LGM ENGINEERS CONSTRUCTORS

DER

MAR 18 1986

BAQM

E-85-100

March 11, 1986

Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, FL 32301

ATTENTION: Clair Fancy, P.E.
Deputy Bureau Chief

SUBJECT: Application to Construct Air Pollution Sources,
Lake County Waste to Energy Facility

Gentlemen:

NRG/Recovery Group proposes to construct a 500 ton per day municipal solid waste energy recovery facility in Lake County, Florida.

We submit herewith the subject application and supporting documents for your consideration on behalf of NRG/Recovery Group, applicant. Enclosed is a check in the amount of $1000.00 to cover the application processing fee.

We have worked closely with your staff during design of the facility and preparation of the application, and we believe the facility meets Florida DER criteria.

The funding for this project is contingent on meeting a fast-track schedule. We would appreciate your expeditious review of this permit application. Should you or your staff require any additional information or have any questions regarding this application, please let us know.

Thank you for your continued assistance.

Yours truly,

Robert C. Mayfield

Robert Mayfield
Manager, Energy Division

RM:BC:jdm

PREVENTION OF SIGNIFICANT DETERIORATION
PERMIT APPLICATION
FOR THE PROPOSED
NRG/RECOVERY GROUP
LAKE COUNTY WASTE TO ENERGY FACILITY
AT LAKE COUNTY, FLORIDA

Submitted by:

NRG/Recovery Group
1616 Athens Street
Lakeland, Florida 33803

Prepared by:

LGM Engineers Constructors
1330 West Peachtree Street
Atlanta, Georgia 30367

Job No. E-85-100
March 11, 1986

NRG/Recovery Group, Inc.

LAKE COUNTY
WASTE TO ENERGY FACILITY

Application to Construct
Air Pollution Sources

LGM

LGM ENGINEERS CONSTRUCTORS

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FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION FOR PERMIT TO CONSTRUCT

FOR

NRG/RECOVERY GROUP

LAKE COUNTY WASTE TO ENERGY FACILITY

AT LAKE COUNTY, FLORIDA

MARCH 11, 1986

STATE OF FLORIDA

AC 35-115379

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

DER

MAR 18 1986

BAOM

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Waste-to-Energy Facility [X] New[1] [ ] Existing[1]

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

COMPANY NAME: Lake County Waste to Energy Facility COUNTY: Lake

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

SOURCE LOCATION: Street Jim Rogers Road City Okahumpka

UTM: East 413.12 km North 3179.26 km

Latitude 28 ° 44 ' 22 "N Longitude 81 ° 53 ' 23 "W

APPLICANT NAME AND TITLE: NRG/Recovery Group (owner)

APPLICANT ADDRESS: 1616 Athens Street, Lakeland, Florida 33803

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of NRG/Recovery Group

I certify that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: Walt Walters

Walt Walters, President
Name and Title (Please Type)

Date: 3/11/86 Telephone No. (813) 687-4593

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

[1] See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed C P Nichols

C. P. Nichols
Name (Please Type)

Lockwood Greene Engineers, Inc.
Company Name (Please Type)

1330 W. Peachtree Street, Atlanta, GA 30367
Mailing Address (Please Type)

Florida Registration No. 30845 Date: 3/11/86 Telephone No. (404) 873-3261

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.

The Lake County Waste to Energy Facility proposes to install a new municipal solid waste (MSW) conversion facility with capacity to burn 500 tons/day to generate steam and electric power. Two incinerator/boilers will be installed each having 250 tons/day capacity. Discharge is to one stack. (see attached description)

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

Start of Construction July 1986 Completion of Construction December 1987

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.)

Electrostatic Precipitator and associated equipment and erection $2,080,000.

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

None.

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

if power plant, hrs/yr ____; if seasonal, describe: Not seasonal.

If this is a new source or major modification, answer the following questions. (Yes or No)

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

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

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

   c. If yes, list non-attainment pollutants.

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

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement 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? Yes

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? No.

Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? No.

   a. If yes, for what pollutants?

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

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

Supportive information is attached.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Municipal solid waste; see subsection E. Fuels.

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		

B. Process Rate, if applicable: (See Section V, Item 1) Not Applicable.

1. Total Process Input Rate (lbs/hr): _____

2. Product Weight (lbs/hr): _____

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

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			units = lbs/hr	T/yr	
Particulate	13.76	60	0.10 lb./ 10^6BTU*	20.8	830+	3650	
Sulfur Dioxide	125	547	NA	NA	125	547	
NO_x	104	455	NA	NA	104	455	
CO	93	102	NA	NA	93	102	
Pb	0.25	1.1			6.25	27	

* proposed 40CFR60 Subpart Db.

[1]See Section V, Item 2.

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

[4]Emission, if source operated without control (See Section V, Item 3).

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency (%)	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
ESP	Particulate	98.5 +		Vendor Experience

. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Municipal solid waste	35,000 lb./hr	41,667 lb./hr	208 (104 x 10^6BTU/hr.each)
Wood chips		11,500	50 (supplement MSW up to unit capacity)

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

Fuel Analysis: Design MSW

Percent Sulfur: 0.3 Percent Ash: 20.1

Density: _____ lbs/gal Typical Percent Nitrogen: 0.8

Heat Capacity: 5000 BTU/lb _____ BTU/gal

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

. If applicable, indicate the percent of fuel used for space heating. Not Applicable.

Annual Average _____ Maximum _____

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

Grate ash and flyash are wetted and mixed to prevent fugitive dust and disposed of in the Astatula landfill. Noncontact cooling water and boiler system blowdown is disposed of by percolation ponds.

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

Stack Height: 125 ft. Stack Diameter: 6' effective ft.

Gas Flow Rate: 111,200 ACFM _____ DSCFM Gas Exit Temperature: 350°(a.) °F.

Water Vapor Content: 9 % Velocity: 66 FPS

(a.) Lowest estimate for vendor equipment under consideration.

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type 0 (Plastics)	Type I (Rubbish) *	Type II (Refuse) *	Type III (Garbage) *	Type IV (Pathological) **	Type V (Liq.& Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated		* Facility capacity is a total of 20.83 tons/hr. of Type I, II and III.			** Type IV to be incinerated only with the specific approval of Fla. DER and in accordance with approved procedures.		
Uncontrolled (lbs/hr)	SEE III						

Description of Waste Residential and commercial municipal solid waste.

Total Weight Incinerated (lbs/hr) 41,666 Design Capacity (lbs/hr) 41,666

Approximate Number of Hours of Operation per day 24 day/wk 7 wks/yr. 52

Manufacturer to be determined.

Date Constructed 7/86 to 12/87 Model No. to be determined

Each Unit	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel Type	Fuel BTU/hr	Temperature (°F)
Primary Chamber	10,000 +	104 x 10^6	MSW	104 X 10^6	1800° 1 sec. +
~~Secondary Chamber~~					1500° 3 sec.

Stack Height: 125 ft. Stack Diamter: 6' effective Stack Temp. 350°F

Gas Flow Rate: 111,200 ACFM 53500 @ 12% CO_2 DSCFM* Velocity: 66 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

[X] Other (specify) ESP

Brief description of operating characteristics of control devices: Three field dry electrostatic precipitator, rigid frame type, guaranteed emission rate less than 0.03 grains particulate/dscf corrected to 12% CO_2.

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

See Section 8.

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)] **N/A**

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

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

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[X] Yes [ ] No See PSD report.

Contaminant	Rate or Concentration
Particulate	0.08 grains/dscf (Subpart E)
Particulate	0.10 lb./million BTU input (Subpart Db-proposed)

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[X] Yes [ ] No See PSD report, BACT/LAER Compilation

Contaminant	Rate or Concentration
Particulate	0.02 to 0.05 gr/dscf
Sulfur Dioxide	0.2 to 1.3 lb./million BTU
Nitrogen Oxides	0.3 to 0.7 lb./million BTU

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

See PSD report

Contaminant	Rate or Concentration
Particulate	0.03 gr/dscf corrected to 12% CO_2
Particulate	0.067 lb./million BTU
Sulfur Dioxide	0.6 lb./million BTU
Nitrogen Oxides	0.5 lb./million BTU

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

1. Control Device/System: ESP
2. Operating Principles: Electrostatic charge
3. Efficiency:* 98.5
4. Capital Costs: $2,080,000

*Explain method of determining

5. Useful Life: 20 years +

6. Operating Costs: $65,000/yr.

7. Energy: 50 kwh

8. Maintenance Cost: $42,000/yr.

9. Emissions:

Contaminant	Rate or Concentration
Particulate	0.03 gr./dscf corrected to 12% CO_2

10. Stack Parameters

a. Height: 125 ft.

b. Diameter: effective 6 ft.

c. Flow Rate: 111,200 ACFM

d. Temperature: 350 °F.

e. Velocity: 66 FPS

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

1. See above.

a. Control Device: ESP

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

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

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected: See above

1. Control Device: ESP

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company: Pinellas County

(2) Mailing Address: Solid Waste Management, Pinellas County.

(3) City:

(4) State: Florida

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

(5) Environmental Manager: Bob Van Deman

(6) Telephone No.: (813) 825-1565

(7) Emissions:[1]

Contaminant	Rate or Concentration
Particulate	<0.03 gr/dscf corrected to 12% CO_2.

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

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

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data None

1. _____ no. sites _____ TSP _____ ( ) SO^{2}* _____ Wind spd/dir

Period of Monitoring ___/___/___ to ___/___/___
month day year month day year

Other data recorded Refer to PSD permit application report for discussion on ambient monitoring exemption.

