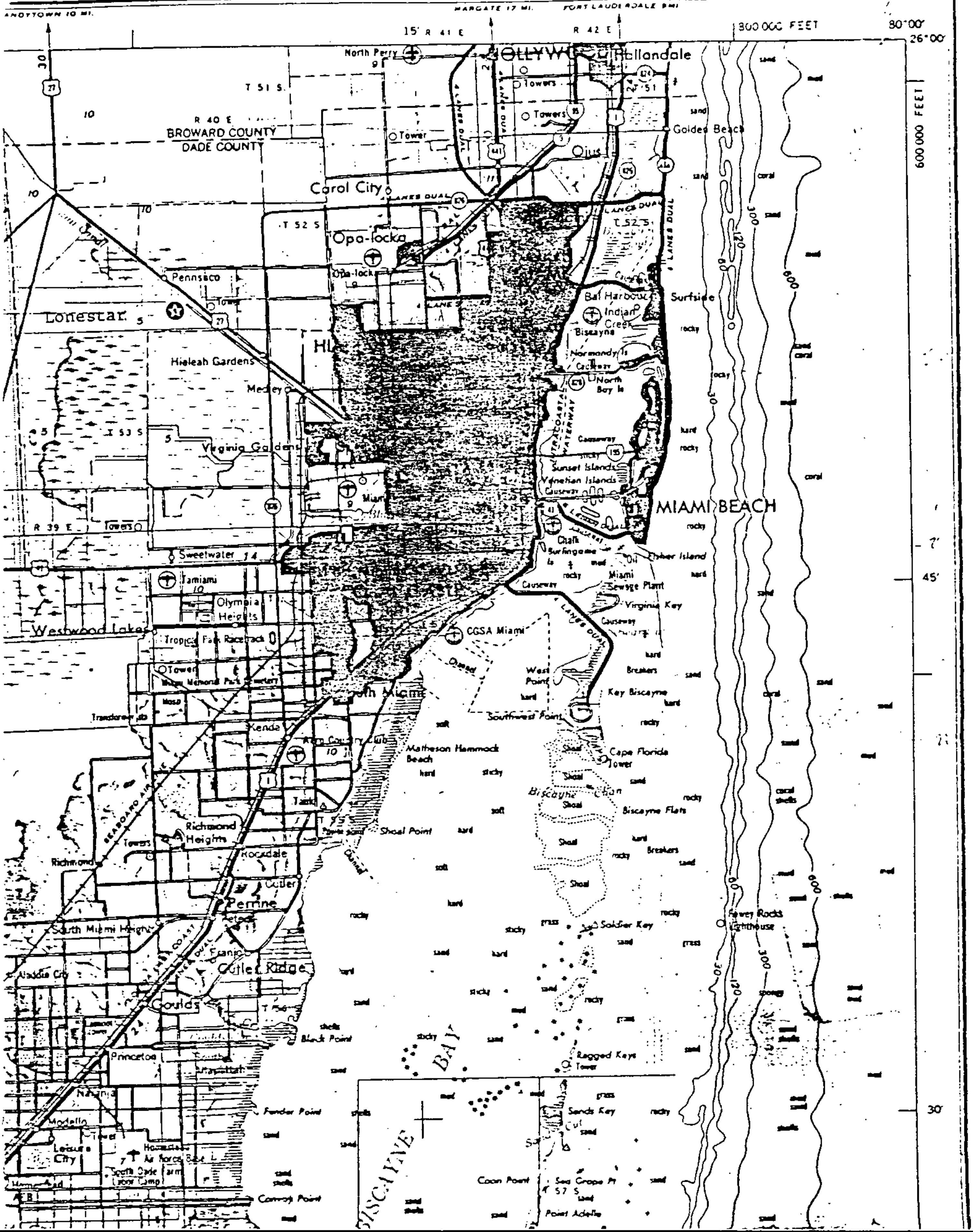
This letter authorizes the signatures of either Mr. Albert W. Townsend, Coordinator of Ecological Planning or Mr. Carl R. Metzgar, Manager Administrative Services, for the purpose of permit changes, applications and renewals.

Very truly yours,

LONESTAR FLORIDA PENNSUCO, INC.

Paul N. Stoms
President

CRM/jh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FORT LAUDERDALE 8 MI
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80°00'
26°00'
600 000 FEET
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R 39 E
T 51 S.
T 52 S
T 53 S
BROWARD COUNTY
DADE COUNTY
North Perry
Hallandale
Towers
Golden Beach
Ojus
Carol City
Opa-locka
Pennsuco
Lonestar
Hialeah Gardens
Medley
Virginia Gardens
Bal Harbour
Surfside
Indian Creek
Biscayne
Normandy Is
North Bay Is
Causeway
Sunset Islands
Venetian Islands
MIAMI BEACH
Fisher Island
Miami Sewage Plant
Virginia Key
Sweetwater
Tamiami
Olympia Heights
Westwood Lakes
Tropical Park Racetrack
CGSA Miami
West Point
Key Biscayne
Southwest Point
Cape Florida
Matheson Hammock Beach
Kendall
Biscayne Flats
Breakers
Shoal Point
Richmond Heights
Richmond
Rockdale
Cutler
Perrine
South Miami Heights
Soldier Key
Fowey Rocks Lighthouse
Cutler Ridge
Goulds
Black Point
Ragged Keys
Princeton
BAY
Naranja
Fender Point
Sands Key
Modello
Leisure City
Homestead Air Force Base
South Dade Farm Labor Camp
Coon Point
Sea Grape Pt
Convoy Point
Point Adelle
BISCAYNE
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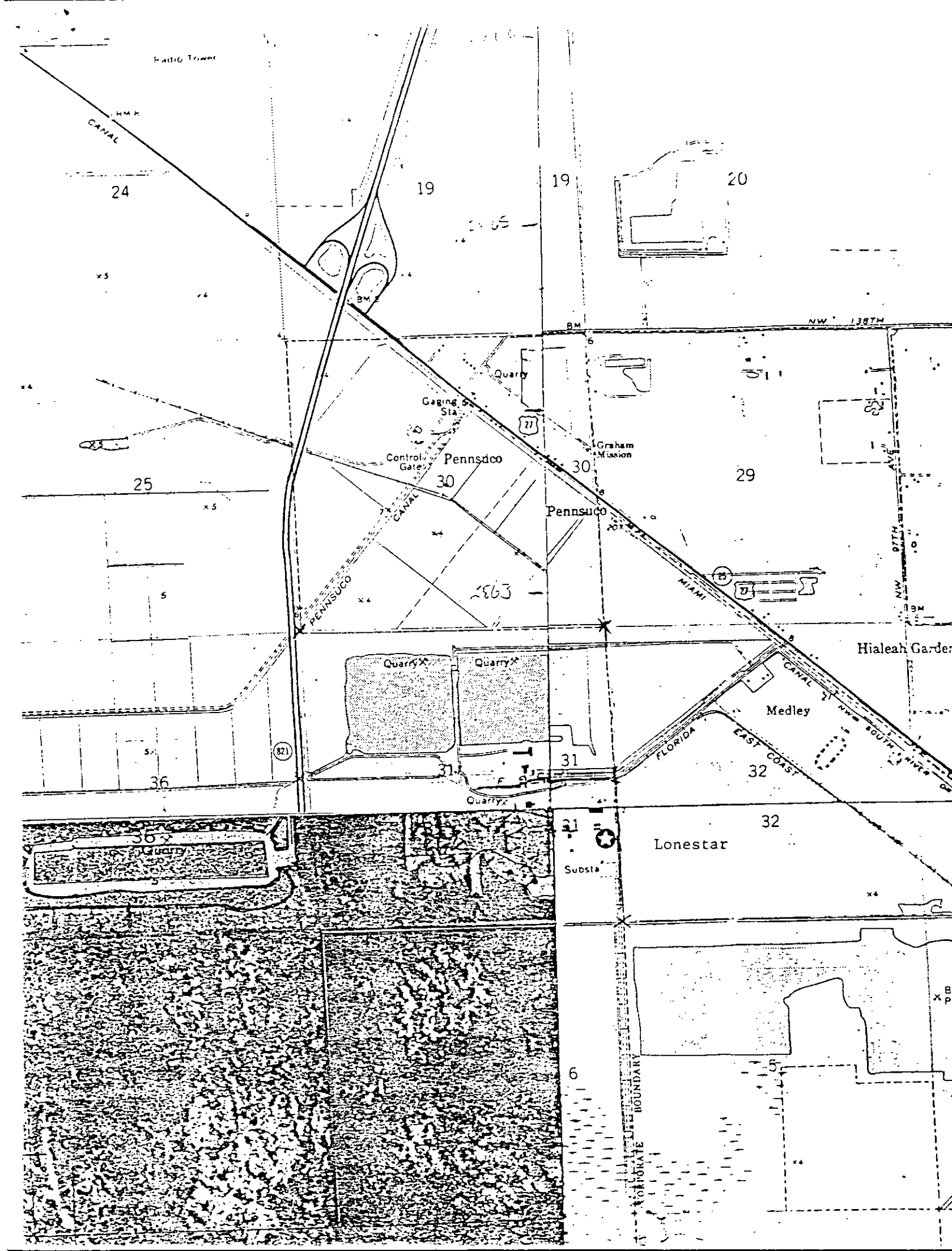
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MIAMI
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Quarry
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CANAL
Medley
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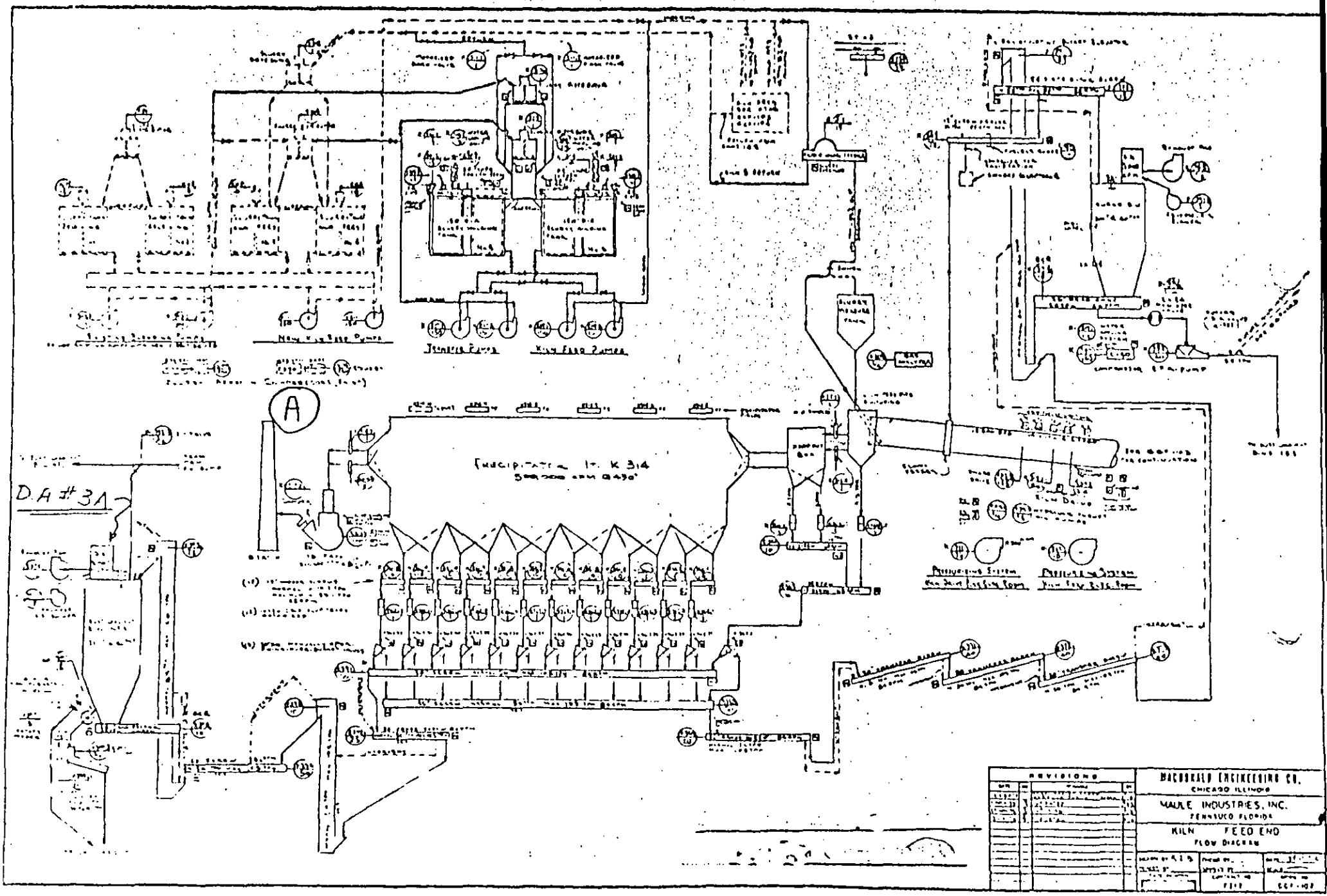
BOUNDARY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D.A #3A
MACDONALD ENGINEERING CO.
CHICAGO ILLINOIS
MAULE INDUSTRIES, INC.
PENINSULA FLORIDA
KILN FEED END
FLOW DIAGRAM

ATTACHMENT B

STUDY GROUP RECOMMENDATIONS

Air Quality Impact Analysis

Methodology

Short-term and annual atmospheric dispersion modeling was performed using two U.S EPA-approved models. Emissions rates and stack parameters utilized as input to the model are summarized in Table 1. The CRSTER Single Source Dispersion Model (EPA, 1977) was used to determine maximum predicted annual concentration as well as to identify worst-case 24-hour and 3-hour meteorological conditions for the Lonestar Facility. The maximum short-term impacts were then refined with the PTMTP-W model. The PTMTP-W allows the user to input spatially distributed sources and resolve the maximum concentration with a smaller receptor spacing. Each PTMTP-W case utilized a 100 receptor grid (1.0 x 1.0 kilometer with 0.1 kilometer spacing). Concentrations were not adjusted (i.e., a calibration factor of 1.0 was employed in the modeling).

A meteorological hourly data record for the years 1970-74 was input into the CRSTER model. This meteorological data was recorded at the Miami International Airport by the National Weather Service. The CRSTER Model processed each hour of the Miami data set to estimate hourly concentrations over 5 years. These concentrations were then averaged over each annual period, each 24-hour period and each 3-hour period to provide the user with the desired concentrations.

Sulfur Dioxide

Sulfur Dioxide (SO_2) emissions from the three existing kilns at Lonestar Florida/ Pennsuco include the total resulting emissions from the sulfur in the raw materials (i.e. limestone) and the sulfur in the coal, considering inherent SO_2 removal in the process as reflected in actual stack test. The total SO_2 emissions from the facility were used in the CRSTER modeling and worst-case meteorology was determined. A PTMTP-W model was used to refine the predicted concentration and spatially distribute the sources.

Particulate Matter

Particulate matter modeling was executed to determine the maximum increase in emissions due to the four proposed dust collectors. The four dust collectors will be close enough in proximity that they could be assumed to be at the same location for modeling purposes. A CRSTER model was executed in order to determine worst-case meteorlogy and the PTMTP-W was used to refine the maximum concentration with a smaller receptor spacing.

Results

Results of the modeling are presented in Table 2. The maximum predicted annual SO_2 concentration was 0.63 ug/m^3. The maximum 3-hour and 24-hour SO_2 concentrations were predicted to be 18 ug/m^3 and 4.90 ug/m^3 respectively. The maximum predicted increase in 24-hour total suspended (TSP) particulate matter concentrations is 4.59 ug/m^3. The maximum predicted increase in annual TSP concentrations is 0.69 ug/m^3.

Copies of the computer model outputs are attached.

Conclusion

The results of the computer modeling show the maximum predicted concentrations for annual, 24-hour and 3-hour time periods are less than the significance levels as defined in the Federal Register, Vol.43, No. 118, June 19, 1978 and in the "Guidance on Prevention of Significant Deterioration (PSD), PSD Review", Florida Department of Environmental Regulation, October, 1978. As a result, no additional air quality analysis is necessary.

Table 1. Emission rates and stack parameters for the Lonestar, Florida/Pennsuco Facility.

SO_2 Sources Source	Emission Rate(g/s)	Stack Height (M)	Stack Temp. (°K)	Velocity (M/s)	Diameter (M)
Kiln #1	7.15	61.0	472.0	16.9	2.10
Kiln #2	7.15	61.0	455.0	15.5	2.10
Kiln #3	3.31	61.0	472.0	10.8	4.27

Particulate Sources Source	Emission Rate (g/s)	Stack Height (M)	Stack Temp. (°K)	Velocity (M/s)	Diameter (M)
Dust Collector 1	0.04	29.0	303.311	25.9	0.30
Dust Collector 2	0.04	20.7	303.311	25.9	0.30
Dust Collector 3	0.26 0.39	24.4	336.0	19.8 19.0	0.85 1.07
Dust Collector 4	0.26	24.4	336.0	19.8	0.85

Table 2. Results of Air Quality Impact Analysis for the Lonestar, Florida/Pennsuco Facility.

	SO_2			Particulate	
	Annual	24-hr	3-hr	Annual	24-hour
Maximum Predicted Concentration (ug/m^3)	0.63	4.90	18	0.69	4.59
Significance Levels	1	5	25	1	5

SULFUR DIOXIDE

COMPUTER MODELING

RESULTS

```
PLANT NAME: LONESTAR                          POLLUTANT:   SO2     AIR QUALITY UNITS: GM/M**3
COAL CONVERSION - EXISTING KILNS 1,2,3

             MET FILE      REQUESTED
            STN NO. YR    STN NO. YR
 SURFACE     12839  70     12839  70
 UPPER AIR   12839  70     12839  70
PLANT LOCATION: RURAL
NO TAPE OUTPUT
MET DATA WILL NOT BE PRINTED

DAY-- 1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
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  * * * * * * * * * * * * * * *  N O T E  * * * * * * * * * * * * * * *

       ALL TABLES, INCLUDING SOURCE CONTRIBUTION, THAT CONTAIN "ANNUAL" IN THE HEADING ARE BASED

       ONLY ON THOSE DAYS MARKED BY A "1" IN THE ABOVE TABLE
```

RING DISTANCES(KM)= 0.90 1.20 1.50 1.80 2.10

STACK # 1--KILN 1&2
STACK # 2--KILN #3

STACK	MONTH	EMISSION RATE (GMS/SEC)	HEIGHT (METERS)	DIAMETER (METERS)	EXIT VELOCITY (M/SEC)	TEMP (DEG.K)	VOLUMETRIC FLO (M**3/SEC)
1	ALL	14.3000	61.00	2.10	16.20	464.00	56.11
2	ALL	3.3100	61.00	4.27	10.80	472.00	154.66

PLANT NAME: LONESTAR POLLUTANT: SO2 AIR QUALITY UNITS: GM/M**3

MAXIMUM MEAN CONC= 6.1519E-07 DIRECTION= 28 DISTANCE= 2.1 KM

YEAR= 70

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR \ RANGE	0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 KM
1	6.72910E-08	9.53425E-08	1.05252E-07	1.05238E-07	1.01276E-07
2	5.30818E-08	7.95159E-08	9.19203E-08	9.53647E-08	9.45587E-08
3	4.11145E-08	6.08741E-08	6.96635E-08	7.15156E-08	7.02444E-08
4	3.41788E-08	4.89282E-08	5.49389E-08	5.57134E-08	5.42511E-08
5	4.80552E-08	6.86485E-08	7.75487E-08	8.02642E-08	8.01997E-08
6	5.22901E-08	6.97317E-08	7.74686E-08	8.01708E-08	8.03498E-08
7	5.95114E-08	7.50736E-08	7.91892E-08	7.76698E-08	7.39236E-08
8	6.75643E-08	8.59525E-08	9.15539E-08	9.08065E-08	8.74583E-08
9	6.38586E-08	8.17488E-08	8.76212E-08	8.72075E-08	8.42825E-08
10	5.54083E-08	7.54093E-08	8.30712E-08	8.35297E-08	8.08265E-08
11	5.12479E-08	7.46622E-08	8.37361E-08	8.45582E-08	8.17221E-08
12	5.80123E-08	9.06215E-08	1.05759E-07	1.10593E-07	1.10313E-07
13	5.57110E-08	9.10630E-08	1.10587E-07	1.20110E-07	1.24070E-07
14	4.83917E-08	9.07648E-08	1.20897E-07	1.40259E-07	1.51748E-07
15	4.98467E-08	9.27427E-08	1.21383E-07	1.38430E-07	1.47848E-07
16	7.10543E-08	1.32878E-07	1.74292E-07	1.98888E-07	2.12276E-07
17	7.11460E-08	1.23693E-07	1.53741E-07	1.68710E-07	1.75299E-07
18	6.18585E-08	1.09585E-07	1.40791E-07	1.59355E-07	1.69914E-07
19	4.47572E-08	6.90158E-08	8.07930E-08	8.49862E-08	8.53063E-08
20	4.50310E-08	6.38597E-08	7.05777E-08	7.12907E-08	6.97361E-08
21	3.95149E-08	5.82534E-08	6.88076E-08	7.37351E-08	7.54209E-08
22	3.25294E-08	4.51237E-08	5.16315E-08	5.42889E-08	5.49004E-08
23	3.20944E-08	4.71907E-08	5.53936E-08	5.95993E-08	6.16550E-08
24	4.92868E-08	7.78400E-08	9.48651E-08	1.04917E-07	1.10660E-07
25	8.96754E-08	1.42468E-07	1.72369E-07	1.88683E-07	1.96638E-07
26	1.40568E-07	2.26376E-07	2.77127E-07	3.06180E-07	3.21280E-07
27	2.24273E-07	3.61984E-07	4.40803E-07	4.83124E-07	5.03339E-07
28	2.68906E-07	4.31867E-07	5.28515E-07	5.84512E-07	6.15186E-07
29	2.58388E-07	3.88083E-07	4.54613E-07	4.85995E-07	4.97817E-07
30	3.05008E-07	4.45491E-07	5.11702E-07	5.39363E-07	5.47220E-07
31	3.08718E-07	4.27860E-07	4.65926E-07	4.67371E-07	4.54137E-07
32	2.89829E-07	4.01006E-07	4.34865E-07	4.33482E-07	4.18270E-07
33	2.30748E-07	3.14411E-07	3.38024E-07	3.34676E-07	3.21148E-07
34	1.98643E-07	2.83936E-07	3.17225E-07	3.23530E-07	3.17824E-07
35	1.38795E-07	1.95404E-07	2.16286E-07	2.18574E-07	2.12895E-07
36	9.81581E-08	1.39813E-07	1.57381E-07	1.61875E-07	1.60405E-07

PLANT NAME: LONESTAR POLLUTANT: SO2 AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 24-HOUR CONC= 4.7680E-06 DIRECTION= 27 DISTANCE= 1.5 KM DAY=165

YEAR= 70

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

RANGE DIR	0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 KM
1	1.8493E-06 (191)	2.0091E-06 (88)	1.8661E-06 (187)	1.6419E-06 (187)	1.4420E-06 (187)
2	1.2344E-06 (187)	1.4876E-06 (187)	1.5827E-06 (163)	1.6468E-06 (163)	1.5817E-06 (187)
3	1.1232E-06 (124)	1.5256E-06 (124)	1.5748E-06 (124)	1.4689E-06 (145)	1.4565E-06 (145)
4	9.5314E-07 (161)	1.2246E-06 (178)	1.3546E-06 (178)	1.3561E-06 (178)	1.2958E-06 (220)
5	1.0618E-06 (177)	1.3550E-06 (220)	1.4694E-06 (92)	1.5855E-06 (92)	1.5752E-06 (219)
6	1.3567E-06 (160)	1.6004E-06 (177)	1.6644E-06 (92)	1.6669E-06 (92)	1.6007E-06 (327)
7	2.1836E-06 (160)	2.0957E-06 (160)	1.8824E-06 (224)	1.7090E-06 (19)	1.5996E-06 (19)
8	2.5010E-06 (175)	2.2588E-06 (42)	2.3126E-06 (42)	1.9915E-06 (160)	1.6685E-06 (160)
9	2.3460E-06 (175)	2.4220E-06 (175)	2.5337E-06 (175)	2.5150E-06 (175)	2.3794E-06 (175)
10	1.9604E-06 (179)	2.6746E-06 (179)	2.8625E-06 (179)	2.7709E-06 (179)	2.4594E-06 (157)
11	1.3057E-06 (160)	1.8604E-06 (161)	2.0638E-06 (161)	1.9486E-06 (161)	1.6589E-06 (105)
12	1.5568E-06 (159)	1.9197E-06 (160)	2.1879E-06 (72)	2.2306E-06 (295)	2.0323E-06 (295)
13	1.5734E-06 (217)	1.9840E-06 (295)	2.1957E-06 (295)	2.2676E-06 (304)	2.3042E-06 (304)
14	1.2086E-06 (159)	1.5154E-06 (159)	1.9218E-06 (7)	2.1854E-06 (73)	2.5433E-06 (73)
15	1.1146E-06 (321)	1.5680E-06 (340)	1.8930E-06 (321)	1.9164E-06 (328)	2.1031E-06 (340)
16	1.4770E-06 (97)	2.1194E-06 (299)	2.6161E-06 (299)	2.8402E-06 (328)	2.8018E-06 (299)
17	1.5224E-06 (97)	2.0746E-06 (310)	2.2886E-06 (360)	2.2704E-06 (362)	2.1080E-06 (13)
18	1.1703E-06 (322)	1.6530E-06 (310)	1.7743E-06 (310)	1.8393E-06 (58)	2.2412E-06 (52)
19	9.8343E-07 (311)	1.3700E-06 (311)	1.4011E-06 (311)	1.4615E-06 (181)	1.4020E-06 (126)
20	1.3188E-06 (311)	1.2354E-06 (312)	1.3614E-06 (182)	1.2153E-06 (311)	1.0936E-06 (322)
21	9.7636E-07 (75)	1.0683E-06 (75)	1.1788E-06 (290)	1.3785E-06 (44)	1.5042E-06 (290)
22	9.5227E-07 (75)	1.0997E-06 (75)	9.7789E-07 (75)	8.7069E-07 (364)	9.5260E-07 (290)
23	9.1678E-07 (75)	1.0845E-06 (75)	1.1706E-06 (283)	1.2726E-06 (283)	1.1933E-06 (83)
24	1.1796E-06 (83)	1.8343E-06 (83)	2.0172E-06 (83)	1.9398E-06 (83)	1.8181E-06 (278)
25	1.2891E-06 (83)	1.7423E-06 (282)	2.0787E-06 (282)	2.1289E-06 (121)	2.1005E-06 (282)
26	2.3894E-06 (120)	2.6608E-06 (312)	2.5463E-06 (254)	2.5435E-06 (121)	2.7646E-06 (312)
27	2.8157E-06 (170)	4.2649E-06 (170)	4.7680E-06 (165)	4.6167E-06 (165)	4.3484E-06 (165)
28	2.0647E-06 (227)	2.8514E-06 (138)	3.0520E-06 (138)	3.2398E-06 (140)	3.9345E-06 (140)
29	2.2185E-06 (196)	2.7420E-06 (195)	2.9408E-06 (195)	2.9905E-06 (242)	3.3253E-06 (242)
30	2.7286E-06 (238)	3.8825E-06 (232)	4.4258E-06 (232)	4.4132E-06 (195)	4.4268E-06 (232)
31	2.9108E-06 (216)	3.3461E-06 (247)	3.2886E-06 (247)	2.9836E-06 (247)	2.6252E-06 (247)
32	3.0805E-06 (183)	3.2969E-06 (100)	3.0568E-06 (100)	2.6828E-06 (100)	2.4323E-06 (193)
33	2.6248E-06 (225)	2.5044E-06 (203)	2.6575E-06 (225)	2.5444E-06 (203)	2.2924E-06 (203)
34	2.5251E-06 (203)	2.9228E-06 (225)	2.7043E-06 (111)	2.8004E-06 (271)	2.8623E-06 (271)
35	1.9888E-06 (137)	2.4839E-06 (221)	2.1976E-06 (221)	1.8740E-06 (363)	2.0789E-06 (318)
36	2.3497E-06 (221)	2.8979E-06 (221)	2.7476E-06 (221)	2.3963E-06 (221)	2.0357E-06 (221)

PLANT NAME: LONESTAR POLLUTANT: SO2 AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 3-HOUR CONC= 1.7721E-05 DIRECTION= 31 DISTANCE= 1.2 KM DAY=238

YEAR= 70

SECOND HIGHEST 3-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 K
1	8.6241E-06 (187, 4)	1.0006E-05 (191, 4)	9.6600E-06 (191, 4)	8.7575E-06 (191, 4)	7.8810E-06 (
2	8.3602E-06 (249, 4)	8.9817E-06 (191, 4)	8.7778E-06 (191, 4)	8.2173E-06 (222, 3)	8.8187E-06 (
3	5.9442E-06 (249, 4)	7.5214E-06 (146, 4)	8.0711E-06 (81, 5)	8.2507E-06 (81, 5)	8.0661E-06 (
4	6.8696E-06 (146, 4)	9.6833E-06 (178, 3)	1.0744E-05 (178, 3)	1.0753E-05 (178, 3)	9.6832E-06 (
5	8.3592E-06 (177, 4)	9.2249E-06 (224, 5)	9.8797E-06 (224, 5)	8.6503E-06 (219, 4)	7.9420E-06 (
6	8.6216E-06 (92, 4)	9.7158E-06 (92, 4)	8.8641E-06 (92, 4)	7.5905E-06 (92, 4)	7.2364E-06 (
7	1.0720E-05 (160, 4)	1.0969E-05 (19, 5)	1.1060E-05 (177, 4)	9.0037E-06 (177, 4)	7.5918E-06 (
8	9.7895E-06 (175, 4)	9.8704E-06 (347, 4)	1.0601E-05 (180, 4)	1.0235E-05 (180, 4)	9.2457E-06 (
9	1.1055E-05 (175, 4)	1.0925E-05 (42, 5)	1.0450E-05 (347, 4)	1.0312E-05 (175, 3)	9.8357E-06 (
10	1.1912E-05 (157, 5)	1.3740E-05 (179, 5)	1.3130E-05 (179, 5)	1.1671E-05 (179, 5)	1.0028E-05 (
11	7.8122E-06 (157, 5)	1.2507E-05 (161, 4)	1.2314E-05 (105, 5)	1.0516E-05 (105, 5)	8.7477E-06 (
12	7.0476E-06 (72, 5)	1.0388E-05 (316, 4)	1.0272E-05 (316, 4)	9.6044E-06 (30, 5)	8.6693E-06 (
13	8.1043E-06 (217, 5)	1.0613E-05 (304, 4)	1.1884E-05 (41, 4)	1.1824E-05 (41, 4)	1.1104E-05 (
14	6.1762E-06 (321, 4)	9.2174E-06 (20, 4)	1.0459E-05 (20, 4)	1.0230E-05 (20, 4)	9.4265E-06 (
15	6.4193E-06 (340, 5)	1.0147E-05 (326, 4)	1.1305E-05 (326, 4)	1.0921E-05 (10, 4)	1.0076E-05 (
16	8.1225E-06 (362, 4)	1.0253E-05 (299, 4)	1.1339E-05 (299, 4)	1.0895E-05 (299, 4)	1.0271E-05 (
17	7.1391E-06 (10, 5)	1.0060E-05 (321, 5)	1.1094E-05 (360, 4)	1.0781E-05 (360, 4)	9.8639E-06 (
18	8.7210E-06 (105, 4)	1.1246E-05 (305, 4)	1.2443E-05 (305, 4)	1.2002E-05 (305, 4)	1.0946E-05 (
19	6.5482E-06 (322, 5)	7.6327E-06 (322, 5)	6.8371E-06 (322, 5)	6.2105E-06 (181, 3)	5.5828E-06 (
20	7.9326E-06 (159, 5)	7.2814E-06 (322, 5)	6.4888E-06 (305, 4)	6.0903E-06 (184, 3)	5.8822E-06 (
21	6.7144E-06 (123, 4)	7.3930E-06 (311, 4)	7.3732E-06 (176, 3)	8.4467E-06 (176, 3)	8.0607E-06 (
22	6.9738E-06 (164, 4)	7.1718E-06 (250, 4)	7.2015E-06 (364, 4)	6.9655E-06 (364, 4)	6.4335E-06 (
23	7.0981E-06 (75, 4)	8.0574E-06 (164, 4)	7.8182E-06 (164, 4)	7.5268E-06 (83, 4)	6.9550E-06 (
24	6.5270E-06 (75, 4)	7.5466E-06 (83, 4)	7.2669E-06 (83, 5)	7.3232E-06 (107, 6)	7.1776E-06 (
25	9.6842E-06 (83, 5)	9.6517E-06 (120, 4)	7.8444E-06 (284, 4)	8.0727E-06 (284, 4)	7.7019E-06 (
26	1.2835E-05 (254, 4)	1.3456E-05 (120, 4)	1.2908E-05 (282, 4)	1.2068E-05 (282, 4)	1.0771E-05 (
27	1.2591E-05 (170, 5)	1.5911E-05 (170, 5)	1.5056E-05 (107, 4)	1.3484E-05 (169, 4)	1.2737E-05 (
28	1.0317E-05 (135, 4)	1.5389E-05 (138, 5)	1.6483E-05 (138, 5)	1.5537E-05 (138, 5)	1.3930E-05 (
29	1.1281E-05 (197, 5)	1.2387E-05 (171, 4)	1.2428E-05 (171, 4)	1.1839E-05 (194, 3)	1.1594E-05 (
30	1.3340E-05 (197, 5)	1.4596E-05 (238, 4)	1.4060E-05 (200, 4)	1.2932E-05 (200, 4)	1.2014E-05 (
31	1.5011E-05 (238, 4)	1.7721E-05 (238, 4)	1.6285E-05 (238, 4)	1.5220E-05 (275, 5)	1.3328E-05 (
32	1.3325E-05 (213, 5)	1.6802E-05 (213, 5)	1.6793E-05 (213, 5)	1.5360E-05 (213, 5)	1.3567E-05 (
33	1.1108E-05 (225, 4)	1.2450E-05 (193, 5)	1.2062E-05 (182, 6)	1.1416E-05 (303, 5)	1.0577E-05 (
34	1.4944E-05 (199, 4)	1.4766E-05 (203, 4)	1.5883E-05 (115, 5)	1.5002E-05 (115, 5)	1.3492E-05 (
35	1.0988E-05 (221, 4)	1.1839E-05 (137, 4)	1.1652E-05 (221, 4)	1.0137E-05 (363, 5)	9.2824E-06 (
36	7.9183E-06 (187, 5)	1.0183E-05 (221, 5)	1.0290E-05 (221, 5)	9.5162E-06 (188, 5)	1.0253E-05 (

PLANT NAME: LONESTAR POLLUTANT: SO2 AIR QUALITY UNITS: GM/M**3

MAXIMUM MEAN CONC= 5.3122E-07 DIRECTION= 30 DISTANCE= 1.5 KM

YEAR= 71

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR	RANGE	0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 KM
1		5.92009E-08	8.24463E-08	9.08021E-08	9.25065E-08	9.14509E-08
2		4.68535E-08	6.52774E-08	7.26681E-08	7.51871E-08	7.54614E-08
3		3.96085E-08	5.99729E-08	7.19243E-08	7.88886E-08	8.26037E-08
4		5.12974E-08	7.13001E-08	7.84346E-08	7.91964E-08	7.72465E-08
5		5.72159E-08	8.01394E-08	9.20984E-08	9.76862E-08	9.96978E-08
6		4.92718E-08	6.64083E-08	7.57271E-08	8.04060E-08	8.25179E-08
7		3.78171E-08	5.35808E-08	6.23392E-08	6.60530E-08	6.68610E-08
8		3.11243E-08	4.57759E-08	5.34355E-08	5.60412E-08	5.58446E-08
9		2.80435E-08	4.01294E-08	4.62366E-08	4.86075E-08	4.90967E-08
10		3.66655E-08	5.42213E-08	6.32452E-08	6.66880E-08	6.72010E-08
11		5.26887E-08	7.81390E-08	9.09007E-08	9.56495E-08	9.61956E-08
12		7.00524E-08	1.06495E-07	1.25090E-07	1.32092E-07	1.33023E-07
13		6.57231E-08	9.83846E-08	1.16310E-07	1.24277E-07	1.26852E-07
14		5.98785E-08	9.57502E-08	1.21857E-07	1.37772E-07	1.46403E-07
15		5.17762E-08	7.90677E-08	9.97402E-08	1.13582E-07	1.22443E-07
16		5.08128E-08	7.82530E-08	9.67887E-08	1.08966E-07	1.17096E-07
17		4.68663E-08	7.33373E-08	8.82707E-08	9.59986E-08	9.98943E-08
18		5.56351E-08	9.29774E-08	1.14032E-07	1.23962E-07	1.27849E-07
19		4.88765E-08	8.03628E-08	9.70546E-08	1.03706E-07	1.04984E-07
20		5.34424E-08	8.26526E-08	9.92043E-08	1.07444E-07	1.10620E-07
21		7.89734E-08	1.28305E-07	1.61465E-07	1.81523E-07	1.91950E-07
22		7.53944E-08	1.25388E-07	1.61808E-07	1.85857E-07	1.99806E-07
23		1.06507E-07	1.71479E-07	2.11922E-07	2.35183E-07	2.46694E-07
24		1.69269E-07	2.64379E-07	3.15298E-07	3.40400E-07	3.50584E-07
25		1.57567E-07	2.55642E-07	3.16926E-07	3.54297E-07	3.75723E-07
26		1.51973E-07	2.38527E-07	2.88069E-07	3.15781E-07	3.30054E-07
27		1.85538E-07	2.78722E-07	3.24137E-07	3.45297E-07	3.53490E-07
28		2.62011E-07	3.86942E-07	4.37689E-07	4.52158E-07	4.49727E-07
29		3.27540E-07	4.63874E-07	5.04013E-07	5.00501E-07	4.79804E-07
30		3.50378E-07	4.91820E-07	5.31224E-07	5.25504E-07	5.03290E-07
31		2.51647E-07	3.52825E-07	3.82246E-07	3.79792E-07	3.65371E-07
32		1.48206E-07	2.20334E-07	2.50491E-07	2.59446E-07	2.58464E-07
33		9.26906E-08	1.42137E-07	1.65012E-07	1.73662E-07	1.75133E-07
34		8.39804E-08	1.32894E-07	1.58966E-07	1.71373E-07	1.75906E-07
35		6.98460E-08	1.07411E-07	1.26724E-07	1.35674E-07	1.38934E-07
36		6.81615E-08	1.00526E-07	1.16697E-07	1.24531E-07	1.27992E-07

PLANT NAME: LONESTAR POLLUTANT: SO2 AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 24-HOUR CONC= 4.2477E-06 DIRECTION= 29 DISTANCE= 1.5 KM DAY=208

YEAR= 71

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.9 KM		1.2 KM		1.5 KM		1.8 KM		2.1 KM	
1	1.6104E-06	(9)	1.9147E-06	(9)	1.7617E-06	(226)	1.7979E-06	(226)	1.7428E-06	(226)
2	1.3847E-06	(9)	1.5884E-06	(9)	1.6607E-06	(10)	1.6239E-06	(10)	1.5501E-06	(10)
3	1.1688E-06	(173)	1.7474E-06	(254)	1.8231E-06	(254)	1.8541E-06	(225)	2.1433E-06	(256)
4	1.3918E-06	(121)	1.6654E-06	(149)	1.8739E-06	(149)	1.9684E-06	(149)	1.9907E-06	(149)
5	2.4399E-06	(166)	2.4448E-06	(166)	2.2810E-06	(149)	2.3266E-06	(149)	2.1642E-06	(223)
6	2.3089E-06	(223)	2.4061E-06	(166)	2.2308E-06	(223)	1.9121E-06	(223)	1.7453E-06	(149)
7	1.1508E-06	(141)	1.4228E-06	(166)	1.3402E-06	(141)	1.2898E-06	(141)	1.3076E-06	(75)
8	8.5642E-07	(223)	1.0941E-06	(334)	1.0608E-06	(334)	1.0802E-06	(165)	1.1033E-06	(85)
9	8.2559E-07	(223)	8.2933E-07	(334)	7.6451E-07	(124)	7.9668E-07	(204)	7.9785E-07	(157)
10	1.1464E-06	(141)	1.3687E-06	(15)	1.4708E-06	(15)	1.3861E-06	(15)	1.2410E-06	(15)
11	1.9698E-06	(123)	2.4392E-06	(299)	2.6652E-06	(299)	2.5494E-06	(299)	2.3143E-06	(299)
12	1.9082E-06	(123)	2.3579E-06	(222)	2.3062E-06	(298)	2.2944E-06	(298)	2.1480E-06	(298)
13	1.4589E-06	(96)	1.8562E-06	(338)	2.1083E-06	(338)	2.1741E-06	(338)	2.1546E-06	(338)
14	1.5931E-06	(82)	1.5505E-06	(96)	1.8007E-06	(168)	2.0179E-06	(96)	2.0579E-06	(96)
15	1.2679E-06	(326)	1.5843E-06	(28)	1.6059E-06	(79)	1.9908E-06	(79)	2.2466E-06	(79)
16	1.3115E-06	(168)	2.0192E-06	(28)	2.2764E-06	(28)	2.2562E-06	(28)	2.1340E-06	(28)
17	1.2001E-06	(83)	1.2748E-06	(29)	1.3973E-06	(16)	1.4330E-06	(352)	1.4790E-06	(352)
18	1.3093E-06	(1)	1.9043E-06	(326)	2.2440E-06	(326)	2.2433E-06	(326)	2.1505E-06	(68)
19	1.0536E-06	(237)	1.4938E-06	(269)	1.9225E-06	(269)	1.8517E-06	(86)	1.7027E-06	(86)
20	1.1655E-06	(237)	1.3343E-06	(237)	1.4851E-06	(316)	1.6650E-06	(311)	1.7710E-06	(241)
21	1.2892E-06	(105)	1.6729E-06	(138)	1.9340E-06	(268)	2.2943E-06	(357)	2.5050E-06	(357)
22	1.0672E-06	(138)	1.8276E-06	(153)	2.4516E-06	(153)	2.8543E-06	(153)	3.0857E-06	(153)
23	1.4323E-06	(80)	2.2022E-06	(153)	2.4744E-06	(236)	2.3233E-06	(139)	2.3915E-06	(266)
24	1.9010E-06	(230)	2.6176E-06	(233)	2.7359E-06	(125)	2.8069E-06	(319)	2.9365E-06	(233)
25	1.7801E-06	(191)	2.3695E-06	(105)	2.3666E-06	(125)	2.7417E-06	(363)	3.2136E-06	(191)
26	2.4002E-06	(169)	3.2369E-06	(169)	3.3820E-06	(169)	3.1759E-06	(169)	2.8579E-06	(169)
27	2.5427E-06	(194)	3.2756E-06	(194)	3.1989E-06	(194)	2.8452E-06	(194)	2.7080E-06	(231)
28	2.3236E-06	(198)	2.8848E-06	(140)	3.1195E-06	(140)	3.0559E-06	(140)	2.8745E-06	(34)
29	3.2096E-06	(129)	4.0423E-06	(128)	4.2477E-06	(208)	4.2082E-06	(208)	3.6757E-06	(193)
30	3.1566E-06	(129)	3.9686E-06	(129)	3.8527E-06	(129)	3.5393E-06	(208)	3.2640E-06	(132)
31	2.8577E-06	(111)	3.6637E-06	(184)	3.6715E-06	(118)	3.4633E-06	(185)	3.0334E-06	(185)
32	1.8652E-06	(108)	2.5506E-06	(287)	2.7002E-06	(287)	2.6398E-06	(118)	2.5737E-06	(59)
33	1.2926E-06	(113)	1.6979E-06	(218)	1.7062E-06	(113)	1.5456E-06	(113)	1.6087E-06	(218)
34	1.5049E-06	(113)	1.9053E-06	(113)	2.1501E-06	(8)	2.1431E-06	(8)	2.2874E-06	(61)
35	1.3698E-06	(73)	1.8380E-06	(7)	2.1840E-06	(7)	2.2717E-06	(7)	2.2122E-06	(7)
36	1.3520E-06	(250)	1.8656E-06	(174)	2.0819E-06	(174)	1.9026E-06	(133)	1.6196E-06	(133)

PLANT NAME: LONESTAR POLLUTANT: SO2 AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 3-HOUR CONC= 1.8055E-05 DIRECTION= 30 DISTANCE= 1.5 KM DAY=126 [I