Attach all data or statistical summaries to this application.

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

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? [ ] Yes [ ] No

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. 5 Year(s) of data from 01 / 01 / 74 (month / day / year) to 12 / 31 / 78 (month / day / year)

2. Surface data obtained from (location) Orlando, Florida

3. Upper air (mixing height) data obtained from (location) Tampa, Florida

4. Stability wind rose (STAR) data obtained from (location) N/A

C. Computer Models Used

1. ISCST - modified to include _____ Modified? If yes, attach description.

2. EPA calm wind _____ Modified? If yes, attach description.

3. adjustment method _____ 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	1.735	grams/sec
SO^2	15.8	grams/sec

E. Emission Data Used in Modeling See attached PSD report.

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

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

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

FACILITY DESCRIPTION

The overall facility will be designed for the efficient receipt, handling and combustion of municipal solid waste for the generation of steam and power and for the disposal of ash residues. Within this overall purpose, the following items are pertinent:

- Fuel Handling Equipment
- Steam Generation Equipment
- Power Generation
- Environmental Systems
- Structures
- Sitework

Each of these items are discussed in the following sections.

FUEL HANDLING EQUIPMENT

Waste will be received from municipal and/or contractor trucks principally on a five day week basis. An above ground 60 ton truck scale (70 feet long) is provided in the access road to the unloading area. The scale is remote monitored, with weight data recorded by camera.

The trucks will be routed to a waste pit provided with multiple unloading bays. The waste will be dumped in the pit which has approximately four days storage volume (1,800 tons). Two overhead cranes provided with grapple feeders will service this area for distribution of the waste to the combustion equipment. Either crane will be capable of servicing the design throughput of the facility while the other crane is being maintained. A single crane operating room will be provided high in the building, with complete visibility of the waste pit to allow for control of either crane. Each crane has a capacity of $7\frac{1}{2}$ tons.

STEAM GENERATION EQUIPMENT

Waste will be distributed to two boilers for combustion and generation of steam. The combustion system for each boiler will consist of a waste hopper, hydraulic ram feeder and reciprocating grates. Waste will be fed into the furnace by the hydraulic ram feeder which responds to steam load requirements. The combustion process is further controlled by modulating the reciprocating grates and the undergrate combustion air. Negative furnace pressure will be controlled by modulating the inlet dampers to the induced draft fan. An overfire air system will be used to provide turbulence throughout the lower section of the furnace resulting in optimum combustion. Both the undergrate air and the overfire air fans will take suction from the waste pit area to aid in ventilation and provide odor control.

Steam will be generated in two natural circulation boilers with water cooled furnace walls. The units will be designed to operate at 625 PSIG/750°F at superheater outlet. They shall each have the capability of handling 250 tons MSW per day. The steam generation system will include an economizer, boiler and superheater. Furnace volume and gas path areas will be liberally sized for proper combustion of the municipal solid waste with an assumed heating value of 5,000 BTU/LB. The sizing will also ensure good superheater, convection bank and economizer tube life and heat transfer. Retractable soot blowers will be provided in the superheater areas and rotary soot blowers will be provided in the convection bank and economizer areas, in order to maintain clean, efficient heat transfer surfaces.

Materials of construction will be selected to ensure that corrosion and mechanical wear problems associated with municipal solid waste combustion will be minimal.

The feedwater system shall consist of the following:

Demineralizer
Demineralized Water Storage Tank
Demineralized Water Transfer Pumps
One Continuous Boiler Blowdown Heat Exchangers
to Heat the Water to the Deaerator
One Motor Driven Feedwater Pump
One Steam Turbine Driven Feed Water Pump
Using Steam From the 150 PSI Extraction Point on
the Power Turbine
Deaerator, Complete with Trim
One Chemical Feed Set for the Boilers
One Chemical Feed Set for the Deaerator

All hot pipes and breeching with usable energy will be insulated and lagged for outdoor service. Other hot lines and breeching will be insulated and lagged where required for personnel protection.

A set of platforms and stairs will be supplied to serve all operating points of all equipment. An additional egress mode will be supplied in the form of OSHA standard ladders.

All equipment will be completely piped per applicable codes.

The instrumentation and control systems shall allow automatic or manual operation of the stoker, feedwater flow and feedwater treatment system.

A cooling tower to cool the circulating water of the steam condenser will be placed alongside the power turbine. Cooling air will be induced over the trickling water by fans in the top of the tower. To control algae and other contaminants, a chemical feed set will be installed.

Water will be circulated back to the condenser by one of two full capacity pumps.

The following station service, instrument and controls work will be performed:

- Set motor control centers
- Set instrument and control panel boards
- Install complete electrical raceway system
- Install all power and control wiring
- Install complete indoor and outdoor lighting system per OSHA and NEC
- Install TV and communication system

POWER GENERATION

A single steam turbine generator will be used to generate power at 12.3 MW. for distribution to the utility grid. This steam turbine generator will be an extraction-condensing unit with a nominal throttle condition of 625 PSIG/750°F, an extraction pressure of 150 PSIG and an exhaust pressure of 3 inch H_gA. This generator will be supported with the normal auxiliary equipment such as air ejection equipment, gland seal equipment and condensate pumps. The generator will be designed to utilize the steam flow from both boilers when operating at full load.

A primary feeder from the generator to the utility breaker and meter station will be installed, in addition to a full complement of switchgear.

ENVIRONMENTAL SYSTEMS

The pollution control and ash handling systems will be designed to provide for disposal of combustion products in an environmentally acceptable manner. This is accomplished by the installation of equipment to capture fly ash and bottom ash. The system will include bottom grate ash conveyors. These conveyors move heavy ash into an ash container. Ash will be sprayed with water to quench and control fugitive dust. Fly ash will be collected in the boiler pass and economizer hoppers and routed by gravity through rotary seal valves to the bottom ash collection system.

Fine material falling through the grate system (siftings) into the under stoker air plenum hoppers will be routed into the bottom ash conveyor.

The final control of fly ash will be accomplished by an electrostatic precipitator. This equipment provides for the particulate collection efficiencies mandated by environmental regulations. Fly ash that is collected by the precipitator will be routed through rotary seal valves and mechanical conveyors to the bottom ash conveyor. The combustion gases of each boiler will be drawn through the system by an induced draft fan. Each fan will discharge into a Corten, free standing stack complying with EPA height standards. The stack will be fitted with test ports and platform with access ladder.

The process wastewater system collects boiler blowdown, demineralizer regenerant wastes, floor drains in the water treatment area and the chemical treatment area, and the cooling tower blowdown. The wastewater will be disposed of in a three-cell percolation pond.

Sanitary waste will be processed by a septic tank system.

STRUCTURES

The refuse recovery building is 120 feet long by 55 feet wide by 70 feet high at the eaves, plus a 110 feet long by 30 feet wide truck unloading enclosure which is 30 feet high at the low eave and shares one long side with the main building. The larger building encloses the refuse pit (100 feet by 40 feet wide by 15 feet deep). Structures are wide flange steel column and beam with appropriate cross bracing, channel girts to support siding and LH bar joists for the roof of the larger building. Uninsulated 26 gauge painted metal siding and roofing is used to enclose the refuse recovery building and truck unloading area. Also enclosed in the refuse recovery building are the switchgear room, control room and crane operator control area which are all "stacked" in the 30 feet by 15 feet area between the hoppers. These control rooms are air-conditioned. Control room windows face the boilers. The boilers are supported on structural steel outside the building. The control room is on the 15 feet operating level. Crane operator space has glass on three sides, with the floor level above the hoppers to allow vision into the hoppers and the pit.

Access to the control rooms and switchgear room is by the outside stair tower which also serves the boiler platforms. Boiler platform floors and stair treads are structural bar grating, except for a 20 feet by 30 feet area of 6 inch concrete slab on metal deck which serves as the deaerator platform and covers the boiler feed water equipment (on original ground level). Another 6 inch concrete slab on metal deck forms a mezzanine on three sides of refuse pit inside the building.

Access to the unloading building is through four 20 feet wide y 16 feet high motor operated doors. Doors and cranes are controlled from the crane operator's room. Crane rails run the entire length of the building, allowing the grapples to rest on the end mezzanines. Stoker supply hoppers are supported on a structural steel frame.

The pit area will have motorized ventilation in-take louvers. Air will be exhausted through the boiler air induction system. Four roof exhaust fans will operate when the boilers are shut down.

A locker room, shower, and restroom are located at operating level with access from outside. Included are basic lockers, benches and toilet accessories.

Air-conditioning for boiler and crane control rooms will be supplied by ducts from a central air-conditioning unit. Shower, locker, and restrooms are to be ventilated with outside air by exhaust fans.

A fire protection system will be installed to include Halon in control room, plus sprinkler systems in the pit area. Fire hose stand pipe will be located in the boiler area. The fire protection loop is to be tied to a "city type water system" and encompass the facility. Three fire hydrants are to be located on each side and the rear of the building. If a "city type water system" does not exist at the site, a storage tank and fire pump will need to be installed, as an extra to the contract.

Electrostatic precipitators are supported by spread footings and piers. Boilers, economizers, and dust collectors are supported on spread footings and piers. The ash removal system is supported by structural steel on concrete footings and piers. All other equipment outside the building, including the Turbine Generator, is on concrete slabs at or near existing grade.

Soil bearing capability is based on 2,000 LB/SF. The Turbine Generator will be housed in a "knock down" type of enclosure with interior lighting and ventilation. Turbine maintenance or a repair service company will supply necessary structural framework and lifts for this structure as necessary.