YEAR= 71

SECOND HIGHEST 3-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 K
1	1.1136E-05 (9, 4)	1.3395E-05 (9, 4)	1.2282E-05 (9, 4)	1.0652E-05 (10, 5)	9.3916E-06 (
2	9.2671E-06 (174, 5)	9.7981E-06 (174, 5)	8.4252E-06 (174, 5)	7.3755E-06 (10, 4)	6.8248E-06 (
3	7.6712E-06 (167, 4)	7.6093E-06 (167, 4)	7.4989E-06 (256, 4)	7.7644E-06 (295, 4)	7.9703E-06 (
4	7.6114E-06 (150, 5)	9.5864E-06 (150, 5)	9.2403E-06 (150, 5)	8.1606E-06 (150, 5)	7.0019E-06 (
5	1.0381E-05 (166, 4)	1.1486E-05 (166, 4)	1.1248E-05 (75, 4)	9.9467E-06 (75, 4)	8.5660E-06 (
6	1.1198E-05 (166, 4)	1.4882E-05 (75, 4)	1.2302E-05 (223, 5)	9.7799E-06 (223, 5)	7.7763E-06 (
7	7.8081E-06 (171, 4)	7.9619E-06 (167, 3)	8.9140E-06 (167, 3)	8.8403E-06 (141, 4)	7.5487E-06 (
8	5.7371E-06 (104, 5)	6.0687E-06 (298, 5)	7.6309E-06 (165, 3)	8.6055E-06 (165, 3)	8.7154E-06 (
9	6.5038E-06 (104, 5)	6.2860E-06 (151, 4)	6.1160E-06 (124, 3)	5.8961E-06 (124, 3)	5.3538E-06 (
10	6.6887E-06 (240, 4)	7.5870E-06 (15, 5)	8.3261E-06 (124, 3)	8.1130E-06 (124, 3)	7.4370E-06 (
11	8.6350E-06 (240, 4)	9.0181E-06 (141, 5)	8.6341E-06 (299, 4)	8.4585E-06 (123, 3)	7.8382E-06 (
12	9.7210E-06 (123, 5)	1.2220E-05 (299, 4)	1.2922E-05 (299, 4)	1.2093E-05 (299, 4)	1.1127E-05 (
13	1.0687E-05 (168, 4)	9.7922E-06 (168, 4)	1.0722E-05 (75, 5)	1.1017E-05 (299, 3)	1.0710E-05 (
14	9.6363E-06 (82, 4)	9.7843E-06 (338, 4)	1.0065E-05 (168, 4)	9.5927E-06 (96, 4)	9.0861E-06 (
15	7.1790E-06 (220, 4)	8.0940E-06 (142, 3)	8.5689E-06 (142, 3)	8.3646E-06 (28, 4)	7.8357E-06 (
16	8.5550E-06 (168, 4)	1.0173E-05 (28, 4)	1.2489E-05 (28, 4)	1.2725E-05 (28, 4)	1.1981E-05 (
17	7.4057E-06 (29, 4)	9.8724E-06 (172, 4)	8.3888E-06 (172, 4)	7.2339E-06 (352, 4)	7.5125E-06 (
18	8.8527E-06 (172, 4)	1.0538E-05 (1, 5)	1.1537E-05 (1, 5)	1.1021E-05 (1, 5)	9.9934E-06 (
19	5.7828E-06 (64, 4)	9.1523E-06 (303, 3)	8.7165E-06 (76, 5)	8.1455E-06 (76, 5)	7.6932E-06 (
20	6.1672E-06 (142, 4)	7.6663E-06 (68, 4)	7.8531E-06 (311, 5)	8.4281E-06 (311, 5)	8.0065E-06 (
21	8.7991E-06 (244, 5)	9.4774E-06 (244, 5)	1.0494E-05 (264, 3)	9.9578E-06 (241, 4)	1.0189E-05 (
22	7.1864E-06 (239, 4)	8.1137E-06 (138, 4)	7.7309E-06 (236, 4)	7.5873E-06 (357, 5)	8.1671E-06 (
23	7.9237E-06 (342, 4)	8.4707E-06 (99, 5)	8.9866E-06 (346, 4)	9.9037E-06 (346, 4)	9.0340E-06 (
24	9.1238E-06 (233, 5)	1.1807E-05 (276, 4)	1.2418E-05 (305, 4)	1.1644E-05 (305, 4)	1.0418E-05 (
25	1.0927E-05 (142, 4)	1.2239E-05 (142, 4)	1.1558E-05 (190, 4)	1.0815E-05 (210, 3)	1.1235E-05 (
26	8.5415E-06 (106, 4)	1.2009E-05 (169, 5)	1.2390E-05 (169, 5)	1.1418E-05 (169, 5)	1.0413E-05 (
27	1.2059E-05 (169, 4)	1.1827E-05 (169, 4)	1.1849E-05 (189, 4)	1.1141E-05 (189, 4)	1.0424E-05 (
28	1.1629E-05 (168, 5)	1.3275E-05 (194, 4)	1.3773E-05 (140, 5)	1.2885E-05 (140, 5)	1.1500E-05 (
29	1.2863E-05 (196, 4)	1.6229E-05 (176, 5)	1.5960E-05 (176, 5)	1.4578E-05 (208, 5)	1.2641E-05 (
30	1.4472E-05 (184, 4)	1.7486E-05 (126, 4)	1.8055E-05 (126, 4)	1.6677E-05 (126, 4)	1.4772E-05 (
31	1.4024E-05 (109, 5)	1.4190E-05 (111, 5)	1.3697E-05 (111, 5)	1.2129E-05 (220, 5)	1.0885E-05 (
32	1.3151E-05 (273, 5)	1.4933E-05 (108, 5)	1.4821E-05 (74, 5)	1.3936E-05 (74, 5)	1.2258E-05 (
33	8.9787E-06 (287, 4)	1.0478E-05 (287, 4)	1.0521E-05 (238, 5)	9.4638E-06 (238, 5)	8.1207E-06 (
34	1.0581E-05 (331, 5)	1.1645E-05 (331, 5)	1.1622E-05 (8, 5)	1.1176E-05 (73, 4)	9.8635E-06 (
35	8.0040E-06 (73, 4)	1.0715E-05 (73, 4)	1.1883E-05 (8, 5)	1.1526E-05 (8, 5)	1.0528E-05 (
36	7.3001E-06 (228, 4)	1.0404E-05 (10, 5)	1.1254E-05 (10, 5)	9.9696E-06 (133, 4)	9.0990E-06 (

PLANT NAME: LONESTAR POLLUTANT: SO2 AIR QUALITY UNITS: GM/M**3

MAXIMUM MEAN CONC= 5.9729E-07 DIRECTION= 30 DISTANCE= 1.8 KM

YEAR= 72

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR \ RANGE	0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 KM
1	5.57866E-08	7.76973E-08	8.77374E-08	9.09081E-08	9.05764E-08
2	5.43547E-08	7.41244E-08	8.37550E-08	8.77792E-08	8.89930E-08
3	5.95781E-08	8.05682E-08	9.02966E-08	9.35785E-08	9.36614E-08
4	6.48596E-08	8.82513E-08	9.77604E-08	9.92422E-08	9.71986E-08
5	6.66373E-08	9.09861E-08	1.02061E-07	1.05257E-07	1.04677E-07
6	8.05200E-08	1.14963E-07	1.32297E-07	1.39110E-07	1.40280E-07
7	5.60592E-08	8.10167E-08	9.43811E-08	9.99510E-08	1.00985E-07
8	3.96451E-08	5.34408E-08	6.02107E-08	6.26009E-08	6.26481E-08
9	4.45627E-08	5.90330E-08	6.58518E-08	6.78978E-08	6.74288E-08
10	4.43875E-08	5.65349E-08	6.14430E-08	6.23496E-08	6.13206E-08
11	5.90240E-08	8.27893E-08	9.27186E-08	9.49319E-08	9.34448E-08
12	7.05874E-08	1.14062E-07	1.39269E-07	1.50711E-07	1.54543E-07
13	6.94684E-08	1.14698E-07	1.40737E-07	1.54021E-07	1.59744E-07
14	6.92876E-08	1.14242E-07	1.40317E-07	1.54115E-07	1.60581E-07
15	4.92250E-08	8.15514E-08	9.92757E-08	1.07935E-07	1.11898E-07
16	4.73812E-08	8.19667E-08	1.02387E-07	1.13379E-07	1.18863E-07
17	4.35405E-08	7.04257E-08	8.25134E-08	8.63166E-08	8.63785E-08
18	3.55942E-08	6.04066E-08	7.40079E-08	8.05598E-08	8.33449E-08
19	2.46355E-08	4.32045E-08	5.36732E-08	5.84717E-08	6.00841E-08
20	2.57377E-08	4.48932E-08	5.64839E-08	6.31025E-08	6.67126E-08
21	4.39635E-08	7.96936E-08	1.05554E-07	1.23248E-07	1.34269E-07
22	5.77195E-08	1.05785E-07	1.42425E-07	1.68481E-07	1.85308E-07
23	6.97218E-08	1.25229E-07	1.68384E-07	1.99456E-07	2.19566E-07
24	1.05258E-07	1.78011E-07	2.28272E-07	2.60911E-07	2.80107E-07
25	1.30661E-07	2.08353E-07	2.56267E-07	2.84673E-07	3.00100E-07
26	1.72507E-07	2.69396E-07	3.25419E-07	3.56507E-07	3.72312E-07
27	1.97762E-07	3.07054E-07	3.71729E-07	4.08849E-07	4.28599E-07
28	2.10401E-07	3.11488E-07	3.65606E-07	3.93800E-07	4.07156E-07
29	2.87792E-07	4.10201E-07	4.56005E-07	4.64301E-07	4.56202E-07
30	3.75438E-07	5.36790E-07	5.92455E-07	5.97289E-07	5.81219E-07
31	3.54179E-07	4.89665E-07	5.25281E-07	5.15341E-07	4.88882E-07
32	2.74844E-07	3.65610E-07	3.83194E-07	3.69216E-07	3.45261E-07
33	1.87821E-07	2.41999E-07	2.49192E-07	2.37234E-07	2.20060E-07
34	1.28013E-07	1.62685E-07	1.66859E-07	1.59111E-07	1.48380E-07
35	9.54875E-08	1.29605E-07	1.40139E-07	1.38765E-07	1.32604E-07
36	7.56163E-08	1.13409E-07	1.33226E-07	1.41501E-07	1.43648E-07

PLANT NAME: LONESTAR POLLUTANT: SU2 AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 24-HOUR CONC= 4.7738E-06 DIRECTION= 31 DISTANCE= 1.2 KM DAY=112

YEAR= 72

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 KM
1	1.6558E-06 (192)	1.8580E-06 (193)	1.9043E-06 (91)	2.0165E-06 (192)	1.7789E-06 (192)
2	1.5994E-06 (99)	2.0103E-06 (193)	1.8078E-06 (193)	1.7760E-06 (63)	1.6853E-06 (99)
3	1.3544E-06 (275)	1.6669E-06 (193)	1.7209E-06 (193)	1.7940E-06 (125)	1.6582E-06 (125)
4	1.4592E-06 (138)	1.7095E-06 (176)	1.7397E-06 (176)	1.8435E-06 (182)	1.8801E-06 (182)
5	1.7459E-06 (181)	1.5865E-06 (176)	1.6380E-06 (176)	1.5538E-06 (176)	1.4335E-06 (176)
6	2.0927E-06 (173)	3.0019E-06 (151)	3.2932E-06 (173)	3.5642E-06 (173)	3.7004E-06 (173)
7	1.2398E-06 (192)	1.5743E-06 (144)	1.6681E-06 (173)	1.8063E-06 (173)	1.8677E-06 (173)
8	9.1223E-07 (146)	1.2512E-06 (361)	1.4856E-06 (151)	1.4597E-06 (151)	1.3473E-06 (151)
9	1.4066E-06 (109)	1.7281E-06 (109)	1.5620E-06 (109)	1.4042E-06 (151)	1.3395E-06 (151)
10	1.9433E-06 (233)	1.4216E-06 (179)	1.5343E-06 (154)	1.6087E-06 (154)	1.5582E-06 (154)
11	1.6992E-06 (282)	1.9515E-06 (142)	2.1172E-06 (282)	2.1042E-06 (142)	1.9933E-06 (142)
12	1.5344E-06 (148)	2.6010E-06 (282)	2.5105E-06 (282)	2.8191E-06 (321)	2.7855E-06 (147)
13	1.5307E-06 (148)	1.9122E-06 (148)	2.2898E-06 (328)	2.5388E-06 (328)	2.7007E-06 (328)
14	1.9448E-06 (280)	3.0350E-06 (280)	3.2801E-06 (97)	3.1823E-06 (280)	2.9386E-06 (16)
15	1.4794E-06 (280)	1.9246E-06 (45)	1.9809E-06 (83)	1.9585E-06 (280)	1.8444E-06 (83)
16	1.2495E-06 (326)	1.6169E-06 (326)	1.7943E-06 (352)	2.2540E-06 (45)	2.3495E-06 (351)
17	1.1316E-06 (141)	1.7674E-06 (322)	1.9722E-06 (322)	1.7236E-06 (326)	1.5122E-06 (141)
18	9.3080E-07 (326)	1.4004E-06 (190)	1.6200E-06 (190)	1.3610E-06 (279)	1.4124E-06 (7)
19	5.7294E-07 (122)	1.1457E-06 (158)	1.2353E-06 (126)	1.2450E-06 (126)	1.1663E-06 (126)
20	7.2456E-07 (117)	1.3808E-06 (158)	1.4038E-06 (122)	1.4739E-06 (117)	1.5017E-06 (117)
21	1.2181E-06 (117)	1.4569E-06 (287)	1.6021E-06 (287)	1.7799E-06 (286)	2.0348E-06 (17)
22	1.1050E-06 (215)	1.5696E-06 (215)	1.6699E-06 (72)	2.3056E-06 (17)	2.5352E-06 (8)
23	1.5550E-06 (246)	1.4332E-06 (247)	2.0013E-06 (295)	2.5967E-06 (295)	2.7693E-06 (8)
24	1.9657E-06 (240)	2.0831E-06 (189)	2.1545E-06 (266)	2.3865E-06 (126)	2.8747E-06 (127)
25	1.9220E-06 (263)	2.4559E-06 (216)	2.5337E-06 (216)	2.4598E-06 (80)	2.5299E-06 (263)
26	1.9213E-06 (189)	2.5693E-06 (216)	2.7228E-06 (216)	2.8068E-06 (202)	2.9662E-06 (202)
27	1.8363E-06 (73)	2.5585E-06 (200)	2.8002E-06 (200)	2.8853E-06 (167)	3.2760E-06 (81)
28	2.3873E-06 (227)	3.0940E-06 (273)	3.1555E-06 (209)	2.9089E-06 (209)	3.0368E-06 (128)
29	2.0750E-06 (195)	3.0461E-06 (162)	3.1373E-06 (212)	3.1761E-06 (213)	3.0615E-06 (213)
30	3.0901E-06 (235)	3.9091E-06 (237)	3.9886E-06 (237)	3.6987E-06 (237)	3.8582E-06 (13)
31	3.7172E-06 (112)	4.7738E-06 (112)	4.3464E-06 (111)	3.7498E-06 (111)	3.2200E-06 (111)
32	2.8470E-06 (180)	3.4820E-06 (274)	3.6298E-06 (274)	3.4023E-06 (274)	3.0770E-06 (274)
33	2.5760E-06 (182)	2.8905E-06 (182)	2.6017E-06 (182)	2.3532E-06 (82)	2.2534E-06 (82)
34	2.6620E-06 (180)	3.1193E-06 (124)	2.8212E-06 (124)	2.3847E-06 (124)	1.9902E-06 (135)
35	1.9703E-06 (124)	2.3231E-06 (136)	2.3170E-06 (181)	2.1385E-06 (124)	1.9560E-06 (136)
36	1.3778E-06 (234)	1.5411E-06 (104)	1.7366E-06 (131)	1.8819E-06 (131)	1.9112E-06 (131)

PLANT NAME: LONESTAR POLLUTANT: SO2 AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 3-HOUR CONC= 1.5963E-05 DIRECTION= 31 DISTANCE= 1.2 KM DAY=131 II

YEAR= 72

SECOND HIGHEST 3-HOUR CONCENTRATION AT EACH RECEPTOR

RANGE DIR	0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 K
1	9.8601E-06 (193, 4)	9.8013E-06 (137, 5)	8.4177E-06 (137, 5)	7.0791E-06 (130, 3)	6.4684E-06 (
2	9.2879E-06 (193, 4)	9.0345E-06 (192, 5)	9.5021E-06 (192, 5)	8.8830E-06 (192, 5)	8.0575E-06 (
3	1.0836E-05 (275, 4)	9.3250E-06 (181, 4)	1.0155E-05 (125, 4)	8.8901E-06 (152, 3)	7.7734E-06 (
4	7.4244E-06 (138, 4)	1.3005E-05 (144, 3)	1.1878E-05 (181, 4)	9.9882E-06 (181, 4)	8.4268E-06 (
5	1.2932E-05 (138, 4)	1.0614E-05 (138, 4)	1.0458E-05 (145, 3)	1.0265E-05 (176, 4)	9.3221E-06 (
6	9.1395E-06 (174, 4)	1.2112E-05 (151, 4)	1.2912E-05 (151, 4)	1.2201E-05 (151, 4)	1.0984E-05 (
7	7.3844E-06 (137, 4)	7.0829E-06 (146, 4)	6.6378E-06 (137, 4)	6.4840E-06 (145, 5)	6.8462E-06 (
8	6.5752E-06 (137, 5)	6.1453E-06 (160, 5)	6.2649E-06 (78, 4)	6.7133E-06 (48, 6)	6.9993E-06 (
9	7.4311E-06 (109, 5)	9.3639E-06 (44, 4)	9.8549E-06 (44, 4)	9.1829E-06 (44, 4)	8.1661E-06 (
10	9.5017E-06 (250, 4)	9.0730E-06 (233, 4)	1.0113E-05 (109, 4)	8.5696E-06 (109, 4)	7.5798E-06 (
11	8.8581E-06 (282, 4)	9.5210E-06 (154, 5)	9.9538E-06 (154, 5)	9.2685E-06 (154, 5)	8.2414E-06 (
12	8.4670E-06 (148, 4)	1.1176E-05 (97, 5)	1.1073E-05 (282, 5)	1.0812E-05 (240, 6)	1.0235E-05 (
13	8.6137E-06 (282, 5)	1.1018E-05 (148, 4)	1.0728E-05 (359, 4)	1.1752E-05 (282, 5)	1.0417E-05 (
14	8.3987E-06 (280, 4)	1.4316E-05 (280, 4)	1.4970E-05 (97, 4)	1.3690E-05 (97, 4)	1.2034E-05 (
15	6.1572E-06 (45, 4)	7.2443E-06 (362, 5)	7.3644E-06 (83, 5)	6.9812E-06 (36, 4)	6.8299E-06 (
16	6.3442E-06 (126, 3)	7.4641E-06 (36, 4)	8.6418E-06 (36, 4)	8.6454E-06 (36, 4)	8.1443E-06 (
17	8.4902E-06 (45, 4)	1.0550E-05 (45, 4)	1.1244E-05 (191, 3)	1.0590E-05 (326, 5)	9.3822E-06 (
18	6.9811E-06 (326, 5)	1.0800E-05 (190, 5)	1.1226E-05 (279, 4)	9.1022E-06 (279, 4)	7.3483E-06 (
19	4.5342E-06 (198, 3)	6.4862E-06 (198, 3)	6.4338E-06 (198, 3)	6.0710E-06 (265, 3)	5.8662E-06 (
20	5.3962E-06 (45, 5)	6.6488E-06 (122, 3)	6.1946E-06 (157, 4)	6.2086E-06 (157, 4)	6.5729E-06 (
21	6.5539E-06 (158, 4)	1.0185E-05 (158, 4)	1.0034E-05 (126, 5)	8.6190E-06 (126, 5)	7.2805E-06 (
22	7.3110E-06 (191, 4)	9.6276E-06 (332, 5)	8.9794E-06 (332, 5)	8.1035E-06 (117, 5)	7.9324E-06 (
23	1.0400E-05 (216, 4)	1.1211E-05 (246, 5)	1.1095E-05 (262, 4)	1.0464E-05 (262, 4)	9.3869E-06 (
24	1.4206E-05 (216, 4)	1.3268E-05 (216, 4)	1.2237E-05 (253, 6)	1.0932E-05 (189, 4)	9.7447E-06 (
25	1.0950E-05 (263, 4)	1.2642E-05 (191, 5)	1.2441E-05 (191, 5)	1.1133E-05 (191, 5)	9.6298E-06 (
26	1.0664E-05 (265, 5)	1.2009E-05 (265, 5)	1.1864E-05 (202, 4)	1.1225E-05 (202, 4)	1.0130E-05 (
27	1.3877E-05 (159, 5)	1.3780E-05 (200, 4)	1.2588E-05 (258, 5)	1.2615E-05 (186, 3)	1.1659E-05 (
28	1.3039E-05 (228, 5)	1.2228E-05 (317, 4)	1.1428E-05 (29, 5)	1.1063E-05 (273, 5)	9.9635E-06 (
29	1.2129E-05 (195, 5)	1.2974E-05 (211, 5)	1.2729E-05 (21, 4)	1.2587E-05 (21, 4)	1.1299E-05 (
30	1.3262E-05 (235, 4)	1.3735E-05 (237, 4)	1.3484E-05 (106, 4)	1.3309E-05 (32, 4)	1.2828E-05 (
31	1.3994E-05 (111, 5)	1.5963E-05 (131, 5)	1.4312E-05 (112, 4)	1.2510E-05 (109, 6)	1.1720E-05 (
32	1.4315E-05 (112, 4)	1.5189E-05 (112, 4)	1.4408E-05 (274, 5)	1.3413E-05 (274, 5)	1.1943E-05 (
33	1.2756E-05 (57, 4)	1.4685E-05 (57, 4)	1.2922E-05 (274, 4)	1.1189E-05 (57, 4)	1.0151E-05 (
34	1.3505E-05 (180, 5)	1.3910E-05 (180, 5)	1.1714E-05 (180, 5)	1.0659E-05 (57, 4)	9.7723E-06 (
35	9.5517E-06 (136, 5)	1.1825E-05 (181, 6)	1.1372E-05 (63, 5)	1.1025E-05 (63, 5)	1.0082E-05 (
36	9.5547E-06 (137, 5)	1.1513E-05 (330, 4)	1.1148E-05 (179, 6)	1.0643E-05 (179, 6)	1.1390E-05 (