SITEWORK

Spread footings and mat foundations have been considered adequate for all structures and equipment. Maximum depth of excavation considered is 10 feet, with the water table assumed lower than 10 feet. No extensive dewatering has been considered.

The proposal is based on an estimated site of about 6 acres, requiring only light dozer clearing and grading with disposal of all waste on site or within $\frac{1}{4}$ mile. A 15 feet wide gravel (8 inches compacted locally available aggregate) entrance and perimeter road serving all facilities are included. A concrete maneuvering apron is provided in front of the enclosed truck unloading area. Included is construction of a lined holding pond (100 feet by 100 feet by 5 feet) for waste water retention. Also included in the civil work is excavation for the refuse storage pit.

A MSW building pit depth of 20 feet (10 feet below existing grade) is achieved by compacted earth fill 10 feet above grade on three sides of the building and formed concrete wall on the fourth (boiler) side of the building. Ramps to the scale are built of the same material as the gravel roads.

Landscaping consists of grading, replacing topsoil and reseeding (with grass) areas disturbed by construction.

The site is to be enclosed with 2,400 linear feet of 7 feet chain link fence with access through one manually operated gate.

EMISSION CONTROL DESIGN DETAILS

1. Type:

   Electrostatic Precipitator

   Rigid Frame

   Three field

2. Gas flow:

   55,600 acfm at 350°F approximate

   Gas flow dependent upon selected incinerator/boiler

3. Gas velocity:

   3.7 ft./sec. approximate

4. Specific collection area:

   To be determined

5. Outlet gas particulate concentration:

   Guaranteed <0.03 gr/dscf corrected to 12% CO_2.

BOILER DESIGN DETAILS

1. Fuel:

   Unprepared municipal soild waste (MSW)

   Design heat value: 5000 BTU/lb.

   Design moisture content: 18.4%

   Design ash content: 20.1%

2. Boiler type:

   Mass burning water-wall furnace

3. Boiler efficiency:

   70% approximate

4. Heat release:

   <10,000 BTU/cu. ft.

5. Design capacity:

   250 tons MSW/day

   104 million BTU input/hr.

Boiler Run 1
Pg 1

BOILER PERFORMANCE

FEB 21, 1986

PROGRAM CALLED 'BOILC02.BAS', ISSUED 1/31/86

PREPARED BY: LOCKWOOD GREENE ENGINEERS, INC.
1330 W. PEACHTREE STREET, N W
ATLANTA, GEORGIA 30367
(404) 873-3261
GARY MCAULIFFE

Gas Flow for 250 TPD Feed Rate @ 82% Excess Air & 375° F Outlet Gas Temp.

JOB NO. 85463.02

CUSTOMER: NRG
LEESBURG
LAKE COUNTY
FLORIDA

CONDITIONS:	FUEL:	MUNICIPAL SOLID WASTE
	EXCESS AIR PERCENT:	82
	STEAMING RATE (LB/HR):	62418.4
	OPERATING PRES (PSIG):	650 AT 1379.18 BTU/LB
	FEEDWATER TEMP (F) :	228
	EXIT FLUE GAS TEMP F :	375
	UNBURNED FUEL FACTOR :	.05
	RAD & UNACCT FOR LOSS:	.0205
	OVERALL EFFICIENCY :	.708992
COMBUSTION AIR:	FLOW RATE (LB/HR):	138233
	FLOW RATE (ACFM) :	31744.6 AT 80 F
	DENSITY :	.0725758
FLUE GAS:	FLOW RATE (LB/HR):	154047
	FLOW RATE (ACFM) :	54862.6 AT 375 F ←
	DENSITY :	.0467977
FUEL INPUT:	FIRING RATE (LB/HR) :	20833 ← 250 TPD
	MOISTURE CONTENT AS FIRED (%) :	18.43
ASH GENERATED:	FLOW RATE (LB/HR):	5019.71

FUEL ANALYSIS	LAB SAMPLE	AS FIRED
C	30.61	30.61
H	4.08	4.08
S	.13	.13
O	25.85	25.85
N	.8	.8
H2O	18.43	18.43
ASH	20.1	20.1
TOTAL	100	100
HEATING VALUE:	5000	5000

BOILER RUN 1
pg 2

PAGE NO. 2 FEB 21, 1986
JOB NO. 85463.02 NRG
% EXCESS AIR 82 MUNICIPAL SOLID WASTE

CHARACTERISTICS OF WET FLUE GASES :

LB/HR TOTAL MOISTURE IN FG :	12662.4
LB/HR MOISTURE FROM AIR IN FG :	1805.14
LB/HR MOISTURE ABSORBED IN FUEL :	3647.55
LB/HR MOISTURE FROM H2 IN FUEL :	7209.71
PERCENT BY WT OF H2O IN FG :	8.21985
MOL WT OF WET FG :	28.5314
AVE SPEC HT (SENS) ABOVE 80 F :	.259319
LAT HT LOSS/HR IN FG :	1.12915E+07
TOTAL HT LOSS/HR IN FG :	2.3076E+07

CHARACTERISTICS OF DRY FLUE GASES :

MOL WT OF DRY FG :	30.1091
DENSITY OF DRY FG AT 68 F :	.0781001
CU FT AT 68 F/BTU INPUT :	.0182938
F METHOD FACTOR :	100.515
PERCENT CO2 IN DRY FG :	10.7511
PERCENT O2 IN DRY FG :	9.53535
PERCENT SO2 IN DRY FG :	.0171225
PERCENT N2 IN DRY FG :	79.6964

SINGLE UNIT DISCHARGE GAS FLOW

BASIS: BOILER DISCHARGE: 54,600 acfm @ 375° F
IN-LEAKAGE AT ESP: 1560 scfm
RESULTING GAS TEMP. @ STACK: 350° F

$$\text{FLUE GAS} = \left(54{,}600\ \frac{ft^3}{min}\right)\left(\frac{460+350}{460+375}\right) + \left(1560\ \frac{ft^3}{min}\right)\left(\frac{460+350}{460+70}\right)$$

SINGLE UNIT FLUE = 55,600 acfm @ 350° F

TOTAL GAS FLOW = 111,200 acfm @ 350° F

GAS TEMP BASED ON LOWEST GAS TEMP PROPOSED BY BOILER VENDORS UNDER CONSIDERATION.

Boiler Run 2
Pg 1

TYPE B:ANSWER.DAT

JAN 27. 1986

BOILER PERFORMANCE

PROGRAM CALLED 'BOILFU.BAS', ISSUED 6/10/83

PREPARED BY: LOCKWOOD GREENE ENGINEERS, INC.
1330 W. PEACHTREE STREET, N W
ATLANTA, GEORGIA 30367
(404) 873-3261
GARY MCAULIFFE

JOB NO. 85463.02

Total Gas Flow for 500TPD Feed Rate @ 12% CO_2

CUSTOMER: NRG
LEESBURG
LAKE COUNTY
FLORIDA

CONDITIONS:	FUEL:	MUNICIPAL SOLID WASTE
	EXCESS AIR PERCENT:	63.1867
	STEAMING RATE (LB/HR):	123871
	OPERATING PRES (PSIG):	650 AT 1380 BTU/LB
	FEEDWATER TEMP (F) :	228
	EXIT FLUE GAS TEMP F :	400
	UNBURNED FUEL FACTOR :	.06
	RAD & UNACCT FOR LOSS:	.019
	OVERALL EFFICIENCY :	.703965
COMBUSTION AIR:	FLOW RATE (LB/HR):	245289
	FLOW RATE (ACFM) :	56329.4 AT 80 F
	DENSITY :	.0725758
FLUE GAS:	FLOW RATE (LB/HR):	276584 ←
	FLOW RATE (ACFM) :	101483 AT 400 F
	DENSITY :	.0454236
FUEL INPUT:	FIRING RATE (LB/HR) :	41667.7 ← (500 TPD)
	MOISTURE CONTENT AS FIRED (%) :	18.43
ASH GENERATED:	FLOW RATE (LB/HR):	10372.6

FUEL ANALYSIS	LAB SAMPLE	AS FIRED
C	30.61	30.61
H	4.08	4.08
S	.13	.13
O	25.85	25.85
N	.6	.6
H2O	18.43	18.43
ASH	20.1	20.1
TOTAL	100	100
HEATING VALUE:	5000	5000

Boiler Run 2
pg 2

PAGE NO. 2 JAN 27. 1986
JOB NO. 85463.02 NRG
% EXCESS AIR 63.1867 MUNICIPAL SOLID WASTE

CHARACTERISTICS OF WET FLUE GASES :

LB/HR TOTAL MOISTURE IN FG :	24690 ←
LB/HR MOISTURE FROM AIR IN FG :	3203.15
LB/HR MOISTURE ABSORBED IN FUEL :	7218.6
LB/HR MOISTURE FROM H2 IN FUEL :	14268.2
PERCENT BY WT OF H2O IN FG :	8.92675
MOL WT OF WET FG :	28.5229
AVE SPEC HT (SENS) ABOVE 80 F :	.261087
LAT HT LOSS/HR IN FG :	2.23463E+07
TOTAL HT LOSS/HR IN FG :	4.54543E+07

CHARACTERISTICS OF DRY FLUE GASES :

MOL WT OF DRY FG :	30.2566
DENSITY OF DRY FG AT 68 F :	.0784826 ←
CU FT AT 68 F/BTU INPUT :	.0163888
F METHOD FACTOR :	100.43
PERCENT CO2 IN DRY FG :	12.0009 ←
PERCENT O2 IN DRY FG :	8.20173
PERCENT SO2 IN DRY FG :	.0191128
PERCENT N2 IN DRY FG :	79.7783

Wet gas Lb/Hr 276584
− Total Moisture Lb/Hr 24690
Dry Gas Lb/Hr 251894

$$\text{Total Dry Gas Flow} = \left(251894 \frac{\text{Lb}}{\text{Hr}}\right)\left(\frac{\text{Hr}}{60\,\text{min}}\right)\left(\frac{\text{cu.ft}}{0.0784826\,\text{Lb}}\right)$$

TOTAL DRY GAS FLOW = 53493 dscf @ 12% CO_2

Single Unit Gas Flow = 26746 dscf @ 12% CO_2

LGM ENGINEERS CONSTRUCTORS

JOB NO. 8546.3.01

SHEET NO. 1 OF 21

DATE 2/19/86

JOB NAME NRG

COMPUTED BY RVC

SUBJECT SO_2 EMISSION FACTORS

CHECKED BY WER

REFERENCE	SO_2 EMISSION FACTOR LOW	HIGH	AVG.	Lb./10^6BTU
CARB 5/24/84				
TAMPA WASTE			0.3%S	
% DISCHARGE			25%	0.3
SUMMARY TABLE 19	72 ppm	159 ppm	123 ppm	0.33
	0.13 Lb/10^6BTU	0.31	0.22	0.22
NASHVILLE			0.19 Lb/10^6BTU	0.14
CHICAGO			0.32 Lb/10^6BTU	0.32
BROOKLYN	1.49 Lb/TON	8.3 Lb/T	5.13 Lb/T	0.51
GALLATIN	0.8 Lb/T	6.9 Lb/T	2.8 Lb/T	0.28
	0.08 Lb/10^6BTU	1.2 Lb/10^6BTU	0.42 Lb/10^6BTU	0.42
PINELLAS			1.33 Lb/T	
			0.15 Lb/10^6BTU	0.15
PADE	3.0 Lb/T	5.5 Lb/T	3.5 Lb/T	0.35
			0.29 Lb/10^6BTU	
E. HAMILTON			4.5 Lb/T	0.45
ALBANY			1.4 Lb/T	
Sommer, E., et.al.			0.12%S	
Gallitin			2.80 Lb/T	0.28
Battelle Report				
Summary			2.25 Lb/T	0.23

NRG UNCONTROLLED SO_2 EMISSION FACTOR

SO_2 PRESENT AVG. = 0.32 Lb/10^6BTU

SO_2 FUTURE = 0.6 Lb/10^6BTU (Projected)

LGM ENGINEERS CONSTRUCTORS

JOB NO. 95463.01
SHEET NO. 2 OF 21
DATE 2/19/96
JOB NAME NRG
COMPUTED BY RVC
SUBJECT SO_2 Emissions
CHECKED BY WBR

Basis for estimates: 3 Lb. SO_2/Ton average
6 Lb. SO_2/Ton maximum

EMISSION RATE

@ 3 Lb./Ton

Emission rate = $\left(\frac{3\text{ Lb}}{\text{Ton}}\right)\left(\frac{250\text{ Ton}}{24\text{ hr}}\right) = 31.25\ \frac{\text{Lb}}{\text{Hr}}$

Emission rate = $\left(\frac{3\text{ Lb}}{\text{Ton}}\right)\left(\frac{\text{Ton}}{10\times10^6\text{ BTU}}\right) = 0.30\ \frac{\text{Lb}}{10^6\text{ BTU}}$

Emission rate = $\left(31.25\frac{\text{Lb}}{\text{Hr}}\right)\left(\frac{\text{Hr}}{60\text{ min}}\right)\left(\frac{\text{min}}{26{,}750\text{ dscf}}\right)\left(\frac{7000\text{ gr}}{\text{Lb}}\right) = 0.1363\ \frac{\text{gr}}{\text{dscf}}$

@ 6 Lb/Ton

Emission rate = 62.50 Lb/Hr.
Emission rate = 0.60 Lb/10^6 BTU
Emission rate = 0.2726 gr/dscf corrected 12% CO_2

SO_2 Concentration = $\left(62.5\frac{\text{Lb}}{\text{Hr}}\right)\left(\frac{\text{Hr}}{60\text{ min}}\right)\left(\frac{\text{min}}{26{,}750\text{ dscf}}\right)\left(\frac{7000\text{ gr}}{\text{Lb}}\right) = 6.27\ \frac{\text{gr}}{\text{dscf}}$

POTENTIAL ANNUAL EMISSION

$SO_2 = \left(62.5\frac{\text{Lb}}{\text{Hr}}\right)(2)\left(\frac{24\text{ Hr}}{\text{Day}}\right)\left(\frac{365\text{ Day}}{\text{yr}}\right)\left(\frac{\text{Ton}}{2000\text{ Lb}}\right) = 547\ \frac{\text{Tons}}{\text{yr.}}$

STACK DISCHARGE RATE

Basis: 2 units discharge through combined stack
6 Lb. SO_2/Ton

SO_2 emission rate = $\left(62.5\frac{\text{Lb}}{\text{Hr}}\right)(2)\left(\frac{454\text{ gm}}{\text{Lb}}\right)\left(\frac{\text{Hr}}{3600\text{ sec}}\right) = 15.9\ \frac{\text{gm.}}{\text{sec.}}$

LGM ENGINEERS CONSTRUCTORS

JOB NO. 85463.01
SHEET NO. 3 OF 21
DATE 2/20/86
JOB NAME NRG
COMPUTED BY RVC
SUBJECT NOx EMISSION FACTOR
CHECKED BY WBR

REFERENCE	NOx EMISSION FACTOR LOW	HIGH	AVG	Lb./10^6BTU
CARB 1980				
Summary p. 31	145 ppm	274 ppm	223 ppm	
	0.11 Lb/10^6BTU	0.47	0.37 Lb/10^6BTU	0.37
Nashville			0.38 Lb/10^6BTU	0.38
Harrisburg	0.15	0.42	0.27 Lb/10^6BTU	0.27
Chicago			0.34 Lb/10^6BTU	0.34
Braintree	0.13	0.26	0.19 Lb/10^6BTU	0.19
Gallatin			0.30 Lb/10^6BTU	0.30
Saugus			0.39 Lb/10^6BTU	0.39
Chicago, I.W.	0.34	0.44	0.39 Lb/10^6BTU	0.39
Sommer, E., et al.				
Gallatin			2.20 Lb/Ton	0.22
Battelle				
Summary			2.4 Lb/Ton	0.29
BOILER VENDORS				
EST.	0.3	0.5	0.4 Lb/10^6BTU	

NRG NOx EMISSION FACTOR

NOx ≤ 0.50 Lb./10^6BTU (Design Spec. & Vendor Guarantee)

LGM ENGINEERS CONSTRUCTORS

JOB NO. 25463.01
SHEET NO. 4 OF 21
DATE 2/20/06
JOB NAME NRG
COMPUTED BY RUC
SUBJECT NOx Emission
CHECKED BY MBR

Basis for estimates:

$NO_x = 0.50\ Lb/10^6\ BTU$

Emission Rate, each unit

Emission rate = $0.50\ Lb/10^6\ BTU$

Emission rate = $\left(\frac{0.50\ Lb}{10^6\ BTU}\right)\left(\frac{10 \times 10^6\ BTU}{Ton\ MSW}\right) = 5.0\ \frac{Lb}{Ton}$

Emission rate = $\left(\frac{5.0\ Lb}{Ton}\right)\left(\frac{250\ Ton}{day}\right)\left(\frac{day}{24\ Hr}\right) = 52\ \frac{Lb.}{Hr.}$

NO_x Concentration = $\left(\frac{52\ Lb}{Hr}\right)\left(\frac{Hr}{60\ min}\right)\left(\frac{min}{26{,}750\ dscf}\right)\left(\frac{7000\ gr}{Lb}\right) = 0.23\ \frac{gr}{dscf}$

POTENTIAL ANNUAL EMISSION

$NO_x = \left(52\ \frac{Lb}{Hr}\right)(2)\left(\frac{24\ Hr}{Day}\right)\left(\frac{365\ Day}{yr}\right)\left(\frac{Ton}{2000\ Lb}\right) = 455\ \frac{Ton}{yr.}$

STACK DISCHARGE RATE

Basis: 2 units discharge to 1 common stack

NO_x emission rate = $\left(52\ \frac{Lb}{Hr}\right)(2)\left(\frac{454\ gm}{Lb}\right)\left(\frac{Hr}{3600\ sec}\right) = 13.12\ \frac{gm}{sec}$

LGM ENGINEERS CONSTRUCTORS

JOB NO. 9546.3.01
SHEET NO. 5 OF 21
DATE 2/19/86
JOB NAME NRG
COMPUTED BY RVC
SUBJECT PARTICULATE EMISSION FACTOR
CHECKED BY WTBR

REFERENCE	PM EMISSION FACTOR LOW	HIGH	AVG	Lb/10^6BTU
CARB 1984 Summary p.146	0.33	3.5	1.4 gr/dscf	
	0.68	7.4	3.1 Lb/10^6BTU	3.1
Battelle Summary Est.	0.6	2.0 gr/dscf	2 gr/dscf	4+
Sommar, E., et.al. Gallatin			42.5 Lb/Ton	4.3
BOILER VENDORS EST.	40	90	72 Lb/Ton	7.2

NRG UNCONTROLLED EMISSION FACTOR

PART. = 4 Lb/10^6BTU (Arbitrary)