PLANT NAME: LONESTAR POLLUTANT: SO2 AIR QUALITY UNITS: GM/M**3

MAXIMUM MEAN CONC= 5.3511E-07 DIRECTION= 31 DISTANCE= 1.8 KM

YEAR= 73

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR \ RANGE	0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 KM
1	7.66084E-08	1.08503E-07	1.21850E-07	1.24525E-07	1.22395E-07
2	4.87912E-08	6.86569E-08	7.79862E-08	8.13206E-08	8.15020E-08
3	3.98934E-08	5.80068E-08	6.69915E-08	7.07238E-08	7.14496E-08
4	3.35991E-08	4.76401E-08	5.55227E-08	5.94875E-08	6.11569E-08
5	3.12012E-08	3.97702E-08	4.47706E-08	4.72737E-08	4.82376E-08
6	3.85407E-08	4.92388E-08	5.53082E-08	5.78825E-08	5.84420E-08
7	3.96170E-08	5.00549E-08	5.57603E-08	5.75230E-08	5.71783E-08
8	4.89757E-08	6.16074E-08	6.89681E-08	7.27458E-08	7.44602E-08
9	5.30239E-08	6.80130E-08	7.76575E-08	8.34103E-08	8.61343E-08
10	3.98466E-08	5.00342E-08	5.61113E-08	5.94252E-08	6.07813E-08
11	3.10115E-08	4.57422E-08	5.59941E-08	6.23496E-08	6.60264E-08
12	2.55751E-08	4.72184E-08	6.49470E-08	7.75993E-08	8.58364E-08
13	3.11422E-08	5.53491E-08	7.28393E-08	8.45478E-08	9.18929E-08
14	5.35214E-08	9.66670E-08	1.25428E-07	1.42949E-07	1.53027E-07
15	4.89001E-08	9.17967E-08	1.23071E-07	1.43858E-07	1.56774E-07
16	4.96920E-08	8.79855E-08	1.14123E-07	1.30078E-07	1.38980E-07
17	5.97986E-08	9.76606E-08	1.22565E-07	1.36659E-07	1.43712E-07
18	6.18953E-08	9.60630E-08	1.17612E-07	1.29205E-07	1.34688E-07
19	5.07067E-08	7.48593E-08	8.75137E-08	9.25436E-08	9.34755E-08
20	3.78212E-08	5.76175E-08	6.86750E-08	7.42147E-08	7.65355E-08
21	2.66169E-08	4.32143E-08	5.47305E-08	6.23401E-08	6.70004E-08
22	4.13188E-08	7.05232E-08	9.00216E-08	1.01924E-07	1.08407E-07
23	6.37073E-08	1.05887E-07	1.34269E-07	1.52717E-07	1.63853E-07
24	1.03670E-07	1.70699E-07	2.13919E-07	2.40731E-07	2.56153E-07
25	1.37460E-07	2.19457E-07	2.67340E-07	2.94364E-07	3.08505E-07
26	1.58190E-07	2.55005E-07	3.12539E-07	3.45698E-07	3.63408E-07
27	1.50408E-07	2.49805E-07	3.13151E-07	3.52105E-07	3.74589E-07
28	1.80166E-07	3.03024E-07	3.83379E-07	4.33071E-07	4.61078E-07
29	2.18105E-07	3.24265E-07	3.78633E-07	4.04543E-07	4.14633E-07
30	3.08490E-07	4.45416E-07	5.05739E-07	5.25885E-07	5.26152E-07
31	3.43020E-07	4.77675E-07	5.27592E-07	5.35115E-07	5.23700E-07
32	3.07977E-07	4.12300E-07	4.39937E-07	4.32079E-07	4.11183E-07
33	2.31048E-07	3.10743E-07	3.34481E-07	3.30664E-07	3.16127E-07
34	1.50391E-07	1.99362E-07	2.15395E-07	2.14262E-07	2.05908E-07
35	1.09666E-07	1.49447E-07	1.63563E-07	1.63231E-07	1.56578E-07
36	1.05119E-07	1.53595E-07	1.74591E-07	1.78842E-07	1.75381E-07

PLANT NAME: LONESTAR POLLUTANT: SO2 AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 24-HOUR CONC= 4.3392E-06 DIRECTION= 26 DISTANCE= 1.8 KM DAY=113

YEAR= 73

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 KM
1	1.0755E-06 (177)	1.8459E-06 (192)	1.9057E-06 (186)	1.9305E-06 (267)	1.9753E-06 (267)
2	1.1267E-06 (192)	1.2213E-06 (186)	1.1814E-06 (261)	1.2402E-06 (94)	1.4577E-06 (94)
3	1.0752E-06 (141)	1.4597E-06 (235)	1.7223E-06 (192)	1.7141E-06 (117)	1.8234E-06 (98)
4	1.0590E-06 (181)	1.0401E-06 (6)	1.2946E-06 (6)	1.3139E-06 (174)	1.4664E-06 (174)
5	1.2995E-06 (181)	8.0661E-07 (190)	1.0299E-06 (6)	1.0524E-06 (6)	9.7856E-07 (6)
6	1.2229E-06 (259)	1.4867E-06 (132)	1.5171E-06 (132)	1.4386E-06 (347)	1.4351E-06 (347)
7	1.3791E-06 (259)	1.3384E-06 (234)	1.4383E-06 (258)	1.3205E-06 (258)	1.1974E-06 (234)
8	1.6249E-06 (258)	1.9667E-06 (258)	1.9185E-06 (258)	1.7463E-06 (258)	1.5487E-06 (258)
9	1.8256E-06 (234)	2.1195E-06 (253)	2.0921E-06 (253)	1.8940E-06 (253)	1.8774E-06 (254)
10	1.2351E-06 (234)	1.4484E-06 (191)	1.2245E-06 (191)	1.1993E-06 (181)	1.3379E-06 (29)
11	8.7810E-07 (181)	1.0512E-06 (181)	1.0285E-06 (86)	1.1841E-06 (99)	1.3171E-06 (99)
12	6.5752E-07 (78)	9.4262E-07 (355)	1.3397E-06 (53)	1.7687E-06 (12)	1.9867E-06 (355)
13	7.8379E-07 (100)	1.1591E-06 (100)	1.3389E-06 (100)	1.4275E-06 (100)	1.6306E-06 (47)
14	1.3107E-06 (15)	2.0568E-06 (136)	2.3391E-06 (131)	2.4213E-06 (303)	2.3601E-06 (303)
15	1.4457E-06 (101)	1.8520E-06 (356)	2.2120E-06 (346)	2.2592E-06 (346)	2.1608E-06 (346)
16	9.6455E-07 (356)	1.4885E-06 (77)	1.7701E-06 (77)	1.8010E-06 (77)	2.1500E-06 (333)
17	1.2891E-06 (131)	1.6718E-06 (9)	1.9889E-06 (9)	2.1019E-06 (9)	2.1065E-06 (9)
18	1.4910E-06 (118)	1.7471E-06 (30)	2.1382E-06 (118)	2.0543E-06 (297)	2.2171E-06 (30)
19	1.0852E-06 (30)	1.8736E-06 (30)	2.0976E-06 (30)	2.0337E-06 (30)	1.8755E-06 (30)
20	1.4583E-06 (188)	1.5545E-06 (101)	1.4463E-06 (30)	1.3396E-06 (30)	1.5621E-06 (296)
21	9.6485E-07 (101)	1.0066E-06 (282)	1.3257E-06 (294)	1.8813E-06 (294)	2.3061E-06 (294)
22	1.1139E-06 (102)	1.2223E-06 (102)	1.2706E-06 (294)	1.6102E-06 (294)	1.8039E-06 (294)
23	1.2858E-06 (36)	1.8706E-06 (36)	1.9610E-06 (36)	2.1809E-06 (315)	2.4846E-06 (315)
24	1.5423E-06 (153)	2.2042E-06 (265)	2.4708E-06 (265)	2.7179E-06 (153)	2.5660E-06 (153)
25	2.0269E-06 (120)	2.6845E-06 (126)	2.6932E-06 (105)	2.8447E-06 (126)	3.1041E-06 (121)
26	2.3865E-06 (264)	3.4836E-06 (107)	4.1121E-06 (107)	4.3392E-06 (113)	3.9414E-06 (113)
27	1.5175E-06 (188)	1.7834E-06 (112)	2.2470E-06 (122)	2.5669E-06 (199)	2.3984E-06 (199)
28	1.7693E-06 (199)	2.2264E-06 (1)	2.5749E-06 (162)	3.2010E-06 (32)	3.7126E-06 (32)
29	2.2174E-06 (195)	2.4580E-06 (1)	2.6887E-06 (198)	2.5082E-06 (162)	2.4883E-06 (1)
30	2.7104E-06 (218)	2.8708E-06 (218)	2.9090E-06 (128)	3.1409E-06 (128)	3.4063E-06 (74)
31	3.4645E-06 (218)	3.3730E-06 (256)	3.3826E-06 (226)	3.4676E-06 (329)	3.3338E-06 (329)
32	2.7769E-06 (218)	3.3202E-06 (167)	3.1926E-06 (216)	3.1234E-06 (75)	3.3205E-06 (148)
33	2.2572E-06 (212)	2.9029E-06 (167)	2.8301E-06 (40)	2.8460E-06 (40)	2.7261E-06 (40)
34	2.0021E-06 (217)	2.0779E-06 (361)	2.3743E-06 (361)	2.3203E-06 (361)	2.1263E-06 (361)
35	1.6924E-06 (147)	2.0270E-06 (213)	2.0434E-06 (267)	2.0493E-06 (267)	1.9278E-06 (267)
36	2.1776E-06 (180)	2.7202E-06 (262)	2.9066E-06 (180)	2.6763E-06 (180)	2.3791E-06 (180)

PLANT NAME: LONESTAR POLLUTANT: SO2 AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 3-HOUR CONC= 1.6859E-05 DIRECTION= 26 DISTANCE= 1.2 KM DAY=264 HR

YEAR= 73

SECOND HIGHEST 3-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 KM
1	8.9543E-06 (186, 5)	1.0384E-05 (177, 4)	9.8695E-06 (186, 5)	8.7079E-06 (186, 5)	7.8627E-06 (
2	7.8429E-06 (141, 4)	8.8756E-06 (141, 4)	7.9438E-06 (186, 5)	7.2518E-06 (192, 4)	6.7662E-06 (1
3	7.9357E-06 (124, 4)	9.4787E-06 (349, 4)	1.0003E-05 (349, 4)	9.5925E-06 (349, 4)	8.7998E-06 (3
4	8.3402E-06 (117, 4)	7.9659E-06 (181, 4)	6.4800E-06 (181, 4)	6.8466E-06 (174, 4)	6.8889E-06 (1
5	6.4700E-06 (190, 5)	5.8478E-06 (8, 5)	6.3290E-06 (8, 5)	6.0103E-06 (8, 5)	6.0738E-06 (1
6	7.9393E-06 (190, 5)	8.0176E-06 (347, 5)	8.1105E-06 (99, 5)	7.4159E-06 (99, 5)	6.5298E-06 (
7	1.0061E-05 (132, 4)	6.9643E-06 (258, 4)	7.4429E-06 (132, 4)	6.9417E-06 (99, 5)	6.5626E-06 (
8	9.3907E-06 (132, 4)	7.4412E-06 (253, 4)	6.5400E-06 (253, 4)	6.2140E-06 (347, 5)	5.8342E-06 (1
9	1.0999E-05 (258, 5)	1.2365E-05 (253, 4)	1.1575E-05 (234, 4)	1.0095E-05 (253, 4)	9.4334E-06 (1
10	9.0150E-06 (138, 5)	7.2978E-06 (234, 4)	8.1355E-06 (234, 4)	7.8377E-06 (234, 4)	6.9406E-06 (1
11	6.6270E-06 (181, 5)	6.0939E-06 (86, 4)	6.0994E-06 (210, 5)	6.2550E-06 (76, 6)	6.0258E-06 (
12	4.0177E-06 (344, 5)	5.9348E-06 (344, 5)	6.7226E-06 (58, 5)	6.6890E-06 (58, 5)	7.4676E-06 (1
13	4.5759E-06 (100, 5)	6.1223E-06 (86, 5)	6.1754E-06 (86, 5)	5.8057E-06 (183, 5)	6.9630E-06 (
14	8.0723E-06 (343, 5)	1.0814E-05 (303, 4)	1.1699E-05 (303, 4)	1.1178E-05 (303, 4)	1.0661E-05 (1
15	7.9992E-06 (101, 5)	9.3139E-06 (343, 5)	1.0905E-05 (14, 5)	1.1255E-05 (14, 5)	1.0747E-05 (
16	6.1211E-06 (35, 5)	7.7283E-06 (78, 4)	8.1426E-06 (78, 4)	7.6015E-06 (78, 4)	7.8086E-06 (3
17	9.0700E-06 (187, 4)	1.0086E-05 (9, 5)	1.0408E-05 (9, 5)	9.7038E-06 (9, 5)	8.9378E-06 (
18	7.9353E-06 (189, 4)	1.0724E-05 (310, 4)	1.1520E-05 (310, 4)	1.1224E-05 (30, 4)	1.0386E-05 (
19	6.1022E-06 (78, 5)	8.3873E-06 (30, 4)	9.2957E-06 (30, 4)	8.7757E-06 (30, 4)	7.8207E-06 (
20	6.4168E-06 (101, 5)	9.2432E-06 (37, 4)	1.1349E-05 (37, 4)	1.0259E-05 (188, 4)	8.4157E-06 (1
21	5.6603E-06 (101, 5)	8.0031E-06 (282, 4)	7.9477E-06 (282, 4)	7.2158E-06 (188, 4)	7.1627E-06 (1
22	8.8102E-06 (102, 4)	9.6460E-06 (102, 4)	9.1754E-06 (282, 4)	8.0929E-06 (36, 5)	7.3772E-06 (2
23	7.9512E-06 (36, 5)	1.0277E-05 (36, 5)	1.0801E-05 (240, 4)	9.7493E-06 (102, 4)	7.9561E-06 (1
24	8.8969E-06 (265, 5)	1.1920E-05 (153, 5)	1.1634E-05 (265, 5)	1.0687E-05 (265, 5)	9.5517E-06 (2
25	1.0972E-05 (264, 4)	1.3458E-05 (153, 4)	1.2537E-05 (271, 5)	1.1703E-05 (271, 5)	1.0412E-05 (2
26	1.4995E-05 (113, 5)	1.6859E-05 (264, 4)	1.5233E-05 (252, 4)	1.5008E-05 (252, 4)	1.3181E-05 (1
27	1.0643E-05 (264, 4)	1.0254E-05 (264, 4)	1.1261E-05 (184, 5)	1.0945E-05 (184, 5)	1.0016E-05 (1
28	7.6529E-06 (289, 5)	8.5737E-06 (198, 4)	1.0247E-05 (255, 6)	1.0864E-05 (255, 6)	9.9645E-06 (2
29	1.0951E-05 (184, 4)	1.2896E-05 (78, 5)	1.2300E-05 (78, 5)	1.1307E-05 (169, 4)	1.0312E-05 (1
30	1.3469E-05 (280, 5)	1.3902E-05 (280, 5)	1.3757E-05 (274, 4)	1.2666E-05 (274, 4)	1.1422E-05 (
31	1.6213E-05 (256, 5)	1.5112E-05 (256, 5)	1.3179E-05 (115, 4)	1.1506E-05 (218, 4)	1.0713E-05 (2
32	1.3053E-05 (218, 4)	1.4209E-05 (362, 5)	1.4749E-05 (362, 5)	1.3737E-05 (362, 5)	1.2247E-05 (3
33	1.5394E-05 (150, 5)	1.3700E-05 (39, 5)	1.4252E-05 (361, 4)	1.3857E-05 (149, 3)	1.3170E-05 (3
34	1.3650E-05 (227, 5)	1.2309E-05 (364, 4)	1.1768E-05 (38, 5)	1.1203E-05 (38, 5)	1.1302E-05 (1
35	1.0064E-05 (262, 4)	1.1796E-05 (208, 5)	1.1364E-05 (208, 5)	9.9205E-06 (208, 5)	8.3801E-06 (2
36	1.1921E-05 (262, 4)	1.5553E-05 (180, 5)	1.4740E-05 (262, 4)	1.3377E-05 (262, 4)	1.1765E-05 (2

PLANT NAME: LONESTAR POLLUTANT: SO2 AIR QUALITY UNITS: GM/M**3

MAXIMUM MEAN CONC= 6.2677E-07 DIRECTION= 30 DISTANCE= 1.8 KM

YEAR= 74

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR \ RANGE	0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 KM
1	5.46077E-08	7.34256E-08	8.14574E-08	8.37949E-08	8.34619E-08
2	4.84037E-08	6.61403E-08	7.30242E-08	7.41821E-08	7.29278E-08
3	4.56802E-08	5.93432E-08	6.36380E-08	6.33235E-08	6.12635E-08
4	4.92546E-08	6.72075E-08	7.35885E-08	7.39215E-08	7.16713E-08
5	4.44046E-08	6.11964E-08	6.80724E-08	6.97908E-08	6.91247E-08
6	4.69206E-08	6.76824E-08	7.71926E-08	8.02393E-08	8.01220E-08
7	4.54834E-08	6.32201E-08	7.21848E-08	7.66879E-08	7.88232E-08
8	4.20569E-08	5.67102E-08	6.20000E-08	6.32825E-08	6.31056E-08
9	3.76285E-08	5.23007E-08	5.83980E-08	6.03858E-08	6.07139E-08
10	3.55196E-08	4.82455E-08	5.28179E-08	5.33606E-08	5.21461E-08
11	3.76257E-08	5.37367E-08	6.12048E-08	6.40268E-08	6.44679E-08
12	4.53876E-08	6.70187E-08	7.77300E-08	8.19974E-08	8.28770E-08
13	4.85877E-08	7.15210E-08	8.24352E-08	8.63567E-08	8.67714E-08
14	5.09806E-08	8.09584E-08	9.78901E-08	1.06278E-07	1.09845E-07
15	5.43481E-08	9.40549E-08	1.19400E-07	1.32632E-07	1.37883E-07
16	5.32137E-08	8.53304E-08	1.04299E-07	1.14044E-07	1.18685E-07
17	5.82084E-08	9.70612E-08	1.23425E-07	1.40057E-07	1.50405E-07
18	5.71453E-08	9.57663E-08	1.21394E-07	1.36918E-07	1.45800E-07
19	4.81879E-08	7.70188E-08	9.51193E-08	1.05217E-07	1.10433E-07
20	3.70298E-08	5.63033E-08	6.90736E-08	7.63663E-08	8.01817E-08
21	3.65607E-08	6.04230E-08	7.76477E-08	8.84606E-08	9.43643E-08
22	5.66709E-08	9.98274E-08	1.32434E-07	1.54582E-07	1.67856E-07
23	7.98987E-08	1.35506E-07	1.77180E-07	2.06160E-07	2.23948E-07
24	9.53025E-08	1.60918E-07	2.09943E-07	2.44424E-07	2.66315E-07
25	1.15459E-07	1.92785E-07	2.45505E-07	2.79232E-07	2.98647E-07
26	1.39843E-07	2.34811E-07	3.01251E-07	3.46648E-07	3.75540E-07
27	1.51005E-07	2.57696E-07	3.35990E-07	3.91670E-07	4.28547E-07
28	1.95728E-07	3.03981E-07	3.68228E-07	4.06635E-07	4.28219E-07
29	2.93384E-07	4.22052E-07	4.73040E-07	4.86691E-07	4.83075E-07
30	3.85196E-07	5.54802E-07	6.17185E-07	6.26770E-07	6.12920E-07
31	3.38547E-07	4.75441E-07	5.16189E-07	5.11931E-07	4.89945E-07
32	2.57544E-07	3.58498E-07	3.85384E-07	3.78710E-07	3.59680E-07
33	1.96072E-07	2.69173E-07	2.86624E-07	2.79698E-07	2.64503E-07
34	1.51580E-07	2.05484E-07	2.18679E-07	2.13618E-07	2.02068E-07
35	1.02938E-07	1.37416E-07	1.48522E-07	1.48484E-07	1.43809E-07
36	6.96620E-08	9.40460E-08	1.05952E-07	1.10653E-07	1.11576E-07

PLANT NAME: LONESTAR POLLUTANT: SO2 AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 24-HOUR CONC= 3.9989E-06 DIRECTION= 30 DISTANCE= 1.5 KM DAY=159

YEAR= 74

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 KM
1	2.0902E-06 (178)	2.4351E-06 (178)	2.4377E-06 (178)	2.3525E-06 (157)	2.0817E-06 (157)
2	9.7921E-07 (88)	1.4743E-06 (88)	1.5739E-06 (88)	1.6904E-06 (156)	1.7400E-06 (156)
3	1.2830E-06 (132)	1.4176E-06 (132)	1.2475E-06 (231)	1.1698E-06 (132)	1.0302E-06 (132)
4	1.1432E-06 (226)	1.5947E-06 (210)	2.0890E-06 (210)	2.1857E-06 (203)	1.9723E-06 (203)
5	1.1265E-06 (99)	1.7716E-06 (99)	1.9805E-06 (99)	1.9562E-06 (99)	1.8355E-06 (99)
6	1.5161E-06 (168)	1.8815E-06 (168)	1.8173E-06 (168)	1.8421E-06 (192)	1.7121E-06 (192)
7	2.1577E-06 (193)	2.2587E-06 (193)	1.9825E-06 (193)	1.8100E-06 (192)	1.5873E-06 (168)
8	1.3677E-06 (193)	1.4074E-06 (193)	1.3575E-06 (71)	1.3008E-06 (124)	1.3068E-06 (88)
9	1.1446E-06 (148)	1.1150E-06 (272)	9.5793E-07 (272)	9.4781E-07 (193)	9.0014E-07 (193)
10	1.1675E-06 (76)	1.3928E-06 (272)	1.4323E-06 (76)	1.3071E-06 (76)	1.1546E-06 (76)
11	9.6131E-07 (17)	1.0962E-06 (17)	9.7254E-07 (17)	8.2798E-07 (316)	1.0079E-06 (48)
12	1.3009E-06 (17)	1.6246E-06 (114)	1.7193E-06 (114)	1.5939E-06 (202)	1.2977E-06 (202)
13	1.4487E-06 (257)	2.1928E-06 (202)	1.9208E-06 (202)	1.5773E-06 (202)	1.3336E-06 (55)
14	1.4865E-06 (257)	1.7746E-06 (76)	1.7494E-06 (76)	1.7214E-06 (40)	2.0152E-06 (42)
15	1.0651E-06 (114)	1.5216E-06 (42)	1.7685E-06 (42)	1.8121E-06 (57)	2.1106E-06 (57)
16	1.1308E-06 (338)	1.4781E-06 (41)	2.0849E-06 (41)	2.2547E-06 (338)	2.3069E-06 (316)
17	1.5162E-06 (338)	2.0141E-06 (339)	2.2068E-06 (292)	2.4310E-06 (338)	2.2074E-06 (338)
18	1.4028E-06 (253)	2.1879E-06 (253)	2.3903E-06 (253)	2.2896E-06 (253)	2.0792E-06 (253)
19	1.0361E-06 (155)	1.2932E-06 (253)	1.4149E-06 (253)	1.5641E-06 (352)	1.6680E-06 (352)
20	1.1341E-06 (77)	1.4083E-06 (77)	1.4457E-06 (330)	1.5298E-06 (330)	1.5806E-06 (275)
21	9.7409E-07 (277)	1.3107E-06 (149)	1.4132E-06 (278)	1.8326E-06 (278)	2.0971E-06 (278)
22	1.0823E-06 (226)	1.6767E-06 (277)	2.0551E-06 (195)	2.0422E-06 (293)	2.3662E-06 (293)
23	1.7666E-06 (226)	1.7252E-06 (226)	2.3791E-06 (294)	2.9849E-06 (294)	3.0124E-06 (51)
24	1.3798E-06 (109)	1.9226E-06 (109)	2.3224E-06 (51)	2.6258E-06 (119)	2.9980E-06 (119)
25	1.6292E-06 (171)	1.9067E-06 (165)	2.0609E-06 (165)	2.0062E-06 (165)	2.2480E-06 (303)
26	2.0195E-06 (97)	2.6578E-06 (97)	2.5331E-06 (171)	2.2570E-06 (215)	2.5051E-06 (242)
27	1.5004E-06 (244)	2.2176E-06 (244)	2.5888E-06 (244)	2.9225E-06 (357)	3.4491E-06 (357)
28	2.0446E-06 (223)	2.8954E-06 (213)	3.1454E-06 (213)	3.1833E-06 (262)	3.4408E-06 (334)
29	2.5926E-06 (188)	3.3737E-06 (246)	3.4813E-06 (249)	3.6206E-06 (249)	3.1570E-06 (223)
30	3.0406E-06 (240)	3.9536E-06 (159)	3.9989E-06 (159)	3.7090E-06 (159)	3.3373E-06 (159)
31	3.0859E-06 (159)	3.8440E-06 (347)	3.9506E-06 (228)	3.4784E-06 (228)	3.1193E-06 (160)
32	2.9573E-06 (143)	3.6938E-06 (143)	3.5144E-06 (143)	3.0730E-06 (143)	2.8100E-06 (93)
33	2.0918E-06 (87)	2.8135E-06 (80)	3.0359E-06 (80)	2.9536E-06 (38)	2.7283E-06 (78)
34	2.5192E-06 (84)	3.0088E-06 (84)	2.8505E-06 (84)	2.6551E-06 (92)	2.5904E-06 (92)
35	1.5732E-06 (231)	1.9333E-06 (84)	2.1013E-06 (50)	2.4058E-06 (50)	2.5333E-06 (50)
36	1.1640E-06 (203)	1.3477E-06 (203)	1.4768E-06 (178)	1.6987E-06 (178)	1.8551E-06 (178)