LGM ENGINEERS CONSTRUCTORS

JOB NO. 8543.01

SHEET NO. 6 OF 21

DATE 2/19/96

JOB NAME NRG

COMPUTED BY RVC

SUBJECT PARTICULATE EMISSION

CHECKED BY WBR

Basis for estimate: 0.03 gr/dscf corrected to 12% CO_2

DSCF corrected to 12% CO_2 = 26,750 dscfm

EMISSION RATE EACH UNIT

$$\text{Emission rate} = \left(\frac{0.03\text{gr}}{\text{dscf}}\right)\left(26{,}750\frac{\text{dscf}}{\text{m}}\right)\left(\frac{60\text{m}}{\text{hr}}\right)\left(\frac{\text{Lb}}{7000\text{gr}}\right) = 6.88\frac{\text{Lb}}{\text{hr.}}$$

$$\text{Emission rate} = \left(6.88\frac{\text{Lb}}{\text{Hr}}\right)\left(\frac{24\text{hr}}{2000\text{Lb}}\right) = 0.0603\frac{\text{Lb}}{\text{Ton}}$$

$$\text{Emission rate} = 0.0603\frac{\text{Lb}}{\text{Ton}}\ \frac{\text{Ton}}{10\times10^{6}\text{BTU}} = 0.006\frac{\text{Lb}}{10^{6}\text{BTU}}$$

POTENTIAL ANNUAL EMISSION

$$\text{PARTICULATE} = \left(6.88\frac{\text{Lb}}{\text{Hr.}}\right)(2\text{ UNITS})\left(\frac{24\text{ Hr}}{\text{DAY}}\right)\left(365\frac{\text{DAY}}{\text{yr}}\right)\left(\frac{\text{Ton}}{2000\text{Lb}}\right)$$

$$= 60\text{ Tons/yr.}$$

STACK DISCHARGE RATE

Basis: 2 units discharge through single combined stack

$$\text{Particulate emission rate} = \left(6.88\frac{\text{Lb}}{\text{Hr}}\right)(2)\left(\frac{454\text{gm}}{\text{Lb}}\right)\left(\frac{\text{Hr}}{3600\text{sec}}\right) = 1.735\frac{\text{gm}}{\text{sec.}}$$

LGM ENGINEERS CONSTRUCTORS

JOB NO. 854631.01
SHEET NO. 7 OF 21
DATE 2/20/86
JOB NAME NRG
COMPUTED BY RVC
SUBJECT CO EMISSION FACTOR
CHECKED BY WBR

REFERENCE	CO EMISSION FACTOR LOW	HIGH	AVG	Lb./10^6BTU
CARB 1984 Summary p.175	102 ppm	643 ppm	146 ppm	
	0.18 Lb/10^6BTU	0.73	0.26	0.26
Nashville			0.29 Lb/10^6BTU	0.29
Raintree			1.06 Lb/10^6BTU	1.06
Gallatin			0.63 Lb/10^6BTU	0.63
Dade			0.63 Lb/10^6BTU	0.63
			769 ppm	0.89
E. Hamilton			1.4 Lb/10^6BTU	1.4
			1,730 ppm	2.0
Sommer, E., et.al Gallatin			4.5 Lb/Ton	0.45
Battelle Estimate			1.9 Lb/Ton	0.19
BOILER VENDORS 8 hr. Avg	400 ppm			0.45
4 day Avg	100 ppm			0.11

NRG CO EMISSION FACTOR

CO = 0.45 Lb./10^6BTU (8 hr. Avg.)

0.11 Lb/10^6BTU (4 day Avg.)

LGM ENGINEERS CONSTRUCTORS

JOB NO. 85463.01
SHEET NO. 8 OF 21
DATE 2/20/96
JOB NAME NRG
COMPUTED BY RVC
SUBJECT CO EMISSION
CHECKED BY WBR

Basis of CO estimates
8 Hr. avg. 400 ppm corrected to 12% CO_2
4 Day avg, 100 ppm "

EMISSION RATE, EACH UNIT

Concentration = 400 ppm

$$\text{Concentration} = \left(\frac{400\ \text{dscf CO}}{10^6\ \text{dscf flue gas}}\right)\left(\frac{28\text{Lb. CO}}{387\ \text{dscf}}\right)\left(\frac{7000\ \text{gr}}{\text{Lb}}\right)$$

$$= 0.203\ \text{gr./dscf corrected to } 12\%\ CO_2$$

$$\text{Emission Rate} = \left(\frac{400}{10^6}\right)\left(\frac{26750\ \text{dscf}}{\text{min}}\right)\left(\frac{28\ \text{Lb}}{387\ \text{dscf}}\right)\left(\frac{60\ \text{min}}{\text{hr.}}\right) = 46.4\ \frac{\text{Lb.}}{\text{Hr.}}$$

$$\text{Emission Rate} = \left(46.4\ \frac{\text{Lb.}}{\text{Hr.}}\right)\left(\frac{24\ \text{Hr}}{250\ \text{Ton}}\right) = 4.45\ \frac{\text{Lb.}}{\text{Ton}}$$

$$\text{Emission Rate} = \left(4.45\ \frac{\text{Lb}}{\text{Ton}}\right)\left(\frac{\text{Ton}}{10\times10^6\ \text{BTU}}\right) = 0.445\ \frac{\text{Lb.}}{10^6\ \text{BTU}}$$

$$\text{Long Term Avg. Emission} = \left(46.4\ \frac{\text{Lb}}{\text{Hr}}\right)\left(\frac{100}{400}\right) = 11.6\ \frac{\text{Lb.}}{\text{Hr.}}$$

POTENTIAL ANNUAL EMISSION

$$CO = \left(11.6\ \frac{\text{Lb}}{\text{Hr}}\right)(2)\left(\frac{24\ \text{Hr}}{\text{Day}}\right)\left(\frac{365\ \text{Day}}{\text{yr.}}\right)\left(\frac{\text{Ton}}{2000\ \text{Lb}}\right) = 101\ \frac{\text{Ton}}{\text{yr.}}$$

STACK DISCHARGE RATE

Basis: 2 units discharge to single stack
400 ppm emission conc.

$$CO\ \text{emission rate} = \left(46.4\ \frac{\text{Lb}}{\text{Hr}}\right)(2)\left(\frac{454\ \text{g}}{\text{Lb.}}\right)\left(\frac{\text{Hr}}{3600\ \text{sec}}\right) = 11.7\ \frac{\text{g.}}{\text{sec.}}$$

LGM ENGINEERS CONSTRUCTORS

JOB NO. 35963-01

SHEET NO. 9 OF 21

DATE 3/7/96

JOB NAME NRG

COMPUTED BY RVC

SUBJECT LEAD EMISSION FACTOR

CHECKED BY WBR

REFERENCE	Pb EMISSION FACTOR LOW	HIGH	AVG.	Lb/10^6BTU
CARB 1984				
Summary p.192	5,600	16,000	9531 µg/MJ	0.013
Braintree	127	154	131 gr/10^6BTU	0.019
Sommer, E., et al.				
Gallatin			0.27 Lb/Ton (uncontrolled)	0.027
Battelle				
Summary			0.012 Lb/Ton (Controlled)	0.0012 (Controlled)
Estimate				0.030
CARB 1984				
Gallatin, pg. 196				0.035

NRG UNCONTROLLED LEAD EMISSION FACTOR

Pb = 0.030 Lb/10^6BTU (EST.)

LGM ENGINEERS CONSTRUCTORS

JOB NO. B5463.01
SHEET NO. 10 OF 21
DATE 3/7/86
JOB NAME NRC
COMPUTED BY RVC
SUBJECT LEAD EMISSION
CHECKED BY WBR

Basis for estimate: Uncontrolled Pb = 0.030 lb/10^6 BTU
ESP provides 96% Pb control

Emission Rate Each Unit

$$\text{Emission Rate} = \left(\frac{0.030\ \text{Lb.}}{10^6\ \text{BTU}}\right)\left(104 \times 10^6\ \frac{\text{BTU}}{\text{Hr.}}\right)\left(\frac{100-96}{100}\right) = 0.125\ \frac{\text{Lb}}{\text{Hr}}$$

$$\text{Emission Rate} = \left(0.030\ \frac{\text{Lb}}{10^6\ \text{BTU}}\right)\left(\frac{100-96}{100}\right) = 0.00120\ \frac{\text{Lb}}{10^6\ \text{BTU}}$$

$$\text{Emission Rate} = \left(0.0012\ \frac{\text{Lb.}}{10^6\ \text{BTU}}\right)\left(\frac{10 \times 10^6\ \text{BTU}}{\text{Ton}}\right) = 0.012\ \frac{\text{Lb}}{\text{Ton}}$$

$$\text{Pb concentration} = \left(\frac{0.125\ \text{Lb}}{\text{Hr}}\right)\left(\frac{\text{Hr.}}{60\ \text{min}}\right)\left(\frac{\text{min}}{26750\ \text{dscf}}\right)\left(\frac{7000\ \text{gr}}{\text{Lb}}\right)$$
$$= 0.00055\ \text{gr/dscf}$$

Potential Annual Emission

$$\text{Pb} = \left(0.125\ \frac{\text{Lb}}{\text{Hr}}\right)(2)\left(\frac{24\ \text{Hr}}{\text{Day}}\right)\left(\frac{365\ \text{Day}}{\text{yr}}\right)\left(\frac{\text{Ton}}{2000\ \text{Lb}}\right) = 1.1\ \frac{\text{Ton}}{\text{yr}}$$

Stack Discharge Rate

Basis: 2 units to a single stack

$$\text{Pb} = \left(0.125\ \frac{\text{Lb}}{\text{Hr}}\right)(2) = 0.25\ \frac{\text{Lb}}{\text{Hr}}$$

$$\text{Pb} = \left(0.25\ \frac{\text{Lb}}{\text{Hr}}\right)\left(\frac{454\ \text{g}}{\text{Lb}}\right)\left(\frac{\text{Hr}}{3600\ \text{sec}}\right) = 0.03\ \text{g/s}$$

LGM ENGINEERS CONSTRUCTORS

JOB NO. 95463.01
SHEET NO. 11 OF 21
DATE 3/7/96
JOB NAME NRG
COMPUTED BY RVC
SUBJECT NMHC (VOC) EMISSION FACTOR
CHECKED BY WBR

REFERENCE	VOC EMMISSION FACTOR LOW	HIGH	AVG.	Lb./10^6BTU
CARB 1989				
Summary p. 179	0.001 Lb/10^6	0.004	0.003 Lb/10^6BTU	0.003
Baintree			0.014 Lb/10^6BTU	0.014
Gallatin			0.037 Lb/10^6BTU	0.037
Dade			0.01 Lb/10^6BTU	0.01
Chicago			0.003 Lb/10^6BTU	0.003
E. Hamilton			0.1 Lb/10^6BTU	0.1
Sommer, R., et.al.				
Gallatin			0.23 Lb/T	0.023
Battelle				
Test summary			0.46 Lb/T	0.046
Estimate			0.12 Lb/T	0.012

NRG VOC EMISSION FACTOR

VOC = 0.04 Lb./10^6BTU (Conservative Est.)

LGM ENGINEERS CONSTRUCTORS

JOB NO. 85463.14
SHEET NO. 12 OF 21
DATE 3/7/86
JOB NAME NRG
COMPUTED BY RVC
SUBJECT VOC EMISSION
CHECKED BY WBR

Basis for estimate: VOC = 0.04 Lb/10^6 BTU

EMISSION RATE EACH UNIT

Emission Rate = 0.04 Lb./10^6 BTU

$$\text{Emission Rate} = \left(0.04 \frac{\text{Lb}}{10^6 \text{BTU}}\right)\left(10 \times 10^6 \frac{\text{BTU}}{\text{Ton}}\right) = 0.4 \frac{\text{Lb}}{\text{Ton}}$$

$$\text{Emission Rate} = \left(0.04 \frac{\text{Lb}}{10^6 \text{BTU}}\right)\left(104 \times 10^6 \frac{\text{BTU}}{\text{Hr}}\right) = 4.16 \frac{\text{Lb}}{\text{Hr}}$$

$$\text{VOC concentration} = \left(4.16 \frac{\text{Lb}}{\text{Hr}}\right)\left(\frac{\text{Hr}}{60 \text{min}}\right)\left(\frac{\text{min}}{2475 \text{dscf}}\right)\left(\frac{7000 \text{gr}}{\text{Lb}}\right)$$

$$= 0.018 \text{ gr/dscf}$$

POTENTIAL ANNUAL EMISSION

$$\text{VOC} = \left(4.14 \frac{\text{Lb}}{\text{Hr}}\right)(2)\left(\frac{24 \text{Hr}}{\text{Day}}\right)\left(\frac{365 \text{Day}}{\text{yr}}\right)\left(\frac{\text{Ton}}{2000 \text{Lb}}\right) = 36 \frac{\text{Ton}}{\text{yr}}$$

STACK DISCHARGE RATE

Basis: 2 units to a single stack

$$\text{VOC} = \left(4.16 \frac{\text{Lb}}{\text{Hr}}\right)(2) = 8.3 \frac{\text{Lb}}{\text{Hr}}$$

$$\text{VOC} = \left(8.3 \frac{\text{Lb}}{\text{Hr}}\right)\left(\frac{454 \text{g}}{\text{Lb}}\right)\left(\frac{\text{Hr}}{3600 \text{sec}}\right) = 1.05 \text{ g/s}$$

LGM ENGINEERS CONSTRUCTORS

JOB NO. 35463.01
SHEET NO. 13 OF 21
DATE 3/7/96
JOB NAME NRG
COMPUTED BY RVC
SUBJECT MERCURY EMISSION FACTOR
CHECKED BY WTSR

REFERENCE	Hg EMISSION FACTOR			Lb/10^6 BTU
	LOW	HIGH	AVG.	
CARB 1984				
Summary p. 192	17	390	157 µg/MJ	0.00037
Gallatin, p. 196			93 µg/MJ	0.00022
Battelle				
Summary			0.0064 Lb/T	0.00064
Weston				
Summary	1,710	19,700	$6,900 \times 10^{-6}$ Lb/T	0.00068

NRG UNCONTROLLED MERCURY EMISSION FACTOR
Hg = 0.0007 Lb./10^6 BTU (Conservative Est.)

FORM NO. LGM 1102-30 1/85

LGM ENGINEERS CONSTRUCTORS

JOB NO. 25463.01
SHEET NO. 14 OF 21
DATE 3/7/96
JOB NAME NRG
COMPUTED BY RVC
SUBJECT MERCURY EMISSION
CHECKED BY WBR

Basis for estimate: Hg = 0.0007 Lb/10^6BTU

EMISSION RATE EACH UNIT

EMISSION RATE = 0.0007 Lb/10^6BTU

$$\text{EMISSION RATE} = \left(0.0007 \frac{\text{Lb}}{10^6\text{BTU}}\right)\left(\frac{10\times10^6\text{BTU}}{\text{TON}}\right) = 0.007 \frac{\text{Lb}}{\text{Ton}}$$

$$\text{EMISSION RATE} = \left(0.0007 \frac{\text{Lb}}{10^6\text{BTU}}\right)\left(104 \times \frac{10^6\text{BTU}}{\text{Hr}}\right) = 0.073 \frac{\text{Lb}}{\text{Hr}}$$

$$\text{Hg Concentration} = \left(0.073 \frac{\text{Lb}}{\text{Hr}}\right)\left(\frac{\text{Hr}}{60\text{min}}\right)\left(\frac{\text{min}}{2475\text{dscf}}\right)\left(\frac{7000\text{gr}}{\text{Lb.}}\right)$$

$$= 0.0003 \text{ gr/dscf}$$

POTENTIAL ANNUAL EMISSION

$$\text{Hg} = \left(0.073 \frac{\text{Lb}}{\text{Hr}}\right)(2)\left(\frac{24\text{Hr}}{\text{day}}\right)\left(\frac{365\text{day}}{\text{yr}}\right)\left(\frac{\text{Ton}}{2000\text{Lb}}\right) = 0.6 \frac{\text{Ton}}{\text{yr.}}$$

STACK DISCHARGE RATE

Basis; 2 units to a single stack

$$\text{Hg} = \left(0.073 \frac{\text{Lb}}{\text{Hr}}\right)(2) = 0.15 \frac{\text{Lb}}{\text{Hr}}$$

$$\text{Hg} = \left(0.15 \frac{\text{Lb}}{\text{Hr}}\right)\left(\frac{459\text{g}}{\text{Lb}}\right)\left(\frac{\text{Hr}}{3600\text{sec}}\right) = 0.019 \text{ g/s}$$

LGM ENGINEERS CONSTRUCTORS

JOB NO. 25463.01
SHEET NO. 15 OF 21
DATE 3/3/96
JOB NAME NRG
COMPUTED BY RVL
SUBJECT HF^- EMISSION FACTOR
CHECKED BY WTGR

REFERENCE	HF^- EMISSION FACTOR LOW	HIGH	AVG.	Lb./10^6 BTU
CARB 1984 Summary p.114			0.003 Lb/10^6 BTU	0.003
Babylon	0.002	0.01	0.006 Lb/10^6	0.006
Battelle Summary			0.06 Lb/Ton	0.006
Sommer, E., et.al Gallatin			0.031 Lb/Ton	0.003

NRG UNCONTROLLED HF^- EMISSION FACTOR

HF^- = 0.006 Lb./10^6 BTU (conservative est.)

LGM ENGINEERS CONSTRUCTORS

JOB NO. 8546 3.01
SHEET NO. 16 OF 21
DATE 3/3/96
JOB NAME NRG
COMPUTED BY RVC
SUBJECT FLUORIDES EMISSION
CHECKED BY WBR

Basis for estimate : 0.006 Lb./10^6 BTU

EMISSION RATE EACH UNIT

Emission Rate = 0.006 Lb/10^6 BTU

$$\text{Emission Rate} = \left(0.006\ \frac{\text{Lb}}{10^6\ \text{BTU}}\right)\left(10\times10^6\ \frac{\text{BTU}}{\text{Ton}}\right) = 0.06\ \frac{\text{Lb}}{\text{Ton}}$$

$$\text{Emission Rate} = \left(0.006\ \frac{\text{Lb}}{10^6\ \text{BTU}}\right)\left(104\times10^6\ \frac{\text{BTU}}{\text{Hr}}\right) = 0.62\ \frac{\text{Lb}}{\text{Hr}}$$

$$F^- \text{ concentration} = \left(0.624\ \frac{\text{Lb}}{\text{Hr}}\right)\left(\frac{\text{Hr}}{60\text{min}}\right)\left(\frac{\text{min}}{2675\text{dscf}}\right)\left(\frac{7000\text{gr}}{\text{Lb}}\right)$$

$$= 0.0027\ \text{gr/dscf}$$

POTENTIAL ANNUAL EMISSION

$$F^- = \left(0.624\ \frac{\text{Lb}}{\text{Hr}}\right)(2)\left(\frac{24\ \text{Hr}}{\text{Day}}\right)\left(\frac{365\ \text{Days}}{\text{yr}}\right)\left(\frac{\text{Ton}}{2000\text{Lb}}\right) = 5.5\ \frac{\text{Ton}}{\text{yr}}$$