PLANT NAME: LONESTAR POLLUTANT: SO2 AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 3-HOUR CONC= 1.6557E-05 DIRECTION= 29 DISTANCE= 1.2 KM DAY=223 IN

YEAR= 74

SECOND HIGHEST 3-HOUR CONCENTRATION AT EACH RECEPTOR

RANGE DIR	0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 KM
1	1.0492E-05 (178, 5)	1.1231E-05 (169, 5)	1.0264E-05 (157, 4)	8.8053E-06 (157, 4)	7.4308E-06 (
2	1.1144E-05 (157, 5)	1.5505E-05 (157, 4)	1.3921E-05 (157, 4)	1.2036E-05 (157, 4)	1.0226E-05 (
3	7.7306E-06 (124, 4)	6.7988E-06 (230, 4)	6.4026E-06 (17, 5)	6.4791E-06 (269, 3)	6.4385E-06 (
4	7.0508E-06 (220, 5)	9.3958E-06 (81, 4)	1.0745E-05 (203, 5)	9.7797E-06 (203, 5)	8.6134E-06 (
5	7.2568E-06 (174, 4)	7.9666E-06 (203, 5)	8.0622E-06 (99, 4)	7.7148E-06 (99, 4)	7.2066E-06 (
6	7.8450E-06 (193, 5)	9.5824E-06 (193, 5)	9.3331E-06 (192, 4)	8.8484E-06 (192, 4)	9.3983E-06 (
7	1.1018E-05 (168, 4)	1.0571E-05 (193, 4)	8.5324E-06 (192, 4)	7.8043E-06 (192, 4)	6.4565E-06 (
8	1.0363E-05 (193, 4)	1.0583E-05 (193, 4)	9.7342E-06 (71, 4)	1.0237E-05 (124, 3)	8.7329E-06 (
9	6.1456E-06 (71, 4)	6.8912E-06 (192, 4)	7.5157E-06 (193, 4)	6.7749E-06 (71, 4)	5.9871E-06 (
10	7.4169E-06 (148, 4)	6.8032E-06 (76, 5)	6.4749E-06 (154, 4)	6.0874E-06 (173, 4)	5.9662E-06 (
11	6.8662E-06 (17, 4)	7.0792E-06 (272, 4)	6.5457E-06 (173, 5)	6.3215E-06 (291, 5)	6.0019E-06 (
12	1.0263E-05 (202, 4)	1.1388E-05 (202, 4)	9.9680E-06 (202, 4)	8.2674E-06 (17, 4)	6.7011E-06 (
13	1.0537E-05 (202, 4)	9.0005E-06 (316, 4)	9.8133E-06 (202, 4)	8.8730E-06 (203, 3)	8.5936E-06 (
14	9.3307E-06 (42, 5)	9.9073E-06 (107, 4)	9.2400E-06 (107, 4)	8.0625E-06 (107, 4)	8.5685E-06 (
15	7.2611E-06 (55, 5)	9.7744E-06 (55, 5)	9.6667E-06 (55, 5)	8.6397E-06 (55, 5)	7.4545E-06 (
16	6.7262E-06 (173, 5)	8.6287E-06 (100, 3)	9.6309E-06 (100, 3)	9.2919E-06 (100, 3)	8.4597E-06 (
17	7.6857E-06 (155, 4)	9.4108E-06 (51, 4)	1.0950E-05 (273, 4)	1.0901E-05 (338, 5)	1.0217E-05 (
18	8.3090E-06 (155, 4)	1.0812E-05 (282, 4)	1.2660E-05 (364, 4)	1.2893E-05 (253, 4)	1.1368E-05 (
19	7.6733E-06 (155, 4)	8.1870E-06 (253, 4)	8.5610E-06 (253, 4)	8.0784E-06 (282, 4)	7.6404E-06 (
20	6.7160E-06 (133, 4)	8.8429E-06 (330, 4)	8.3967E-06 (149, 4)	8.7097E-06 (276, 3)	8.7885E-06 (
21	6.4195E-06 (73, 4)	6.8503E-06 (97, 3)	6.4463E-06 (212, 5)	6.7852E-06 (115, 6)	6.2995E-06 (
22	5.7797E-06 (339, 5)	6.9719E-06 (339, 5)	7.0122E-06 (60, 4)	7.9437E-06 (60, 4)	8.1630E-06 (
23	9.2311E-06 (51, 5)	1.0811E-05 (116, 5)	1.1285E-05 (116, 5)	1.0860E-05 (116, 5)	1.0131E-05 (
24	7.3332E-06 (172, 5)	7.7527E-06 (109, 4)	7.7836E-06 (259, 4)	8.5855E-06 (362, 5)	8.6917E-06 (
25	1.0635E-05 (171, 4)	1.0169E-05 (181, 5)	1.0465E-05 (181, 5)	9.6040E-06 (181, 5)	8.4443E-06 (
26	1.1441E-05 (190, 4)	1.2964E-05 (12, 5)	1.3467E-05 (12, 5)	1.1946E-05 (171, 4)	9.9434E-06 (
27	8.7097E-06 (224, 4)	1.0223E-05 (261, 4)	1.0507E-05 (261, 4)	9.5957E-06 (241, 4)	8.5291E-06 (
28	1.2387E-05 (189, 5)	1.5855E-05 (189, 5)	1.4917E-05 (262, 4)	1.2944E-05 (262, 4)	1.0987E-05 (
29	1.3294E-05 (246, 4)	1.6557E-05 (223, 5)	1.6341E-05 (223, 5)	1.4266E-05 (329, 4)	1.2808E-05 (
30	1.4898E-05 (240, 4)	1.6423E-05 (246, 4)	1.5242E-05 (240, 4)	1.3826E-05 (227, 4)	1.2199E-05 (
31	1.2985E-05 (288, 5)	1.5732E-05 (228, 4)	1.6527E-05 (347, 5)	1.5750E-05 (219, 4)	1.3932E-05 (
32	1.1661E-05 (98, 4)	1.4622E-05 (80, 5)	1.4778E-05 (80, 5)	1.3436E-05 (79, 4)	1.1791E-05 (
33	1.0750E-05 (151, 4)	1.1952E-05 (38, 4)	1.2310E-05 (84, 4)	1.1496E-05 (84, 4)	1.0248E-05 (
34	1.2669E-05 (177, 4)	1.5242E-05 (84, 5)	1.5195E-05 (16, 5)	1.4794E-05 (177, 4)	1.3043E-05 (
35	9.3975E-06 (84, 5)	1.1257E-05 (84, 5)	1.0786E-05 (84, 5)	1.0132E-05 (33, 5)	9.2828E-06 (
36	7.3674E-06 (209, 4)	7.5303E-06 (268, 6)	8.5036E-06 (268, 6)	7.3572E-06 (203, 4)	6.7635E-06 (

COMPOSITE ANNUAL CONCENTRATION TABLE, UG/CU.M

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR	RANGE	0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 KM
1		0.	0.	0.	0.	0.
2		0.	0.	0.	0.	0.
3		0.	0.	0.	0.	0.
4		0.	0.	0.	0.	0.
5		0.	0.	0.	0.	0.
6		0.	0.	0.	0.	0.
7		0.	0.	0.	0.	0.
8		0.	0.	0.	0.	0.
9		0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.
11		0.	0.	0.	0.	0.
12		0.	0.	0.	0.	0.
13		0.	0.	0.	0.	0.
14		0.	0.	0.	0.	0.
15		0.	0.	0.	0.	0.
16		0.	0.	0.	0.	0.
17		0.	0.	0.	0.	0.
18		0.	0.	0.	0.	0.
19		0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.
21		0.	0.	0.	0.	0.
22		0.	0.	0.	0.	0.
23		0.	0.	0.	0.	0.
24		0.	0.	0.	0.	0.
25		0.	0.	0.	0.	0.
26		0.	0.	0.	0.	0.
27		0.	0.	0.	0.	1.
28		0.	0.	1.	1.	1.
29		0.	0.	1.	1.	0.
30		0.	1.	1.	1.	1.
31		0.	0.	1.	1.	1.
32		0.	0.	0.	0.	0.
33		0.	0.	0.	0.	0.
34		0.	0.	0.	0.	0.
35		0.	0.	0.	0.	0.
36		0.	0.	0.	0.	0.

COMPOSITE HIGHEST, SECOND-HIGHEST 24-HOUR CONCENTRATION TABLE, UG/CU.M

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR \ RANGE	0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 KM
1	2.	2.	2.	2.	2.
2	2.	2.	2.	2.	2.
3	1.	2.	2.	2.	2.
4	1.	2.	2.	2.	2.
5	2.	2.	2.	2.	2.
6	2.	3.	3.	4.	4.
7	2.	2.	2.	2.	2.
8	3.	2.	2.	2.	2.
9	2.	2.	3.	3.	2.
10	2.	3.	3.	3.	2.
11	2.	2.	3.	3.	2.
12	2.	3.	3.	3.	3.
13	2.	2.	2.	3.	3.
14	2.	3.	3.	3.	3.
15	1.	2.	2.	2.	2.
16	1.	2.	3.	3.	3.
17	2.	2.	2.	2.	2.
18	1.	2.	2.	2.	2.
19	1.	2.	2.	2.	2.
20	1.	2.	1.	2.	2.
21	1.	2.	2.	2.	3.
22	1.	2.	2.	3.	3.
23	2.	2.	2.	3.	3.
24	2.	3.	3.	3.	3.
25	2.	3.	3.	3.	3.
26	2.	3.	4.	4.	4.
27	3.	4.	5.	5.	4.
28	2.	3.	3.	3.	4.
29	3.	4.	4.	4.	4.
30	3.	4.	4.	4.	4.
31	4.	5.	4.	4.	3.
32	3.	4.	4.	3.	3.
33	3.	3.	3.	3.	3.
34	3.	3.	3.	3.	3.
35	2.	2.	2.	2.	3.
36	2.	3.	3.	3.	2.

COMPOSITE HIGHEST, SECOND-HIGHEST 3-HOUR CONCENTRATION TABLE, UG/CU.M

RANGE DIR	SECOND HIGHEST 3-HOUR CONCENTRATION AT EACH RECEPTOR 0.9 KM	1.2 KM	1.5 KM	1.8 KM	2.1 KM
1	11.	13.	12.	11.	9.
2	11.	16.	14.	12.	10.
3	11.	9.	10.	10.	9.
4	8.	13.	12.	11.	10.
5	13.	11.	11.	10.	9.
6	11.	15.	13.	12.	11.
7	11.	11.	11.	9.	8.
8	10.	11.	11.	10.	9.
9	11.	12.	12.	10.	10.
10	12.	14.	13.	12.	10.
11	9.	13.	12.	11.	9.
12	10.	12.	13.	12.	11.
13	11.	11.	12.	12.	11.
14	10.	14.	15.	14.	12.
15	8.	10.	11.	11.	11.
16	9.	10.	12.	13.	12.
17	9.	11.	11.	11.	10.
18	9.	11.	13.	13.	11.
19	8.	9.	9.	9.	8.
20	8.	9.	11.	10.	9.
21	9.	10.	10.	10.	10.
22	9.	10.	9.	8.	8.
23	10.	11.	11.	11.	10.
24	14.	13.	12.	12.	10.
25	11.	13.	13.	12.	11.
26	15.	17.	15.	15.	13.
27	14.	16.	15.	13.	13.
28	13.	16.	16.	16.	14.
29	13.	17.	16.	15.	13.
30	15.	17.	18.	17.	15.
31	16.	18.	17.	16.	14.
32	14.	17.	17.	15.	14.
33	15.	15.	14.	14.	13.
34	15.	15.	16.	15.	13.
35	11.	12.	12.	12.	11.
36	12.	16.	15.	13.	12.

LONESTAR - KILNS 1,2,3 - 24 HR SO2 - MAX IMPACT - DAY 112,1972 - DIR 310 - 1,2 K

1. 7.0

* * * S O U R C E S * * *

NU	Q (G/SEC)	HP (M)	TS (DEG-K)	VS (M/SEC)	D(M)	R(KM)	S(KM)	
1.	7.15	61.0	472.0	16.9	2.10	562.920	2861.710	KILN #1
2.	7.15	61.0	455.0	15.5	2.10	562.920	2861.680	KILN #2
3.	3.31	61.0	472.0	10.8	4.27	562.990	2861.670	KILN #3

* * * R E C E P T O R S * * *

NU.	RREC(KM)	SREC(KM)	Z (M)
1.	561.530	2861.980	0.0
2.	561.530	2862.080	0.0
3.	561.530	2862.180	0.0
4.	561.530	2862.280	0.0
5.	561.530	2862.380	0.0
6.	561.530	2862.480	0.0
7.	561.530	2862.580	0.0
8.	561.530	2862.680	0.0
9.	561.530	2862.780	0.0
10.	561.530	2862.880	0.0
11.	561.630	2861.980	0.0
12.	561.630	2862.080	0.0
13.	561.630	2862.180	0.0
14.	561.630	2862.280	0.0
15.	561.630	2862.380	0.0
16.	561.630	2862.480	0.0
17.	561.630	2862.580	0.0
18.	561.630	2862.680	0.0
19.	561.630	2862.780	0.0
20.	561.630	2862.880	0.0
21.	561.730	2861.980	0.0
22.	561.730	2862.080	0.0
23.	561.730	2862.180	0.0
24.	561.730	2862.280	0.0
25.	561.730	2862.380	0.0
26.	561.730	2862.480	0.0
27.	561.730	2862.580	0.0
28.	561.730	2862.680	0.0
29.	561.730	2862.780	0.0
30.	561.730	2862.880	0.0
31.	561.830	2861.980	0.0
32.	561.830	2862.080	0.0

33.	561.830	2862.180	0.0
34.	561.830	2862.280	0.0
35.	561.830	2862.380	0.0
36.	561.830	2862.480	0.0
37.	561.830	2862.580	0.0
38.	561.830	2862.680	0.0
39.	561.830	2862.780	0.0
40.	561.830	2862.880	0.0
41.	561.930	2861.980	0.0
42.	561.930	2862.080	0.0
43.	561.930	2862.180	0.0
44.	561.930	2862.280	0.0
45.	561.930	2862.380	0.0
46.	561.930	2862.480	0.0
47.	561.930	2862.580	0.0
48.	561.930	2862.680	0.0
49.	561.930	2862.780	0.0
50.	561.930	2862.880	0.0
51.	562.030	2861.980	0.0
52.	562.030	2862.080	0.0
53.	562.030	2862.180	0.0
54.	562.030	2862.280	0.0
55.	562.030	2862.380	0.0
56.	562.030	2862.480	0.0
57.	562.030	2862.580	0.0
58.	562.030	2862.680	0.0
59.	562.030	2862.780	0.0
60.	562.030	2862.880	0.0
61.	562.130	2861.980	0.0
62.	562.130	2862.080	0.0
63.	562.130	2862.180	0.0
64.	562.130	2862.280	0.0
65.	562.130	2862.380	0.0
66.	562.130	2862.480	0.0
67.	562.130	2862.580	0.0
68.	562.130	2862.680	0.0
69.	562.130	2862.780	0.0
70.	562.130	2862.880	0.0
71.	562.230	2861.980	0.0
72.	562.230	2862.080	0.0
73.	562.230	2862.180	0.0
74.	562.230	2862.280	0.0
75.	562.230	2862.380	0.0
76.	562.230	2862.480	0.0
77.	562.230	2862.580	0.0
78.	562.230	2862.680	0.0
79.	562.230	2862.780	0.0

80.	562.230	2862.880	0.0
81.	562.330	2861.980	0.0
82.	562.330	2862.080	0.0
83.	562.330	2862.180	0.0
84.	562.330	2862.280	0.0
85.	562.330	2862.380	0.0
86.	562.330	2862.480	0.0
87.	562.330	2862.580	0.0
88.	562.330	2862.680	0.0
89.	562.330	2862.780	0.0
90.	562.330	2862.880	0.0
91.	562.430	2861.980	0.0
92.	562.430	2862.080	0.0
93.	562.430	2862.180	0.0
94.	562.430	2862.280	0.0
95.	562.430	2862.380	0.0
96.	562.430	2862.480	0.0
97.	562.430	2862.580	0.0
98.	562.430	2862.680	0.0
99.	562.430	2862.780	0.0
100.	562.430	2862.880	0.0

DAY= 112 YEAR= 72 HOURS= ALL WD SHIFT ANGLE= 0

1.	210.	1.5	7	1338.	297.	0.
2.	210.	1.5	7	1341.	297.	0.
3.	296.	1.5	7	1345.	296.	0.
4.	197.	2.1	6	1348.	296.	0.
5.	300.	2.1	6	1352.	294.	0.
6.	307.	2.1	5	11.	295.	0.
7.	315.	2.1	4	182.	296.	0.
8.	131.	2.1	3	354.	298.	0.
9.	136.	3.1	2	525.	299.	0.
10.	134.	2.6	2	697.	300.	0.
11.	129.	3.6	2	868.	301.	0.
12.	141.	4.6	2	1040.	302.	0.
13.	105.	5.1	3	1211.	302.	0.
14.	124.	6.2	3	1383.	302.	0.
15.	130.	5.1	3	1383.	303.	0.
16.	131.	5.1	3	1383.	302.	0.
17.	119.	5.1	4	1383.	301.	0.
18.	143.	3.6	4	1383.	301.	0.
19.	139.	3.6	5	1383.	300.	0.
20.	154.	2.6	5	1384.	299.	0.
21.	166.	2.6	5	1385.	299.	0.
22.	148.	2.1	5	1386.	298.	0.
23.	144.	2.1	5	1387.	298.	0.

24.	137.	2.6	5	1388.	298.	0.

AVERAGE CONCENTRATIONS FOR 24 HOURS.

* * * R E C E P T O R N U M B E R * * *

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.28	0.36	0.32	0.27	0.38	0.68	1.07	1.46	1.76	1.89
2.	0.35	0.39	0.32	0.31	0.50	0.86	1.28	1.68	1.96	2.02
3.	0.06	0.07	0.06	0.06	0.08	0.15	0.25	0.35	0.43	0.47
	TOTAL CONCENTRATION (UG/M**3)									
	0.68	0.82	0.70	0.63	0.97	1.69	2.60	3.49	4.15	4.37

* * * R E C E P T O R N U M B E R * * *

	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.30	0.36	0.29	0.30	0.53	0.94	1.39	1.78	1.96	1.92
2.	0.37	0.38	0.31	0.38	0.70	1.17	1.65	2.01	2.13	2.01
3.	0.06	0.06	0.05	0.06	0.11	0.20	0.31	0.41	0.46	0.48
	TOTAL CONCENTRATION (UG/M**3)									
	0.73	0.80	0.65	0.75	1.35	2.31	3.35	4.19	4.56	4.40

* * * R E C E P T O R N U M B E R * * *

	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.
SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.32	0.34	0.28	0.39	0.76	1.27	1.74	2.02	2.02	1.80
2.	0.38	0.35	0.32	0.53	1.00	1.55	2.02	2.23	2.13	1.84
3.	0.05	0.05	0.05	0.08	0.15	0.26	0.37	0.45	0.47	0.45
	TOTAL CONCENTRATION (UG/M**3)									
	0.75	0.74	0.64	0.99	1.91	3.08	4.13	4.69	4.63	4.19

* * * R E C E P T O R N U M B E R * * *

	31.	32.	33.	34.	35.	36.	37.	38.	39.	40.
SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.31	0.30	0.29	0.56	1.08	1.65	2.03	2.10	1.90	1.5
2.	0.37	0.32	0.38	0.77	1.39	1.97	2.29	2.25	1.95	1.5
3.	0.04	0.04	0.05	0.10	0.20	0.32	0.41	0.45	0.44	0.4
	TOTAL CONCENTRATION (UG/M**3)									
	0.73	0.66	0.72	1.43	2.66	3.93	4.73	4.81	4.29	3.5

* * * R E C E P T O R N U M B E R * * *

	41.	42.	43.	44.	45.	46.	47.	48.	49.	50.
SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.29	0.26	0.37	0.82	1.46	1.98	2.15	1.97	1.62	1.2
2.	0.33	0.30	0.53	1.13	1.83	2.30	2.34	2.05	1.63	1.2
3.	0.03	0.03	0.06	0.13	0.24	0.35	0.41	0.42	0.39	0.3
	TOTAL CONCENTRATION (UG/M**3)									
	0.65	0.58	0.96	2.09	3.54	4.63	4.90	4.44	3.64	2.8

* * * R E C E P T O R N U M B E R * * *

	51.	52.	53.	54.	55.	56.	57.	58.	59.	60.
SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.24	0.24	0.53	1.17	1.81	2.12	2.00	1.66	1.28	0.9
2.	0.27	0.33	0.80	1.57	2.20	2.37	2.11	1.68	1.27	0.9
3.	0.02	0.03	0.07	0.16	0.27	0.35	0.38	0.36	0.31	0.2
	TOTAL CONCENTRATION (UG/M**3)									
	0.53	0.59	1.41	2.90	4.29	4.84	4.50	3.70	2.85	2.1

* * * R E C E P T O R N U M B E R * * *

	61.	62.	63.	64.	65.	66.	67.	68.	69.	70.
SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.17	0.27	0.77	1.49	1.96	1.95	1.65	1.26	0.92	0.6
2.	0.22	0.45	1.17	1.95	2.29	2.12	1.69	1.26	0.90	0.6
3.	0.01	0.03	0.09	0.18	0.26	0.31	0.31	0.28	0.23	0.1
	TOTAL CONCENTRATION (UG/M**3)									
	0.40	0.75	2.03	3.62	4.51	4.38	3.65	2.80	2.06	1.47

* * * R E C E P T O R N U M B E R * * *

	71.	72.	73.	74.	75.	76.	77.	78.	79.	80.
SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.12	0.37	1.01	1.61	1.76	1.54	1.19	0.86	0.60	0.4
2.	0.19	0.66	1.48	2.02	2.00	1.63	1.21	0.85	0.57	0.3
3.	0.01	0.03	0.09	0.16	0.22	0.24	0.23	0.20	0.16	0.1
	TOTAL CONCENTRATION (UG/M**3)									
	0.32	1.06	2.58	3.79	3.98	3.42	2.63	1.91	1.32	0.8

* * * R E C E P T O R N U M B E R * * *

	81.	82.	83.	84.	85.	86.	87.	88.	89.	90.
SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.10	0.40	1.04	1.37	1.31	1.04	0.75	0.50	0.32	0.2
2.	0.23	0.83	1.49	1.68	1.45	1.08	0.74	0.48	0.30	0.1
3.	0.01	0.03	0.07	0.13	0.16	0.17	0.15	0.13	0.09	0.0
	TOTAL CONCENTRATION (UG/M**3)									
	0.33	1.32	2.61	3.18	2.91	2.29	1.65	1.11	0.72	0.4

* * * R E C E P T O R N U M B E R * * *

	91.	92.	93.	94.	95.	96.	97.	98.	99.	100.

SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.09	0.42	0.79	0.91	0.78	0.57	0.37	0.23	0.13	0.0
2.	0.24	0.75	1.11	1.09	0.85	0.58	0.36	0.21	0.12	0.0
3.	0.00	0.02	0.05	0.08	0.10	0.10	0.09	0.07	0.05	0.0
	TOTAL CONCENTRATION (UG/M**3)									
	0.34	1.19	1.95	2.08	1.74	1.25	0.82	0.51	0.30	0.1

PARTICULATE MATTER

COMPUTER MODELING

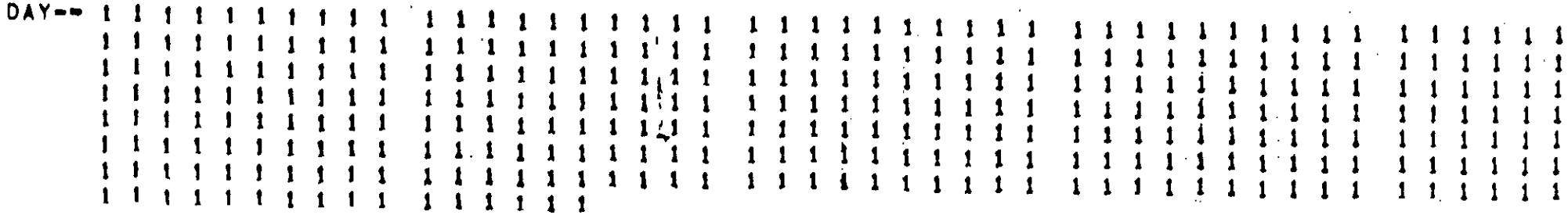
RESULTS

PLANT NAME: LONESTAR POLLUTANT: TSP AIR QUALITY UNITS: GM/M**3
FOUR NEW DUST COLLECTORS
MIAMI MET DATA - 1970-1974 - RURAL

	MET FILE STN NO.	YR	REQUESTED STN NO.	YR
SURFACE	12839	70	12839	70
UPPER AIR	12839	70	12839	70

PLANT LOCATION: RURAL
NO TAPE OUTPUT
MET DATA WILL NOT BE PRINTED

DAY--



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ALL TABLES, INCLUDING SOURCE CONTRIBUTION, THAT CONTAIN "ANNUAL" IN THE HEADING ARE BASED ONLY ON THOSE DAYS MARKED BY A "1" IN THE ABOVE TABLE

RING DISTANCES(KM)= 0.30 0.60 0.90 1.20 1.50

STACK # 1--DC=1
STACK # 2--DC=2
STACK # 3--DC=3
STACK # 4--DC=4

STACK	MONTH	EMISSION RATE (GMS/SEC)	HEIGHT (METERS)	DIAMETER (METERS)	EXIT VELOCITY (M/SEC)	TEMP (DEG.K)	VOLUMETRIC FL (M**3/SEC)
1	ALL	0.0400	29.00	0.30	25.90	311.00	1.83
2	ALL	0.0400	20.70	0.30	25.90	311.00	1.83
3	ALL	0.3900	24.40	1.07	19.00	336.00	17.08
4	ALL	0.2600	24.40	0.85	19.80	336.00	11.24

PLANT NAME: LONESTAR POLLUTANT: TSP AIR QUALITY UNITS: GM/M**3

MAXIMUM MEAN CONC= 6.9324E-07 DIRECTION= 28 DISTANCE= 0.6 KM

YEAR= 70

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR \ RANGE	0.3 KM	0.6 KM	0.9 KM	1.2 KM	1.5 KM
1	1.14036E-07	1.14500E-07	8.77335E-08	6.82391E-08	5.57213E-08
2	9.84829E-08	1.05716E-07	8.23507E-08	6.43429E-08	5.23388E-08
3	7.80588E-08	8.39561E-08	6.65300E-08	5.33398E-08	4.48437E-08
4	6.40535E-08	6.71363E-08	5.35446E-08	4.27098E-08	3.55892E-08
5	8.10371E-08	9.39798E-08	7.68717E-08	6.13848E-08	5.07340E-08
6	8.47434E-08	9.20067E-08	7.45530E-08	6.05573E-08	5.13345E-08
7	8.71839E-08	7.60661E-08	5.94972E-08	4.44085E-08	3.69182E-08
8	9.84662E-08	9.23786E-08	7.18624E-08	5.81392E-08	4.96886E-08
9	9.88936E-08	9.50588E-08	7.68566E-08	6.45040E-08	5.65414E-08
10	9.09377E-08	8.50682E-08	6.49324E-08	5.20865E-08	4.42843E-08
11	8.78252E-08	8.58354E-08	6.51194E-08	5.10242E-08	4.21794E-08
12	1.00077E-07	1.13664E-07	9.00810E-08	7.19333E-08	6.02429E-08
13	1.05812E-07	1.41090E-07	1.20895E-07	1.01502E-07	8.83978E-08
14	1.16454E-07	1.82231E-07	1.60111E-07	1.33490E-07	1.14895E-07
15	1.19545E-07	1.83422E-07	1.60544E-07	1.32731E-07	1.12550E-07
16	1.54485E-07	2.40591E-07	2.10903E-07	1.74753E-07	1.48611E-07
17	1.44321E-07	2.08528E-07	1.81705E-07	1.50535E-07	1.27724E-07
18	1.37624E-07	2.13268E-07	1.94953E-07	1.67264E-07	1.46803E-07
19	8.58714E-08	1.01431E-07	8.20266E-08	6.57714E-08	5.52982E-08
20	7.62702E-08	8.50017E-08	7.25062E-08	6.09728E-08	5.27947E-08
21	7.44470E-08	9.06257E-08	7.55899E-08	6.12636E-08	5.13089E-08
22	5.74080E-08	7.00625E-08	5.73388E-08	4.51883E-08	3.66128E-08
23	5.60401E-08	7.33105E-08	6.09337E-08	4.92603E-08	4.10429E-08
24	9.19695E-08	1.32043E-07	1.11184E-07	8.95306E-08	7.41030E-08
25	1.58239E-07	2.19089E-07	1.74613E-07	1.33517E-07	1.05596E-07
26	2.58731E-07	3.02372E-07	2.87798E-07	2.20010E-07	1.74547E-07
27	4.00050E-07	5.55305E-07	4.49243E-07	3.53299E-07	2.88395E-07
28	4.82094E-07	6.93243E-07	5.73353E-07	4.56636E-07	3.75192E-07
29	4.30913E-07	5.52794E-07	4.42133E-07	3.47010E-07	2.83042E-07
30	4.73644E-07	5.90830E-07	4.73718E-07	3.73088E-07	3.05736E-07
31	4.37557E-07	4.67435E-07	3.50921E-07	2.63815E-07	2.08070E-07
32	4.02031E-07	4.11521E-07	3.04866E-07	2.27769E-07	1.78664E-07
33	3.25735E-07	3.27275E-07	2.40603E-07	1.79074E-07	1.40379E-07
34	2.91430E-07	3.14907E-07	2.36917E-07	1.78541E-07	1.41458E-07
35	2.12800E-07	2.21702E-07	1.67861E-07	1.28876E-07	1.03841E-07
36	1.59422E-07	1.75345E-07	1.36360E-07	1.06580E-07	8.72583E-08

PLANT NAME: LUNESTAR POLLUTANT: ISP AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 24-HOUR CONC= 4.3602E-06 DIRECTION= 28 DISTANCE= 0.6 KM DAY=153

YEAR= 70

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.3 KM	0.6 KM	0.9 KM	1.2 KM	1.5 KM
1	1.7516E-06 (88)	1.3990E-06 (222)	1.1381E-06 (222)	8.7487E-07 (222)	6.8473E-07 (6)
2	1.5463E-06 (26)	1.4851E-06 (222)	1.2712E-06 (222)	9.9653E-07 (222)	9.1935E-07 (220)
3	1.3276E-06 (124)	1.2731E-06 (185)	1.1704E-06 (219)	9.4990E-07 (185)	7.5470E-07 (185)
4	1.3713E-06 (178)	1.5084E-06 (359)	1.2200E-06 (178)	9.4282E-07 (178)	7.5955E-07 (178)
5	1.4105E-06 (219)	1.3062E-06 (92)	1.0672E-06 (72)	8.5808E-07 (72)	7.3931E-07 (18)
6	1.0582E-06 (327)	1.4492E-06 (56)	1.0598E-06 (327)	7.8870E-07 (327)	6.1837E-07 (327)
7	1.8651E-06 (177)	1.2559E-06 (224)	8.9998E-07 (12)	7.6388E-07 (67)	5.9164E-07 (67)
8	2.2583E-06 (175)	1.4577E-06 (42)	9.9858E-07 (67)	7.5986E-07 (67)	6.0332E-07 (288)
9	2.9398E-06 (175)	2.5022E-06 (179)	1.9501E-06 (179)	1.6199E-06 (179)	1.4091E-06 (179)
10	2.7249E-06 (157)	2.3180E-06 (48)	1.4910E-06 (179)	9.9240E-07 (179)	7.2933E-07 (175)
11	1.9345E-06 (161)	1.2673E-06 (161)	9.1734E-07 (103)	7.6925E-07 (103)	6.1024E-07 (105)
12	1.6947E-06 (217)	1.7511E-06 (68)	1.5209E-06 (68)	1.1692E-06 (72)	8.7915E-07 (72)
13	2.2716E-06 (304)	2.7916E-06 (304)	2.3567E-06 (304)	1.9291E-06 (304)	1.6159E-06 (304)
14	1.4418E-06 (348)	2.7854E-06 (73)	2.3556E-06 (7)	1.7621E-06 (7)	1.3505E-06 (7)
15	1.4169E-06 (299)	2.1723E-06 (35)	1.8428E-06 (328)	1.4336E-06 (36)	1.1467E-06 (35)
16	2.0773E-06 (362)	2.8824E-06 (36)	2.6969E-06 (320)	2.0972E-06 (320)	1.6640E-06 (320)
17	1.7376E-06 (310)	2.5324E-06 (36)	2.4020E-06 (36)	1.8868E-06 (36)	1.4979E-06 (39)
18	1.5602E-06 (51)	2.2839E-06 (51)	2.0688E-06 (4)	1.6084E-06 (4)	1.2601E-06 (4)
19	1.2072E-06 (181)	1.1933E-06 (4)	9.6714E-07 (338)	7.3304E-07 (52)	5.9081E-07 (305)
20	1.2374E-06 (159)	1.0528E-06 (323)	9.6436E-07 (38)	7.6638E-07 (38)	6.7848E-07 (354)
21	1.0612E-06 (290)	1.4312E-06 (290)	1.3188E-06 (277)	1.1407E-06 (277)	9.7325E-07 (52)
22	8.3618E-07 (75)	1.0970E-06 (258)	1.1229E-06 (258)	8.6489E-07 (290)	6.5732E-07 (290)
23	9.9019E-07 (83)	1.1441E-06 (284)	9.3441E-07 (283)	7.3677E-07 (283)	5.9681E-07 (283)
24	1.4626E-06 (83)	1.0951E-06 (336)	1.3039E-06 (336)	1.0090E-06 (283)	8.5180E-07 (278)
25	1.0332E-06 (282)	2.0879E-06 (121)	1.0187E-06 (121)	1.2982E-06 (284)	1.0801E-06 (284)
26	2.0709E-06 (254)	3.1931E-06 (121)	2.5741E-06 (121)	1.9097E-06 (121)	1.4614E-06 (291)
27	3.9749E-06 (170)	3.8530E-06 (142)	3.3252E-06 (142)	2.6693E-06 (142)	2.2580E-06 (150)
28	2.5401E-06 (167)	4.3602E-06 (153)	3.6545E-06 (280)	2.8128E-06 (280)	2.2117E-06 (280)
29	2.4926E-06 (120)	3.0337E-06 (242)	3.2253E-06 (345)	2.6038E-06 (152)	1.9759E-06 (152)
30	3.0049E-06 (195)	4.2135E-06 (293)	3.5156E-06 (293)	2.6421E-06 (293)	2.0326E-06 (293)
31	2.9614E-06 (216)	3.0009E-06 (293)	2.4591E-06 (293)	1.8208E-06 (293)	1.4183E-06 (134)
32	3.0638E-06 (183)	2.3278E-06 (216)	1.8440E-06 (238)	1.5624E-06 (238)	1.3373E-06 (238)
33	2.3237E-06 (183)	2.4658E-06 (89)	2.1672E-06 (89)	1.8054E-06 (89)	1.5317E-06 (89)
34	2.3401E-06 (225)	2.9041E-06 (307)	2.3745E-06 (271)	1.8909E-06 (71)	1.6962E-06 (318)
35	1.9140E-06 (221)	2.1159E-06 (137)	1.7401E-06 (350)	1.3356E-06 (145)	1.0803E-06 (145)
36	2.2094E-06 (221)	1.8941E-06 (101)	1.5616E-06 (64)	1.2191E-06 (64)	9.5948E-07 (64)

PLANT NAME: LONESTAR POLLUTANT: TSP AIR QUALITY UNITS: GM/M***3

MAXIMUM MEAN CONC= 4.9231E-07 DIRECTION= 30 DISTANCE= 0.6 KM

YEAR= 71

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.3 KM	0.6 KM	0.9 KM	1.2 KM	1.5 KM
1	9.17219E-08	1.03909E-07	8.40274E-08	6.86185E-08	5.86652E-08
2	7.85075E-08	9.13531E-08	7.52857E-08	6.20731E-08	5.34998E-08
3	7.73209E-08	1.00466E-07	8.29278E-08	6.73031E-08	5.71267E-08
4	7.66694E-08	8.24704E-08	6.44620E-08	5.18439E-08	4.42776E-08
5	8.93585E-08	1.10549E-07	9.11581E-08	7.48812E-08	6.42701E-08
6	8.02528E-08	1.04199E-07	8.83599E-08	7.20510E-08	6.06410E-08
7	6.55666E-08	7.79766E-08	6.47632E-08	5.35284E-08	4.62943E-08
8	5.36726E-08	5.92497E-08	4.68762E-08	3.76384E-08	3.17949E-08
9	4.97334E-08	6.02556E-08	5.14962E-08	4.35347E-08	3.79531E-08
10	6.60236E-08	7.81034E-08	6.47918E-08	5.36390E-08	4.61429E-08
11	9.46644E-08	1.12706E-07	9.29524E-08	7.63960E-08	6.55344E-08
12	1.21853E-07	1.46171E-07	1.23670E-07	1.05464E-07	9.34361E-08
13	1.17342E-07	1.45383E-07	1.26809E-07	1.10700E-07	9.98076E-08
14	1.24875E-07	1.74991E-07	1.51966E-07	1.27523E-07	1.09968E-07
15	1.10349E-07	1.68454E-07	1.56078E-07	1.36356E-07	1.21268E-07
16	1.02365E-07	1.57410E-07	1.46193E-07	1.26440E-07	1.10968E-07
17	9.06862E-08	1.24226E-07	1.09220E-07	9.26093E-08	8.05514E-08
18	1.03382E-07	1.39408E-07	1.19807E-07	1.00288E-07	8.67055E-08
19	9.14019E-08	1.15424E-07	9.15837E-08	7.09383E-08	5.71612E-08
20	9.67236E-08	1.25098E-07	9.79059E-08	7.48701E-08	5.96111E-08
21	1.44186E-07	2.07175E-07	1.65778E-07	1.27430E-07	1.01467E-07
22	1.52320E-07	2.27337E-07	1.81688E-07	1.39013E-07	1.10095E-07
23	1.93146E-07	2.72190E-07	2.14187E-07	1.62385E-07	1.28125E-07
24	2.69767E-07	3.65960E-07	2.93191E-07	2.29219E-07	1.86282E-07
25	2.82724E-07	4.20212E-07	3.51283E-07	2.82940E-07	2.35064E-07
26	2.64553E-07	3.72348E-07	3.04454E-07	2.41516E-07	1.98907E-07
27	2.99967E-07	3.89585E-07	3.11077E-07	2.43110E-07	1.97971E-07
28	3.92632E-07	4.58047E-07	3.50967E-07	2.67269E-07	2.13165E-07
29	4.53051E-07	4.51952E-07	3.20687E-07	2.32099E-07	1.78052E-07
30	4.82321E-07	4.92306E-07	3.68272E-07	2.79642E-07	2.23249E-07
31	3.66640E-07	3.78612E-07	2.85913E-07	2.18616E-07	1.75201E-07
32	2.45464E-07	2.82943E-07	2.21880E-07	1.72164E-07	1.39091E-07
33	1.68495E-07	2.03888E-07	1.61206E-07	1.25309E-07	1.01264E-07
34	1.51051E-07	1.93795E-07	1.53001E-07	1.18120E-07	9.49687E-08
35	1.29003E-07	1.68634E-07	1.37289E-07	1.08985E-07	8.96543E-08
36	1.16640E-07	1.54214E-07	1.29629E-07	1.06016E-07	8.99241E-08

PLANT NAME: LONESTAR POLLUTANT: TSP AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 24-HOUR CONC= 3.7079E-06 DIRECTION= 24 DISTANCE= 0.6 KM DAY=327

YEAR= 71

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.3 KM	0.6 KM	0.9 KM	1.2 KM	1.5 KM
1	1.8792E-06 (10)	1.5013E-06 (226)	1.0484E-06 (226)	8.6090E-07 (114)	7.4075E-07 (114)
2	1.4054E-06 (226)	1.5967E-06 (115)	1.3693E-06 (115)	1.0432E-06 (226)	7.8102E-07 (226)
3	1.0763E-06 (173)	1.9017E-06 (256)	1.6405E-06 (115)	1.2767E-06 (115)	1.0019E-06 (115)
4	1.4785E-06 (166)	1.7931E-06 (256)	1.3042E-06 (256)	9.3475E-07 (256)	7.1159E-07 (166)
5	1.9995E-06 (166)	1.8979E-06 (149)	1.5128E-06 (95)	1.1607E-06 (95)	9.0346E-07 (95)
6	2.1765E-06 (223)	1.9077E-06 (149)	1.4827E-06 (149)	1.0995E-06 (149)	8.4249E-07 (149)
7	1.4152E-06 (141)	1.3408E-06 (122)	1.1420E-06 (122)	8.6346E-07 (122)	6.6369E-07 (122)
8	9.5708E-07 (334)	1.0449E-06 (216)	9.4050E-07 (211)	8.4836E-07 (211)	7.2180E-07 (211)
9	7.5813E-07 (173)	1.0335E-06 (244)	1.0544E-06 (244)	9.0685E-07 (244)	7.6656E-07 (244)
10	1.1545E-06 (15)	1.0222E-06 (44)	8.4176E-07 (123)	6.9521E-07 (123)	5.9206E-07 (301)
11	2.0003E-06 (299)	1.0633E-06 (123)	1.1069E-06 (123)	1.0192E-06 (19)	9.0525E-07 (19)
12	1.7934E-06 (325)	1.8483E-06 (338)	1.5056E-06 (338)	1.1281E-06 (338)	8.8201E-07 (184)
13	1.8327E-06 (338)	2.1857E-06 (315)	1.8558E-06 (338)	1.4130E-06 (338)	1.0978E-06 (338)
14	1.5702E-06 (220)	1.9003E-06 (79)	1.6075E-06 (79)	1.2312E-06 (79)	9.6316E-07 (79)
15	1.2663E-06 (28)	2.2492E-06 (79)	1.8416E-06 (79)	1.3763E-06 (79)	1.1432E-06 (40)
16	1.6413E-06 (28)	2.4803E-06 (317)	2.5902E-06 (317)	2.1337E-06 (40)	1.6643E-06 (40)
17	1.2243E-06 (170)	1.3242E-06 (317)	1.3281E-06 (317)	1.1606E-06 (22)	1.0929E-06 (22)
18	1.5063E-06 (326)	2.1373E-06 (1)	1.5916E-06 (1)	1.2450E-06 (41)	1.0600E-06 (41)
19	1.4423E-06 (80)	1.5501E-06 (41)	1.3314E-06 (41)	1.0172E-06 (41)	7.8805E-07 (269)
20	1.2587E-06 (316)	1.5685E-06 (316)	1.1667E-06 (316)	9.3276E-07 (359)	7.6121E-07 (359)
21	1.7628E-06 (13)	2.4786E-06 (358)	2.0186E-06 (359)	1.6689E-06 (359)	1.3983E-06 (359)
22	1.4078E-06 (357)	3.0940E-06 (335)	2.6543E-06 (153)	1.9316E-06 (153)	1.5398E-06 (155)
23	1.9839E-06 (236)	2.4216E-06 (290)	2.1552E-06 (290)	1.6599E-06 (266)	1.2637E-06 (266)
24	1.9316E-06 (125)	3.7079E-06 (327)	3.0406E-06 (319)	2.2614E-06 (319)	1.7276E-06 (319)
25	1.8662E-06 (232)	3.2007E-06 (322)	2.6196E-06 (322)	1.9528E-06 (322)	1.4956E-06 (322)
26	2.8748E-06 (169)	2.9085E-06 (190)	2.2499E-06 (144)	1.7434E-06 (144)	1.4335E-06 (211)
27	2.0977E-06 (194)	2.8222E-06 (231)	2.2751E-06 (48)	1.7788E-06 (48)	1.4283E-06 (48)
28	2.8327E-06 (140)	2.9961E-06 (34)	2.4262E-06 (34)	1.9846E-06 (209)	1.5846E-06 (209)
29	3.4957E-06 (208)	3.2708E-06 (208)	2.8766E-06 (50)	2.1234E-06 (132)	1.6068E-06 (132)
30	3.1090E-06 (129)	3.0757E-06 (132)	2.4037E-06 (91)	2.0759E-06 (245)	1.7672E-06 (282)
31	3.1104E-06 (185)	2.4034E-06 (92)	1.9525E-06 (92)	1.4582E-06 (92)	1.1179E-06 (92)
32	2.3734E-06 (118)	2.0787E-06 (58)	2.3554E-06 (84)	1.9696E-06 (84)	1.6650E-06 (84)
33	1.3931E-06 (287)	1.9665E-06 (9)	1.7378E-06 (9)	1.4243E-06 (9)	1.1686E-06 (9)
34	1.0307E-06 (8)	2.7545E-06 (73)	2.3301E-06 (61)	1.8640E-06 (61)	1.4915E-06 (53)
35	1.8763E-06 (73)	2.3948E-06 (283)	1.9846E-06 (283)	1.4911E-06 (283)	1.1468E-06 (283)
36	1.7045E-06 (133)	1.5367E-06 (297)	1.3522E-06 (297)	1.0583E-06 (254)	9.8004E-07 (174)