STACK DISCHARGE RATE

Basis : 2 units to single stack

$$F^- = \left(0.624\ \frac{\text{Lb}}{\text{Hr}}\right)(2) = 1.25\ \frac{\text{Lb}}{\text{Hr}}$$

$$F^- = \left(1.25\ \frac{\text{Lb}}{\text{Hr}}\right)\left(\frac{454\text{g}}{\text{Lb}}\right)\left(\frac{\text{Hr}}{3600\text{Sec}}\right) = 0.16\ \text{g/s}$$

LGM ENGINEERS CONSTRUCTORS

JOB NO. 95463.01
SHEET NO. 17 OF 21
DATE 3/7/96
JOB NAME NRG
COMPUTED BY RVC
SUBJECT BERYLLIUM EMISSION FACTOR
CHECKED BY WTBR

REFERENCE	Be EMISSION FACTOR LOW	HIGH	AVG	Lb./10^6 BTU
CARB 1984 p.192 Gallatin p.196	<0.05	3	1.05 µg/MJ 2.66 µg/MJ	2.5×10^{-6} 6.2×10^{-6}
Battelle (little data) Estimate	(Controlled) (Controlled)		$< 5.6 \times 10^{-3}$ Lb/T < 0.15 µg/g TSP	0.6×10^{-3} 1.0×10^{-3}
Weston, Roy F., Inc. Gallatin			$< 4.8 \times 10^{-5}$ Lb/T	4.8×10^{-6}

NRG UNCONTROLLED BERYLLIUM EMISSION RATE

Be = 5×10^{-6} Lb./10^6 BTU (Avg.)*

* Low confidence in this value

LGM ENGINEERS CONSTRUCTORS

JOB NO. 85463.01
SHEET NO. 18 OF 21
DATE 3/7/86
JOB NAME NRG
COMPUTED BY RVC
SUBJECT BERYLLIUM EMISSION
CHECKED BY WCR

Basis for estimate: Uncontrolled Be = 5×10^{-6} Lb./10^6 BTU
ESP provides 98% Be control

EMISSION RATE EACH UNIT

$$\text{Emission Rate} = \left(5 \times 10^{-6} \frac{\text{Lb.}}{10^6 \text{ BTU}}\right)\left(\frac{100-98}{100}\right) = 1.0 \times 10^{-7} \frac{\text{Lb}}{10^6 \text{ BTU}}$$

$$\text{Emission Rate} = \left(1.0 \times 10^{-7} \frac{\text{Lb}}{10^6 \text{ BTU}}\right)\left(104 \times 10^6 \frac{\text{BTU}}{\text{Hr.}}\right) = 1.0 \times 10^{-5} \frac{\text{Lb.}}{\text{Hr}}$$

$$\text{Emission Rate} = \left(1.0 \times 10^{-7} \frac{\text{Lb}}{10^6 \text{ BTU}}\right)\left(10 \times 10^6 \frac{\text{BTU}}{\text{Ton}}\right) = 1.0 \times 10^{-6} \frac{\text{Lb.}}{\text{Ton}}$$

$$\text{Be concentration} = \left(1.0 \times 10^{-5} \frac{\text{Lb.}}{\text{Hr}}\right)\left(\frac{\text{Hr}}{60 \text{ min}}\right)\left(\frac{\text{min}}{26750 \text{ dscf}}\right)\left(\frac{7000 \text{ gr}}{\text{Lb}}\right)$$

$$= 4.4 \times 10^{-8} \text{ gr/dscf}$$

POTENTIAL ANNUAL EMISSION

$$\text{Be} = \left(1.0 \times 10^{-5} \frac{\text{Lb}}{\text{Hr}}\right)(2)\left(24 \frac{\text{Hr}}{\text{Day}}\right)\left(365 \frac{\text{Days}}{\text{yr}}\right)\left(\frac{\text{Ton}}{2000 \text{ Lb}}\right) = 9 \times 10^{-5} \frac{\text{Ton}}{\text{yr}}$$

$$\sim 1 \times 10^{-4} \frac{\text{Ton}}{\text{yr.}}$$

STACK DISCHARGE RATE

Basis: 2 units to single stack

$$\text{Be} = \left(1.0 \times 10^{-5} \frac{\text{Lb}}{\text{Hr}}\right)(2) = 2 \times 10^{-5} \frac{\text{Lb}}{\text{Hr}}$$

$$\text{Be} = \left(2 \times 10^{-5} \frac{\text{Lb.}}{\text{Hr.}}\right)\left(\frac{454 \text{ g}}{\text{Lb}}\right)\left(\frac{\text{Hr}}{3600 \text{ sec}}\right) = 2.5 \times 10^{-6} \text{ g/s}$$

LGM ENGINEERS CONSTRUCTORS

JOB NO. 3546.3.01
SHEET NO. 19 OF 21
DATE 3/7/96
JOB NAME NRG
COMPUTED BY RVC
SUBJECT SULFURIC ACID MIST EMISSION
CHECKED BY WER

Basis for estimate:

H_2SO_4 Emission Factor = (1.5%)(SO_2 Emission Rate)

SO_2 Emission Rate = 3 lb./Ton MSW

Emission Rate Each Unit

$$\text{Emission Rate} = (0.015)\left(0.3 \frac{lb}{10^6 BTU}\right) = 0.0045 \frac{lb}{10^6 BTU}$$

$$\text{Emission Rate} = \left(0.0045 \frac{lb}{10^6 BTU}\right)\left(\frac{10 \times 10^6 BTU}{Ton}\right) = 0.045 \frac{lb}{Ton}$$

$$\text{Emission Rate} = \left(0.0045 \frac{lb}{10^6 BTU}\right)\left(104 \times \frac{10^6 BTU}{Hr}\right) = 0.47 \frac{lb}{Hr}$$

$$H_2SO_4 \text{ Concentration} = \left(0.47 \frac{lb}{Hr}\right)\left(\frac{Hr}{60 min}\right)\left(\frac{min}{26750 dscf}\right)\left(\frac{7000 gr}{lb}\right)$$

$$= 0.002 \text{ gr/dscf}$$

POTENTIAL ANNUAL EMISSION

$$H_2SO_4 = \left(0.47 \frac{lb}{Hr}\right)(2)\left(\frac{24 hr.}{day}\right)\left(\frac{365 day}{yr}\right)\left(\frac{Ton}{2000 lb}\right) = 4.1 \frac{Ton}{yr.}$$

STACK DISCHARGE RATE

Basis: 2 units to single stack

$$H_2SO_4 = \left(0.47 \frac{lb}{Hr}\right)(2) = 0.9 \frac{lb}{Hr}$$

$$H_2SO_4 = \left(0.9 \frac{lb}{Hr}\right)\left(\frac{454 g}{lb}\right)\left(\frac{Hr}{3600 sec}\right) = 0.11 \text{ g/s}$$

LGM ENGINEERS CONSTRUCTORS

JOB NO. 95463.01
SHEET NO. 20 OF 21
DATE 3/3/96
JOB NAME NRG
COMPUTED BY RVC
SUBJECT HCl EMISSION FACTOR
CHECKED BY WBR

REFERENCE	HCl EMISSION FACTOR Low	HIGH	AVG.	Lb./10^6BTU
CARB 1984				
Tampa MSW Est.			0.3% Cl	
% Discharge Est.			50%	0.30
Summary p. 113	70 ppm	605 ppm	227 ppm	
	0.18	0.73	0.26 Lb/10^6BTU	0.26
Nashville	0.14	0.34	0.22 Lb/10^6BTU	
Braintree	10,000	13,700 gr/10^6BTU		1.95
Babylon	0.50	0.67	0.57 Lb/10^6BTU	0.6
Gallatin	0.25	1.84	0.70 Lb/10^6BTU	0.7
Saugus			0.73 Lb/10^6BTU	0.7
E. Hamilton	0.3	0.6	0.4 Lb/10^6BTU	0.4
Battelle				
Summary			3.4 Lb/Ton	0.34
Sommer, E., et.al				
Gallatin			5.3 Lb/Ton	0.53
Ozvacic, V., et.al.				
Toronto			5 Lb/Ton	0.5
SWARU			5.5 Lb/Ton	0.55

NRG UNCONTROLLED HCl EMISSION FACTOR

HCl PRESENT = 0.6 Lb/10^6BTU (EST.)