PLANT NAME: LONESTAR POLLUTANT: TSP AIR QUALITY UNITS: GM/M**3

MAXIMUM MEAN CONC= 5.0489E-07 DIRECTION= 30 DISTANCE= 0.6 KM

YEAR= 72

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR \ RANGE	0.3 KM	0.6 KM	0.9 KM	1.2 KM	1.5 KM
1	9.30152E-08	1.02591E-07	8.04299E-08	6.38938E-08	5.34263E-08
2	9.09552E-08	1.09383E-07	9.31903E-08	7.75381E-08	6.66187E-08
3	9.47183E-08	1.07976E-07	8.99672E-08	7.48923E-08	6.46708E-08
4	1.00507E-07	1.06773E-07	8.64760E-08	7.10853E-08	6.10337E-08
5	1.07353E-07	1.24213E-07	1.02165E-07	8.26350E-08	6.93165E-08
6	1.23943E-07	1.52033E-07	1.24019E-07	1.00343E-07	8.47697E-08
7	9.40932E-08	1.12123E-07	9.06907E-08	7.38115E-08	6.27331E-08
8	6.72675E-08	7.99691E-08	6.89728E-08	5.82629E-08	5.05682E-08
9	6.77128E-08	7.49958E-08	6.22349E-08	5.14992E-08	4.40192E-08
10	6.85279E-08	7.02468E-08	5.54740E-08	4.44286E-08	3.74007E-08
11	9.34462E-08	1.00998E-07	7.97667E-08	6.39938E-08	5.41714E-08
12	1.31696E-07	1.65275E-07	1.35627E-07	1.10039E-07	9.33620E-08
13	1.34184E-07	1.77890E-07	1.48010E-07	1.20716E-07	1.02909E-07
14	1.29814E-07	1.79837E-07	1.53230E-07	1.26252E-07	1.07793E-07
15	1.03008E-07	1.45585E-07	1.31271E-07	1.13818E-07	1.01206E-07
16	9.39374E-08	1.34985E-07	1.17894E-07	9.94057E-08	8.63313E-08
17	7.90138E-08	1.02078E-07	8.71657E-08	7.30543E-08	6.32230E-08
18	7.50974E-08	1.04955E-07	9.07499E-08	7.53183E-08	6.41739E-08
19	5.88959E-08	7.61353E-08	6.07505E-08	4.66266E-08	3.70257E-08
20	6.43352E-08	9.24227E-08	7.74573E-08	6.14012E-08	4.99783E-08
21	1.00822E-07	1.59436E-07	1.31040E-07	1.01769E-07	8.12620E-08
22	1.32897E-07	2.17639E-07	1.79777E-07	1.39739E-07	1.11850E-07
23	1.58115E-07	2.60255E-07	2.15727E-07	1.67995E-07	1.34586E-07
24	2.00848E-07	3.05854E-07	2.50076E-07	1.94668E-07	1.56073E-07
25	2.34914E-07	3.36721E-07	2.76734E-07	2.18757E-07	1.78192E-07
26	2.93951E-07	4.09502E-07	3.35986E-07	2.67381E-07	2.19806E-07
27	3.38939E-07	4.78618E-07	3.95316E-07	3.17068E-07	2.63830E-07
28	3.51915E-07	4.67130E-07	3.79384E-07	2.99987E-07	2.45703E-07
29	4.18379E-07	4.58747E-07	3.48151E-07	2.67422E-07	2.16106E-07
30	5.28765E-07	5.64891E-07	4.25055E-07	3.22634E-07	2.57468E-07
31	4.85622E-07	4.69726E-07	3.39722E-07	2.50349E-07	1.94654E-07
32	3.65525E-07	3.30597E-07	2.39120E-07	1.78849E-07	1.41476E-07
33	2.48336E-07	2.16043E-07	1.55754E-07	1.17442E-07	9.40860E-08
34	1.71886E-07	1.50781E-07	1.09744E-07	8.31536E-08	6.66316E-08
35	1.41326E-07	1.31560E-07	9.43159E-08	7.07236E-08	5.66718E-08
36	1.35197E-07	1.03541E-07	1.36589E-07	1.11970E-07	9.47996E-08

PLANT NAME: LONESTAR POLLUTANT: TSP AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 24-HOUR CONC= 4.2333E-06 DIRECTION= 28 DISTANCE= 0.6 KM DAY=169

YEAR= 72

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.3 KM	0.6 KM	0.9 KM	1.2 KM	1.5 KM
1	1.7172E-06 (192)	1.3059E-06 (171)	1.2063E-06 (171)	1.0206E-06 (330)	8.7687E-07 (330)
2	1.5157E-06 (192)	1.4751E-06 (192)	1.1734E-06 (330)	1.0049E-06 (330)	8.3904E-07 (330)
3	1.0993E-06 (193)	1.0667E-06 (33)	1.3975E-06 (242)	1.0686E-06 (242)	8.2857E-07 (242)
4	1.5922E-06 (182)	1.8181E-06 (182)	1.4656E-06 (139)	1.1082E-06 (139)	1.0213E-06 (153)
5	1.4858E-06 (138)	1.7784E-06 (177)	1.5279E-06 (177)	1.2722E-06 (143)	1.1552E-06 (143)
6	2.3046E-06 (173)	3.5342E-06 (173)	2.7228E-06 (173)	1.9901E-06 (173)	1.5071E-06 (173)
7	1.3909E-06 (144)	1.6343E-06 (144)	1.2133E-06 (144)	9.7625E-07 (78)	7.3649E-07 (173)
8	1.1912E-06 (151)	1.4463E-06 (48)	1.1637E-06 (48)	9.0066E-07 (303)	7.2604E-07 (280)
9	1.4757E-06 (109)	1.2444E-06 (146)	1.0134E-06 (320)	9.2187E-07 (303)	8.2443E-07 (320)
10	1.7279E-06 (233)	1.1699E-06 (109)	8.6821E-07 (313)	6.5476E-07 (77)	5.0617E-07 (77)
11	1.8506E-06 (109)	1.7702E-06 (321)	1.3531E-06 (321)	1.0881E-06 (77)	8.5661E-07 (321)
12	2.2952E-06 (282)	2.2144E-06 (147)	1.6921E-06 (281)	1.3779E-06 (281)	1.1353E-06 (281)
13	1.9888E-06 (328)	3.0681E-06 (328)	2.6184E-06 (328)	2.0592E-06 (328)	1.6457E-06 (328)
14	2.3723E-06 (328)	2.4960E-06 (327)	2.3367E-06 (327)	1.8773E-06 (327)	1.5135E-06 (327)
15	1.5200E-06 (45)	1.8133E-06 (92)	1.9058E-06 (92)	1.5319E-06 (352)	1.2795E-06 (92)
16	1.3340E-06 (320)	2.2010E-06 (351)	1.7941E-06 (351)	1.3338E-06 (351)	1.1597E-06 (71)
17	1.4044E-06 (191)	1.3452E-06 (191)	1.0274E-06 (322)	9.1890E-07 (94)	7.3027E-07 (332)
18	1.1454E-06 (190)	1.3595E-06 (92)	1.1249E-06 (7)	8.0314E-07 (66)	6.8406E-07 (66)
19	1.0100E-06 (279)	1.2554E-06 (53)	1.0614E-06 (158)	8.5888E-07 (267)	7.7787E-07 (267)
20	1.0717E-06 (122)	1.4437E-06 (158)	1.2092E-06 (189)	9.8251E-07 (189)	7.8686E-07 (337)
21	1.3727E-06 (117)	2.1751E-06 (17)	1.8467E-06 (17)	1.4482E-06 (17)	1.1583E-06 (286)
22	1.5002E-06 (117)	2.0644E-06 (8)	2.2181E-06 (8)	1.6760E-06 (8)	1.2974E-06 (8)
23	1.4803E-06 (340)	3.1200E-06 (8)	2.6423E-06 (306)	2.0260E-06 (306)	1.5858E-06 (346)
24	1.0821E-06 (189)	3.2916E-06 (101)	2.7221E-06 (101)	2.0592E-06 (101)	1.6276E-06 (343)
25	2.2121E-06 (216)	2.4206E-06 (80)	1.9364E-06 (9)	1.5140E-06 (9)	1.2519E-06 (348)
26	2.2030E-06 (216)	3.3863E-06 (203)	2.8352E-06 (203)	2.1680E-06 (167)	1.6588E-06 (167)
27	2.1927E-06 (73)	4.0566E-06 (169)	3.2974E-06 (169)	2.4978E-06 (169)	1.9555E-06 (169)
28	2.0470E-06 (273)	4.2333E-06 (169)	3.5513E-06 (169)	2.7481E-06 (169)	2.1982E-06 (169)
29	2.9704E-06 (209)	2.9750E-06 (209)	2.3048E-06 (318)	1.7306E-06 (318)	1.3409E-06 (318)
30	3.3289E-06 (237)	3.6193E-06 (161)	2.8542E-06 (161)	2.2574E-06 (161)	1.9062E-06 (207)
31	3.7093E-06 (111)	2.7310E-06 (112)	1.8982E-06 (312)	1.4781E-06 (312)	1.1762E-06 (312)
32	3.2066E-06 (274)	2.3270E-06 (171)	1.6927E-06 (62)	1.4127E-06 (62)	1.1512E-06 (171)
33	2.4866E-06 (182)	1.9534E-06 (180)	1.8084E-06 (302)	1.3737E-06 (302)	1.0735E-06 (302)
34	2.3366E-06 (124)	1.7903E-06 (180)	1.2385E-06 (357)	1.1000E-06 (357)	9.2632E-07 (357)
35	1.9585E-06 (136)	1.7464E-06 (136)	1.2170E-06 (136)	8.5885E-07 (136)	6.3886E-07 (136)
36	1.6972E-06 (330)	2.2385E-06 (357)	2.1732E-06 (357)	1.6869E-06 (330)	1.3983E-06 (357)

PLANT NAME: LUNESTAR POLLUTANT: TSP AIR QUALITY UNITS: GM/M**3

MAXIMUM MEAN CONC= 5.4241E-07 DIRECTION= 30 DISTANCE= 0.6 KM

YEAR= 73

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.3 KM	0.6 KM	0.9 KM	1.2 KM	1.5 KM
1	1.44697E-07	1.56324E-07	1.24462E-07	9.94637E-08	8.28715E-08
2	9.86607E-08	1.08478E-07	8.60615E-08	6.89598E-08	5.80213E-08
3	7.81446E-08	8.87232E-08	6.84339E-08	5.21828E-08	4.16821E-08
4	6.62139E-08	8.02033E-08	6.63545E-08	5.34315E-08	4.44174E-08
5	5.69707E-08	6.26834E-08	5.03805E-08	4.11252E-08	3.51315E-08
6	6.61258E-08	7.48409E-08	6.02397E-08	4.86563E-08	4.11766E-08
7	6.99920E-08	7.55647E-08	6.35125E-08	5.32528E-08	4.61529E-08
8	8.79828E-08	1.04099E-07	8.90139E-08	7.36509E-08	6.25639E-08
9	9.33258E-08	1.11020E-07	9.12974E-08	7.39126E-08	6.20786E-08
10	7.17583E-08	8.20179E-08	6.61279E-08	5.22810E-08	4.28727E-08
11	6.54076E-08	9.02664E-08	7.99183E-08	6.73532E-08	5.79303E-08
12	6.48565E-08	1.07883E-07	9.66730E-08	8.10641E-08	6.97832E-08
13	7.41852E-08	1.21130E-07	1.07703E-07	8.90894E-08	7.51801E-08
14	1.16115E-07	1.81500E-07	1.60494E-07	1.34422E-07	1.15614E-07
15	1.25750E-07	2.06318E-07	1.84171E-07	1.52705E-07	1.29117E-07
16	1.20418E-07	1.76475E-07	1.51490E-07	1.24190E-07	1.04800E-07
17	1.30498E-07	1.77519E-07	1.50038E-07	1.22042E-07	1.02471E-07
18	1.25104E-07	1.71288E-07	1.49904E-07	1.26632E-07	1.09859E-07
19	9.63436E-08	1.15535E-07	9.49621E-08	7.68866E-08	6.44686E-08
20	7.52313E-08	9.78413E-08	8.06318E-08	6.41371E-08	5.26182E-08
21	6.30355E-08	8.86481E-08	7.23282E-08	5.58931E-08	4.44962E-08
22	8.61655E-08	1.25910E-07	1.01356E-07	7.73908E-08	6.10034E-08
23	1.27760E-07	1.94099E-07	1.57318E-07	1.20585E-07	9.52833E-08
24	1.93449E-07	2.88874E-07	2.36459E-07	1.84601E-07	1.48451E-07
25	2.42522E-07	3.46235E-07	2.82673E-07	2.22666E-07	1.80986E-07
26	2.76897E-07	3.97909E-07	3.23049E-07	2.53039E-07	2.04702E-07
27	2.93304E-07	4.33056E-07	3.59799E-07	2.89130E-07	2.39648E-07
28	3.52831E-07	5.21331E-07	4.25147E-07	3.33130E-07	2.70412E-07
29	3.67474E-07	4.74039E-07	3.79532E-07	2.96847E-07	2.41034E-07
30	4.67262E-07	5.42409E-07	4.18447E-07	3.20345E-07	2.56430E-07
31	4.98057E-07	5.22368E-07	3.88500E-07	2.92714E-07	2.32351E-07
32	4.34368E-07	4.15743E-07	3.06106E-07	2.31555E-07	1.85117E-07
33	3.47865E-07	3.37025E-07	2.54726E-07	1.95890E-07	1.57876E-07
34	2.41344E-07	2.37232E-07	1.82283E-07	1.41391E-07	1.14834E-07
35	1.79486E-07	1.70014E-07	1.24028E-07	9.31476E-08	7.41923E-08
36	1.87793E-07	2.03738E-07	1.62260E-07	1.29370E-07	1.07884E-07

PLANT NAME: LUNESTAR POLLUTANT: TSP AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 24-HOUR CONC= 3.8843E-06 DIRECTION= 30 DISTANCE= 0.6 KM DAY= 74

YEAR= 73

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.3 KM	0.6 KM	0.9 KM	1.2 KM	1.5 KM
1	2.0041E-06 (192)	2.4347E-06 (267)	1.8222E-06 (94)	1.4087E-06 (193)	1.2318E-06 (261)
2	1.5576E-06 (178)	1.5452E-06 (305)	1.3448E-06 (175)	1.2148E-06 (175)	1.0587E-06 (94)
3	1.2381E-06 (117)	1.6374E-06 (98)	1.2657E-06 (98)	9.2397E-07 (98)	7.4939E-07 (92)
4	1.5255E-06 (117)	1.8081E-06 (117)	1.2853E-06 (117)	1.0677E-06 (231)	9.3778E-07 (231)
5	1.1924E-06 (190)	1.5721E-06 (80)	1.1507E-06 (259)	9.1589E-07 (80)	7.5974E-07 (259)
6	1.2971E-06 (190)	1.4660E-06 (130)	1.1759E-06 (175)	9.4921E-07 (139)	7.6054E-07 (139)
7	1.5760E-06 (258)	1.2875E-06 (257)	1.0304E-06 (258)	7.6808E-07 (258)	6.0588E-07 (80)
8	1.8919E-06 (258)	1.7235E-06 (234)	1.1398E-06 (234)	7.9777E-07 (234)	6.4051E-07 (190)
9	1.6773E-06 (191)	1.8975E-06 (254)	1.5887E-06 (254)	1.2637E-06 (41)	9.7906E-07 (41)
10	1.5023E-06 (189)	1.5854E-06 (189)	1.2800E-06 (124)	1.1388E-06 (124)	9.8057E-07 (124)
11	1.0545E-06 (20)	1.8073E-06 (99)	1.5690E-06 (99)	1.2658E-06 (99)	1.1065E-06 (355)
12	1.0369E-06 (355)	1.9886E-06 (355)	1.7751E-06 (34)	1.4113E-06 (34)	1.1299E-06 (34)
13	1.2886E-06 (20)	1.7594E-06 (51)	1.5488E-06 (13)	1.3178E-06 (13)	1.1257E-06 (13)
14	1.8153E-06 (136)	2.1413E-06 (131)	1.8557E-06 (52)	1.5395E-06 (342)	1.3775E-06 (11)
15	1.7028E-06 (14)	2.4078E-06 (14)	1.9527E-06 (293)	1.6903E-06 (293)	1.4480E-06 (54)
16	1.3777E-06 (77)	1.6933E-06 (278)	1.4679E-06 (278)	1.1955E-06 (54)	1.1857E-06 (15)
17	1.7811E-06 (77)	2.0705E-06 (77)	1.5331E-06 (137)	1.2462E-06 (196)	1.0055E-06 (196)
18	1.6127E-06 (30)	2.2032E-06 (9)	2.0179E-06 (298)	1.7126E-06 (297)	1.3869E-06 (297)
19	1.6654E-06 (30)	1.6871E-06 (30)	1.2044E-06 (220)	9.8244E-07 (220)	8.0284E-07 (220)
20	1.1310E-06 (294)	1.9745E-06 (295)	1.7167E-06 (295)	1.3899E-06 (295)	1.1614E-06 (295)
21	1.1864E-06 (295)	2.8029E-06 (295)	2.3051E-06 (295)	1.7208E-06 (295)	1.3182E-06 (295)
22	1.2555E-06 (315)	2.0967E-06 (294)	2.2518E-06 (335)	1.7496E-06 (315)	1.3388E-06 (315)
23	1.5010E-06 (102)	2.7155E-06 (335)	2.3662E-06 (111)	1.7607E-06 (111)	1.3484E-06 (111)
24	2.0357E-06 (265)	2.6470E-06 (316)	2.1250E-06 (154)	1.7330E-06 (316)	1.3646E-06 (316)
25	2.2787E-06 (126)	3.2048E-06 (121)	2.6718E-06 (287)	2.0670E-06 (287)	1.6178E-06 (287)
26	2.7837E-06 (264)	3.5498E-06 (271)	2.8100E-06 (271)	2.1253E-06 (271)	1.6572E-06 (271)
27	1.8247E-06 (122)	2.9359E-06 (286)	2.6251E-06 (286)	2.1211E-06 (286)	1.7294E-06 (286)
28	2.4281E-06 (162)	3.7699E-06 (32)	3.3989E-06 (244)	2.7900E-06 (244)	2.3048E-06 (244)
29	2.3147E-06 (201)	2.6836E-06 (162)	2.1684E-06 (123)	1.8912E-06 (123)	1.6250E-06 (123)
30	2.5827E-06 (263)	3.8843E-06 (74)	3.2787E-06 (74)	2.5283E-06 (74)	1.9924E-06 (74)
31	2.9659E-06 (203)	3.3656E-06 (21)	2.7437E-06 (203)	2.0003E-06 (203)	1.5008E-06 (251)
32	2.8455E-06 (167)	2.8718E-06 (148)	2.2137E-06 (33)	1.7423E-06 (33)	1.4572E-06 (360)
33	2.4835E-06 (147)	2.7410E-06 (116)	2.4082E-06 (116)	2.0791E-06 (116)	1.8162E-06 (116)
34	2.0924E-06 (40)	2.7572E-06 (97)	2.3826E-06 (40)	1.8517E-06 (57)	1.5433E-06 (40)
35	1.8717E-06 (208)	1.7279E-06 (79)	1.4981E-06 (79)	1.2706E-06 (79)	1.0995E-06 (79)
36	2.2748E-06 (262)	2.1233E-06 (231)	1.7626E-06 (231)	1.4503E-06 (231)	1.2303E-06 (260)

PLANT NAME: LONESTAR POLLUTANT: TSP AIR QUALITY UNITS: GM/M**3

MAXIMUM MEAN CONC= 5.9012E-07 DIRECTION= 30 DISTANCE= 0.6 KM

YEAR= 74

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.3 KM	0.6 KM	0.9 KM	1.2 KM	1.5 KM
1	8.84805E-08	1.02564E-07	8.28064E-08	6.62844E-08	5.55203E-08
2	7.95391E-08	9.06408E-08	7.50255E-08	6.15990E-08	5.24872E-08
3	6.78894E-08	6.84405E-08	5.47201E-08	4.52573E-08	3.94221E-08
4	7.09835E-08	8.05604E-08	6.40853E-08	5.19735E-08	4.44233E-08
5	7.21678E-08	7.74585E-08	6.21499E-08	5.09525E-08	4.37469E-08
6	7.54952E-08	8.30242E-08	6.73841E-08	5.61814E-08	4.89391E-08
7	7.82982E-08	9.72610E-08	8.15060E-08	6.62196E-08	5.53938E-08
8	7.14905E-08	8.56799E-08	7.42735E-08	6.26025E-08	5.40293E-08
9	6.85507E-08	7.88603E-08	6.55770E-08	5.33359E-08	4.47761E-08
10	6.10678E-08	6.20683E-08	4.84352E-08	3.82010E-08	3.15437E-08
11	7.01739E-08	7.98034E-08	6.39815E-08	5.04012E-08	4.13044E-08
12	8.62358E-08	1.04870E-07	8.66564E-08	6.97058E-08	5.82193E-08
13	8.81188E-08	1.05548E-07	8.95230E-08	7.50630E-08	6.50439E-08
14	9.99701E-08	1.32520E-07	1.15140E-07	9.76694E-08	8.56518E-08
15	1.13993E-07	1.50074E-07	1.22409E-07	9.82978E-08	8.24277E-08
16	1.06925E-07	1.48121E-07	1.32911E-07	1.15350E-07	1.02427E-07
17	1.23384E-07	1.92530E-07	1.73835E-07	1.47667E-07	1.28017E-07
18	1.23236E-07	1.85246E-07	1.61401E-07	1.32971E-07	1.12705E-07
19	9.74885E-08	1.36644E-07	1.16169E-07	9.41378E-08	7.86003E-08
20	7.30746E-08	1.00642E-07	8.56763E-08	7.02872E-08	5.93012E-08
21	7.76975E-08	1.12828E-07	9.08212E-08	6.97088E-08	5.52052E-08
22	1.15634E-07	1.82540E-07	1.47366E-07	1.13017E-07	8.93397E-08
23	1.52759E-07	2.47956E-07	2.01105E-07	1.54007E-07	1.21473E-07
24	1.87190E-07	3.01187E-07	2.46972E-07	1.92122E-07	1.53821E-07
25	2.20374E-07	3.31701E-07	2.68168E-07	2.08569E-07	1.67866E-07
26	2.70637E-07	4.34579E-07	3.61712E-07	2.86039E-07	2.32472E-07
27	3.04297E-07	4.99651E-07	4.27233E-07	3.48944E-07	2.93284E-07
28	3.39210E-07	4.81385E-07	3.95430E-07	3.14476E-07	2.58724E-07
29	4.34069E-07	4.97026E-07	3.79768E-07	2.90283E-07	2.33169E-07
30	5.50051E-07	5.90122E-07	4.40957E-07	3.32894E-07	2.64612E-07
31	4.74784E-07	4.64701E-07	3.38536E-07	2.54560E-07	2.03003E-07
32	3.60906E-07	3.40683E-07	2.42956E-07	1.78583E-07	1.39199E-07
33	2.76543E-07	2.60538E-07	1.89458E-07	1.41807E-07	1.12279E-07
34	2.13810E-07	1.99522E-07	1.43740E-07	1.07140E-07	8.50317E-08
35	1.53668E-07	1.53493E-07	1.13959E-07	8.55549E-08	6.74561E-08
36	1.15815E-07	1.35128E-07	1.10951E-07	9.02009E-08	7.63071E-08

PLANT NAME: LONESTAR POLLUTANT: TSP AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 24-HOUR CONC= 3.6286E-06 DIRECTION= 28 DISTANCE= 0.6 KM DAY=102

YEAR= 74

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

RANGE DIR	0.3 KM	0.6 KM	0.9 KM	1.2 KM	1.5 KM
1	1.8177E-06 (178)	2.1551E-06 (176)	1.7254E-06 (210)	1.3275E-06 (178)	1.0103E-06 (178)
2	1.4255E-06 (156)	1.5421E-06 (156)	1.2156E-06 (211)	9.9767E-07 (211)	8.4653E-07 (211)
3	1.2093E-06 (231)	1.1101E-06 (210)	9.7230E-07 (231)	8.1935E-07 (210)	6.9913E-07 (210)
4	1.7603E-06 (210)	1.4956E-06 (167)	1.4811E-06 (167)	1.1495E-06 (210)	8.8306E-07 (210)
5	1.4123E-06 (99)	1.4371E-06 (203)	1.0477E-06 (124)	7.9659E-07 (124)	6.1817E-07 (124)
6	1.6294E-06 (168)	1.4346E-06 (126)	1.3129E-06 (126)	1.1027E-06 (126)	9.3058E-07 (126)
7	1.9979E-06 (168)	1.5519E-06 (89)	1.2811E-06 (89)	1.0113E-06 (89)	8.3147E-07 (88)
8	1.4142E-06 (192)	1.1804E-06 (193)	1.0551E-06 (204)	9.2209E-07 (127)	8.4499E-07 (127)
9	1.0790E-06 (148)	1.1960E-06 (124)	1.3079E-06 (15)	1.1182E-06 (15)	9.2419E-07 (15)
10	1.3397E-06 (272)	1.2485E-06 (173)	7.1990E-07 (173)	5.8123E-07 (150)	4.8491E-07 (150)
11	1.1569E-06 (272)	1.3348E-06 (48)	1.0836E-06 (173)	8.9550E-07 (187)	7.3141E-07 (48)
12	1.3729E-06 (114)	1.5634E-06 (193)	1.4076E-06 (193)	1.1049E-06 (193)	8.7158E-07 (193)
13	1.7258E-06 (202)	1.6872E-06 (316)	1.2422E-06 (40)	9.7295E-07 (40)	7.7140E-07 (40)
14	1.5143E-06 (257)	2.1170E-06 (335)	1.7794E-06 (335)	1.3793E-06 (335)	1.0956E-06 (335)
15	1.4765E-06 (17)	2.0508E-06 (57)	1.7273E-06 (57)	1.2996E-06 (57)	9.9912E-07 (57)
16	1.4606E-06 (292)	2.2589E-06 (41)	1.8096E-06 (56)	1.4221E-06 (56)	1.1305E-06 (316)
17	1.8738E-06 (292)	2.3610E-06 (281)	2.0515E-06 (313)	1.9158E-06 (313)	1.7627E-06 (313)
18	1.8162E-06 (339)	1.8875E-06 (279)	1.6772E-06 (317)	1.3826E-06 (171)	1.2153E-06 (171)
19	1.3459E-06 (253)	1.8204E-06 (275)	1.4585E-06 (275)	1.0844E-06 (275)	8.2882E-07 (275)
20	1.2392E-06 (149)	2.3736E-06 (274)	2.1046E-06 (274)	1.6260E-06 (274)	1.2726E-06 (274)
21	1.2655E-06 (149)	1.9984E-06 (278)	1.6020E-06 (278)	1.1878E-06 (278)	9.0864E-07 (278)
22	1.4478E-06 (277)	2.4143E-06 (293)	1.9416E-06 (293)	1.4404E-06 (312)	1.1142E-06 (312)
23	1.5021E-06 (310)	2.9535E-06 (294)	2.3888E-06 (285)	1.8083E-06 (296)	1.4188E-06 (297)
24	1.6424E-06 (119)	3.1842E-06 (295)	2.4883E-06 (295)	1.8219E-06 (295)	1.3824E-06 (295)
25	1.6385E-06 (310)	2.0419E-06 (101)	1.7598E-06 (287)	1.4626E-06 (287)	1.1912E-06 (303)
26	1.9202E-06 (265)	2.8167E-06 (263)	2.6808E-06 (328)	2.2437E-06 (328)	1.7982E-06 (242)
27	1.9180E-06 (215)	3.0253E-06 (140)	2.9704E-06 (357)	2.3498E-06 (245)	2.0094E-06 (245)
28	2.4564E-06 (213)	3.6286E-06 (102)	2.8053E-06 (102)	2.1475E-06 (358)	1.7365E-06 (2)
29	3.0698E-06 (246)	2.9695E-06 (74)	2.4870E-06 (74)	2.0156E-06 (309)	1.7347E-06 (249)
30	3.0814E-06 (188)	3.1608E-06 (247)	3.0372E-06 (37)	2.5920E-06 (37)	2.2051E-06 (37)
31	3.4493E-06 (228)	2.8738E-06 (160)	2.1636E-06 (347)	1.6242E-06 (1)	1.4113E-06 (93)
32	2.9219E-06 (143)	2.4336E-06 (94)	1.9219E-06 (94)	1.5481E-06 (92)	1.2809E-06 (92)
33	2.4643E-06 (80)	2.4143E-06 (92)	1.7662E-06 (38)	1.2441E-06 (38)	9.9903E-07 (95)
34	2.3740E-06 (84)	2.0502E-06 (92)	1.5758E-06 (177)	1.2211E-06 (83)	1.0109E-06 (83)
35	1.6184E-06 (84)	2.4759E-06 (50)	1.9646E-06 (177)	1.4065E-06 (177)	1.0522E-06 (177)
36	1.2769E-06 (178)	2.1524E-06 (178)	1.7767E-06 (178)	1.3876E-06 (178)	1.1155E-06 (178)

COMPOSITE ANNUAL CONCENTRATION TABLE, UR/CU.M

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR	RANGE	0.3 KM	0.6 KM	0.9 KM	1.2 KM	1.5 KM
1		0.	0.	0.	0.	0.
2		0.	0.	0.	0.	0.
3		0.	0.	0.	0.	0.
4		0.	0.	0.	0.	0.
5		0.	0.	0.	0.	0.
6		0.	0.	0.	0.	0.
7		0.	0.	0.	0.	0.
8		0.	0.	0.	0.	0.
9		0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.
11		0.	0.	0.	0.	0.
12		0.	0.	0.	0.	0.
13		0.	0.	0.	0.	0.
14		0.	0.	0.	0.	0.
15		0.	0.	0.	0.	0.
16		0.	0.	0.	0.	0.
17		0.	0.	0.	0.	0.
18		0.	0.	0.	0.	0.
19		0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.
21		0.	0.	0.	0.	0.
22		0.	0.	0.	0.	0.
23		0.	0.	0.	0.	0.
24		0.	0.	0.	0.	0.
25		0.	0.	0.	0.	0.
26		0.	0.	0.	0.	0.
27		0.	1.	0.	0.	0.
28		0.	1.	1.	0.	0.
29		0.	1.	0.	0.	0.
30		1.	1.	0.	0.	0.
31		0.	1.	0.	0.	0.
32		0.	0.	0.	0.	0.
33		0.	0.	0.	0.	0.
34		0.	0.	0.	0.	0.
35		0.	0.	0.	0.	0.
36		0.	0.	0.	0.	0.

COMPOSITE HIGHEST,SECOND-HIGHEST 24-HOUR CONCENTRATION TABLE,UG/CU.M

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR \ RANGE	0.3 KM	0.6 KM	0.9 KM	1.2 KM	1.5 KM
1	2.	2.	2.	1.	1.
2	2.	2.	1.	1.	1.
3	2.	2.	2.	1.	1.
4	2.	2.	1.	1.	1.
5	2.	2.	2.	1.	1.
6	2.	4.	3.	2.	2.
7	2.	2.	1.	1.	1.
8	2.	2.	1.	1.	1.
9	3.	3.	2.	2.	1.
10	3.	2.	1.	1.	1.
11	2.	2.	2.	1.	1.
12	2.	2.	2.	1.	1.
13	2.	3.	3.	2.	2.
14	2.	3.	2.	2.	2.
15	2.	2.	2.	2.	1.
16	2.	3.	3.	2.	2.
17	2.	3.	2.	2.	2.
18	2.	2.	2.	2.	1.
19	2.	2.	1.	1.	1.
20	1.	2.	2.	2.	1.
21	2.	3.	2.	2.	1.
22	2.	3.	3.	2.	2.
23	2.	3.	3.	2.	2.
24	2.	4.	3.	2.	2.
25	2.	3.	3.	2.	2.
26	3.	4.	3.	2.	2.
27	4.	4.	3.	3.	2.
28	3.	4.	4.	3.	2.
29	3.	4.	3.	3.	2.
30	4.	4.	4.	3.	2.
31	4.	3.	3.	2.	2.
32	3.	3.	2.	2.	2.
33	2.	3.	2.	2.	2.
34	2.	3.	2.	2.	2.
35	2.	2.	2.	1.	1.
36	2.	2.	2.	2.	1.

LUNESTAR - 4 NEW DUST COLLECTORS - DIR 280 - DIST 0.6 - DAY 153,1970

1. 7.0

* * * S O U R C E S * * *

NO	Q (G/SEC)	HP (M)	TS (DEG-K)	VS (M/SEC)	D(M)	R(KM)	S(KM)	
1.	0.04	29.0	303.0	25.9	0.30	0.0	0.0	DC-1
2.	0.04	20.7	303.0	25.9	0.30	0.0	0.0	DC-2
3.	0.39	24.4	336.0	19.0	1.07	0.0	0.0	DC-3
4.	0.26	24.4	336.0	19.8	0.85	0.0	0.0	DC-4

* * * R E C E P T U R S * * *

NO.	RREC(KM)	SREC(KM)	Z (M)
1.	-1.100	-0.400	0.0
2.	-1.100	-0.300	0.0
3.	-1.100	-0.200	0.0
4.	-1.100	-0.100	0.0
5.	-1.100	0.000	0.0
6.	-1.100	0.100	0.0
7.	-1.100	0.200	0.0
8.	-1.100	0.300	0.0
9.	-1.100	0.400	0.0
10.	-1.100	0.500	0.0
11.	-1.000	-0.400	0.0
12.	-1.000	-0.300	0.0
13.	-1.000	-0.200	0.0
14.	-1.000	-0.100	0.0
15.	-1.000	0.000	0.0
16.	-1.000	0.100	0.0
17.	-1.000	0.200	0.0
18.	-1.000	0.300	0.0
19.	-1.000	0.400	0.0
20.	-1.000	0.500	0.0
21.	-0.900	-0.400	0.0
22.	-0.900	-0.300	0.0
23.	-0.900	-0.200	0.0
24.	-0.900	-0.100	0.0
25.	-0.900	0.000	0.0
26.	-0.900	0.100	0.0
27.	-0.900	0.200	0.0
28.	-0.900	0.300	0.0
29.	-0.900	0.400	0.0
30.	-0.900	0.500	0.0
31.	-0.800	-0.400	0.0

32.	-0.800	-0.300	0.0
33.	-0.800	-0.200	0.0
34.	-0.800	-0.100	0.0
35.	-0.800	0.000	0.0
36.	-0.800	0.100	0.0
37.	-0.800	0.200	0.0
38.	-0.800	0.300	0.0
39.	-0.800	0.400	0.0
40.	-0.800	0.500	0.0
41.	-0.700	-0.400	0.0
42.	-0.700	-0.300	0.0
43.	-0.700	-0.200	0.0
44.	-0.700	-0.100	0.0
45.	-0.700	0.000	0.0
46.	-0.700	0.100	0.0
47.	-0.700	0.200	0.0
48.	-0.700	0.300	0.0
49.	-0.700	0.400	0.0
50.	-0.700	0.500	0.0
51.	-0.600	-0.400	0.0
52.	-0.600	-0.300	0.0
53.	-0.600	-0.200	0.0
54.	-0.600	-0.100	0.0
55.	-0.600	0.000	0.0
56.	-0.600	0.100	0.0
57.	-0.600	0.200	0.0
58.	-0.600	0.300	0.0
59.	-0.600	0.400	0.0
60.	-0.600	0.500	0.0
61.	-0.500	-0.400	0.0
62.	-0.500	-0.300	0.0
63.	-0.500	-0.200	0.0
64.	-0.500	-0.100	0.0
65.	-0.500	0.000	0.0
66.	-0.500	0.100	0.0
67.	-0.500	0.200	0.0
68.	-0.500	0.300	0.0
69.	-0.500	0.400	0.0
70.	-0.500	0.500	0.0
71.	-0.400	-0.400	0.0
72.	-0.400	-0.300	0.0
73.	-0.400	-0.200	0.0
74.	-0.400	-0.100	0.0
75.	-0.400	0.000	0.0
76.	-0.400	0.100	0.0
77.	-0.400	0.200	0.0
78.	-0.400	0.300	0.0

79.	-0.400	0.400	0.0
80.	-0.400	0.500	0.0
81.	-0.300	-0.400	0.0
82.	-0.300	-0.300	0.0
83.	-0.300	-0.200	0.0
84.	-0.300	-0.100	0.0
85.	-0.300	0.000	0.0
86.	-0.300	0.100	0.0
87.	-0.300	0.200	0.0
88.	-0.300	0.300	0.0
89.	-0.300	0.400	0.0
90.	-0.300	0.500	0.0
91.	-0.200	-0.400	0.0
92.	-0.200	-0.300	0.0
93.	-0.200	-0.200	0.0
94.	-0.200	-0.100	0.0
95.	-0.200	0.000	0.0
96.	-0.200	0.100	0.0
97.	-0.200	0.200	0.0
98.	-0.200	0.300	0.0
99.	-0.200	0.400	0.0
100.	-0.200	0.500	0.0

DAY= 153 YEAR= 70 HOURS= ALL WD SHIFT ANGLE= 0

1.	101.	7.7	4	1181.	299.	0.
2.	98.	6.7	4	1205.	299.	0.
3.	100.	8.7	4	1228.	298.	0.
4.	102.	5.7	4	1252.	298.	0.
5.	95.	4.6	5	1275.	298.	0.
6.	100.	5.1	4	77.	298.	0.
7.	93.	6.7	4	254.	298.	0.
8.	102.	8.2	4	430.	299.	0.
9.	109.	8.7	4	606.	300.	0.
10.	101.	7.2	4	783.	300.	0.
11.	100.	8.2	3	959.	301.	0.
12.	120.	7.7	3	1135.	301.	0.
13.	108.	8.7	3	1312.	301.	0.
14.	101.	7.2	3	1488.	301.	0.
15.	106.	6.7	4	1488.	302.	0.
16.	112.	6.2	4	1488.	301.	0.
17.	107.	6.2	4	1488.	301.	0.
18.	104.	6.7	4	1488.	300.	0.
19.	103.	6.7	4	1488.	300.	0.
20.	94.	5.1	5	1499.	299.	0.
21.	95.	4.6	4	1510.	299.	0.

23.	105.	5.1	5	1533.	299.	0.
24.	114.	4.1	5	1545.	299.	0.

AVERAGE CONCENTRATIONS FOR 24 HOURS.

* * * R E C E P T O R N U M B E R * * *

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.00	0.00	0.00	0.00	0.04	0.12	0.18	0.15	0.08	0.0
2.	0.00	0.00	0.00	0.00	0.05	0.18	0.24	0.20	0.10	0.0
3.	0.00	0.00	0.00	0.02	0.27	0.89	1.48	1.27	0.65	0.3
4.	0.00	0.00	0.00	0.02	0.20	0.66	1.07	0.91	0.46	0.2
	TOTAL CONCENTRATION (UG/M**3)									
	0.00	0.00	0.00	0.05	0.56	1.85	2.97	2.53	1.29	0.6

* * * R E C E P T O R N U M B E R * * *

	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.00	0.00	0.00	0.00	0.04	0.14	0.20	0.14	0.07	0.0
2.	0.00	0.00	0.00	0.00	0.06	0.21	0.28	0.19	0.10	0.0
3.	0.00	0.00	0.00	0.02	0.29	1.04	1.66	1.17	0.54	0.2
4.	0.00	0.00	0.00	0.01	0.22	0.77	1.20	0.84	0.39	0.1
	TOTAL CONCENTRATION (UG/M**3)									
	0.00	0.00	0.00	0.04	0.61	2.15	3.34	2.34	1.09	0.4

* * * R E C E P T O R N U M B E R * * *

	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.
SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.00	0.00	0.00	0.00	0.04	0.16	0.22	0.12	0.06	0.0
2.	0.00	0.00	0.00	0.00	0.07	0.25	0.32	0.17	0.09	0.0
3.	0.00	0.00	0.00	0.02	0.31	1.21	1.80	1.01	0.40	0.1
4.	0.00	0.00	0.00	0.01	0.23	0.90	1.31	0.73	0.30	0.0
	TOTAL CONCENTRATION (UG/M**3)									

	0.00	0.00	0.00	0.03	0.66	2.52	3.64	2.03	0.85	0.2

* * * R E C E P T O R N U M B E R * * *

	31.	32.	33.	34.	35.	36.	37.	38.	39.	40.
SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.00	0.00	0.00	0.00	0.05	0.19	0.23	0.10	0.04	0.0
2.	0.00	0.00	0.00	0.00	0.08	0.30	0.34	0.15	0.06	0.0
3.	0.00	0.00	0.00	0.01	0.33	1.44	1.82	0.81	0.25	0.0
4.	0.00	0.00	0.00	0.01	0.25	1.08	1.34	0.59	0.19	0.0
	TOTAL CONCENTRATION (UG/M**3)									
	0.00	0.00	0.00	0.02	0.71	3.00	3.73	1.64	0.54	0.1

* * * R E C E P T O R N U M B E R * * *

	41.	42.	43.	44.	45.	46.	47.	48.	49.	50.
SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.00	0.00	0.00	0.00	0.05	0.23	0.21	0.08	0.02	0.0
2.	0.00	0.00	0.00	0.00	0.09	0.37	0.33	0.13	0.03	0.0
3.	0.00	0.00	0.00	0.01	0.35	1.71	1.67	0.56	0.15	0.0
4.	0.00	0.00	0.00	0.00	0.27	1.30	1.25	0.41	0.11	0.0
	TOTAL CONCENTRATION (UG/M**3)									
	0.00	0.00	0.00	0.01	0.76	3.60	3.45	1.18	0.30	0.1

* * * R E C E P T O R N U M B E R * * *

	51.	52.	53.	54.	55.	56.	57.	58.	59.	60.
SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.00	0.00	0.00	0.00	0.05	0.26	0.16	0.04	0.01	0.0
2.	0.00	0.00	0.00	0.00	0.10	0.46	0.27	0.08	0.01	0.0
3.	0.00	0.00	0.00	0.00	0.36	1.97	1.31	0.32	0.10	0.0
4.	0.00	0.00	0.00	0.00	0.29	1.54	0.99	0.23	0.07	0.0
	TOTAL CONCENTRATION (UG/M**3)									

0.00	0.00	0.00	0.01	0.80	4.23	2.73	0.67	0.20	0.0

RECEPTUR NUMBER

	61.	62.	63.	64.	65.	66.	67.	68.	69.	70.
SUURCE	PARTIAL CUNCENTRATIUNS (UG/M**3)									
1.	0.0	0.00	0.00	0.00	0.05	0.29	0.11	0.02	0.01	0.0
2.	0.0	0.00	0.00	0.00	0.11	0.56	0.20	0.03	0.01	0.0
3.	0.0	0.00	0.00	0.00	0.34	2.07	0.81	0.19	0.05	0.0
4.	0.0	0.00	0.00	0.00	0.29	1.67	0.63	0.13	0.04	0.0
	TOTAL CUNCENTRATIUN (UG/M**3)									
	0.0	0.00	0.00	0.00	0.80	4.59	1.75	0.37	0.10	0.0

RECEPTUR NUMBER

	71.	72.	73.	74.	75.	76.	77.	78.	79.	80.
SUURCE	PARTIAL CUNCENTRATIUNS (UG/M**3)									
1.	0.0	0.00	0.00	0.00	0.05	0.25	0.05	0.01	0.00	0.0
2.	0.0	0.00	0.00	0.00	0.13	0.59	0.10	0.01	0.00	0.0
3.	0.0	0.00	0.00	0.00	0.29	1.69	0.38	0.10	0.01	0.0
4.	0.0	0.00	0.00	0.00	0.26	1.44	0.30	0.07	0.01	0.0
	TOTAL CUNCENTRATIUN (UG/M**3)									
	0.0	0.00	0.00	0.00	0.72	3.97	0.83	0.20	0.02	0.0

RECEPTUR NUMBER

	81.	82.	83.	84.	85.	86.	87.	88.	89.	90.
SUURCE	PARTIAL CUNCENTRATIUNS (UG/M**3)									
1.	0.0	0.0	0.00	0.00	0.04	0.13	0.02	0.00	0.00	0.0
2.	0.0	0.0	0.00	0.00	0.12	0.39	0.04	0.00	0.00	0.0
3.	0.0	0.0	0.00	0.00	0.19	0.82	0.20	0.01	0.00	0.0
4.	0.0	0.0	0.00	0.00	0.17	0.73	0.15	0.01	0.00	0.0
	TOTAL CUNCENTRATIUN (UG/M**3)									

	0.0	0.0	0.00	0.00	0.52	2.07	0.41	0.02	0.00	0.0

*** RECEPTOR NUMBER ***

	91.	92.	93.	94.	95.	96.	97.	98.	99.	100.
SOURCE	PARTIAL CONCENTRATIONS (UG/M**3)									
1.	0.0	0.0	0.0	0.00	0.01	0.03	0.00	0.00	0.00	0.0
2.	0.0	0.0	0.0	0.00	0.08	0.11	0.00	0.00	0.00	0.0
3.	0.0	0.0	0.0	0.00	0.07	0.22	0.01	0.00	0.00	0.0
4.	0.0	0.0	0.0	0.00	0.07	0.19	0.01	0.00	0.00	0.0
	TOTAL CONCENTRATION (UG/M**3)									
	0.0	0.0	0.0	0.00	0.22	0.55	0.03	0.00	0.00	0.0