HCl FUTURE = 0.9 Lb./10^6BTU (Projected)

LGM ENGINEERS CONSTRUCTORS

JOB NO. 95463.01
SHEET NO. 21 OF 21
DATE 3/3/96
JOB NAME NRG
COMPUTED BY RVL
SUBJECT HCl EMISSION
CHECKED BY WBR

Basis for estimate: 0.9 Lb./10^6 BTU

EMISSION RATE EACH UNIT

Emission Rate = 0.9 Lb./10^6 BTU

$$\text{Emission Rate} = \left(0.9\frac{\text{Lb}}{10^6\text{BTU}}\right)\left(10\times10^6\frac{\text{BTU}}{\text{Ton}}\right) = 9\frac{\text{Lb}}{\text{Ton}}$$

$$\text{Emission Rate} = \left(0.9\frac{\text{Lb}}{10^6\text{BTU}}\right)\left(104\times10^6\frac{\text{BTU}}{\text{Hr}}\right) = 93.6\frac{\text{Lb}}{\text{Hr}}$$

$$\text{HCl concentration} = \left(93.6\frac{\text{Lb}}{\text{Hr}}\right)\left(\frac{\text{Hr}}{60\text{min}}\right)\left(\frac{\text{min}}{26750\text{dscf}}\right)\left(\frac{7000\text{gr}}{\text{Lb.}}\right)$$

$$= 0.4 \text{ gr/dscf}$$

POTENTIAL ANNUAL EMISSION

$$\text{HCl} = \left(93.6\frac{\text{Lb.}}{\text{Hr.}}\right)(2)\left(24\frac{\text{Hr.}}{\text{Day}}\right)\left(\frac{365\text{ Day}}{\text{yr.}}\right)\left(\frac{\text{Ton}}{2000\text{Lb}}\right) = 820\frac{\text{Ton}}{\text{yr.}}$$

STACK DISCHARGE RATE

Basis: 2 units to single stack

$$\text{HCl} = \left(93.6\frac{\text{Lb.}}{\text{Hr.}}\right)(2) = 187\frac{\text{lb.}}{\text{Hr.}}$$

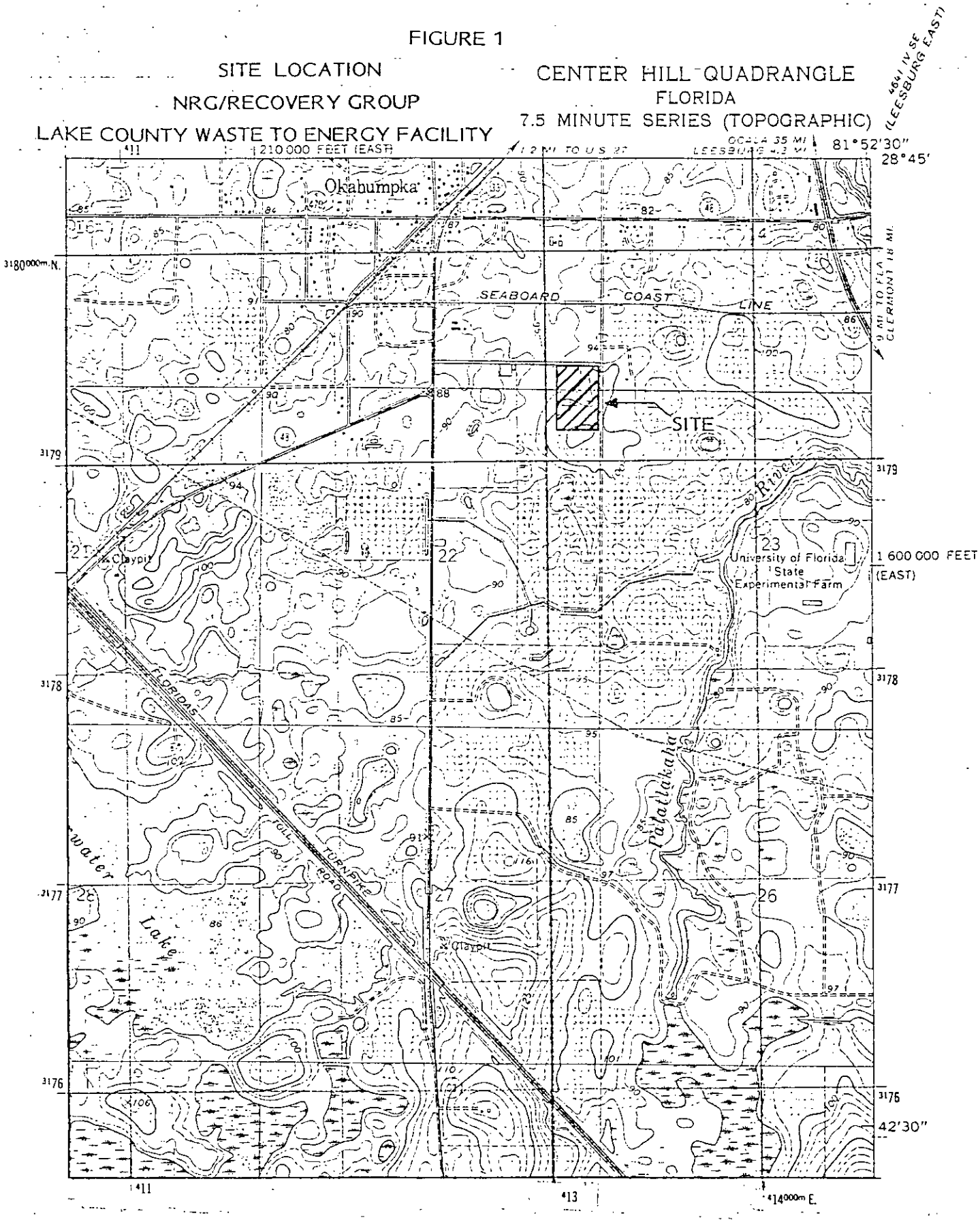
$$\text{HCl} = \left(187\frac{\text{lb.}}{\text{Hr.}}\right)\left(\frac{454\text{g}}{\text{Lb.}}\right)\left(\frac{\text{Hr}}{3600\text{sec}}\right) = 23.6\text{ g/s}$$

FIGURE 1

SITE LOCATION

NRG/RECOVERY GROUP

LAKE COUNTY WASTE TO ENERGY FACILITY



SCALE 1:24 000

1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 KILOMETER

CONTOUR INTERVAL 5 FEET

DATUM IS MEAN SEA LEVEL

QUADRANGLE LOCATION

FIGURE 2

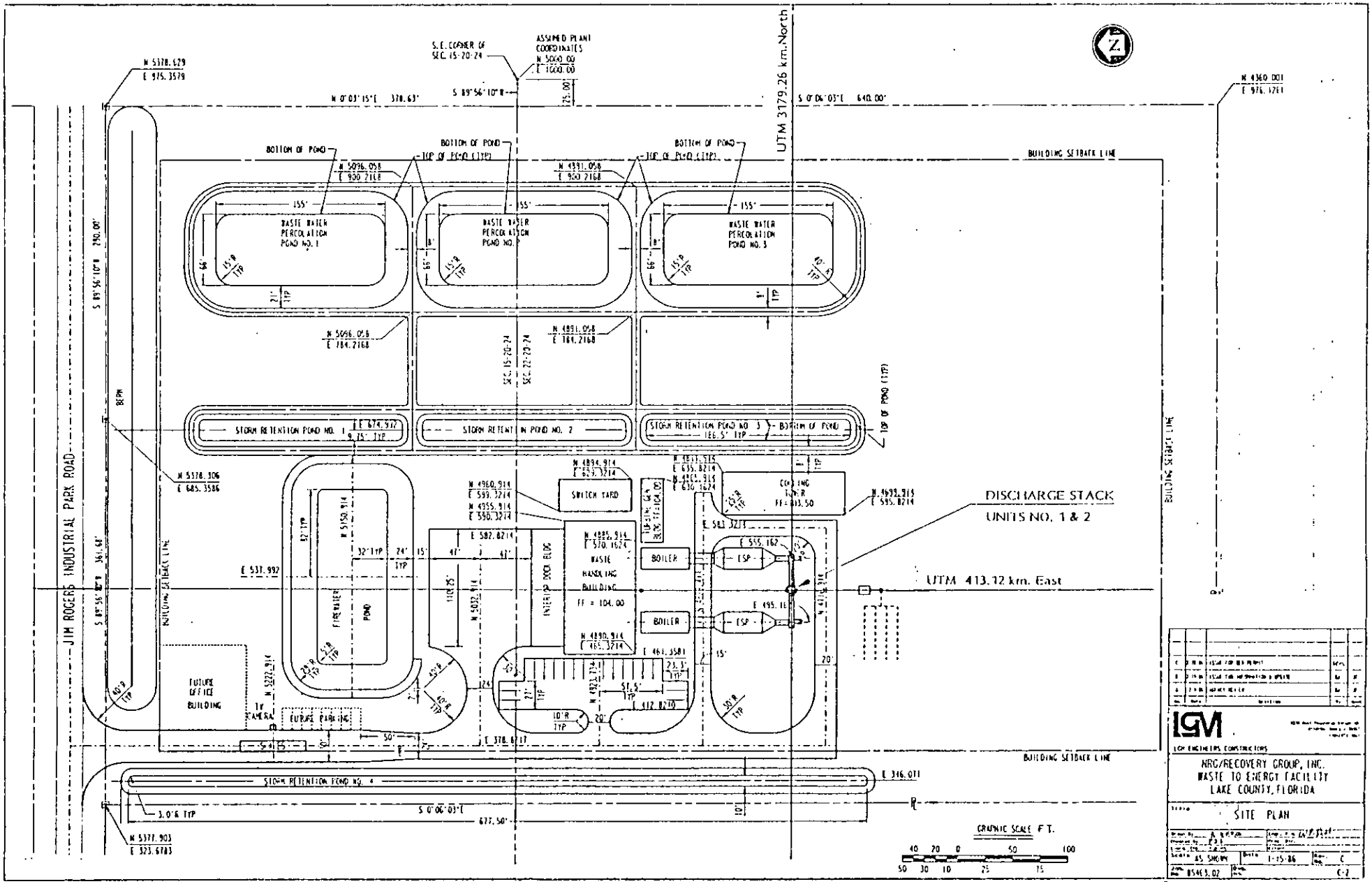
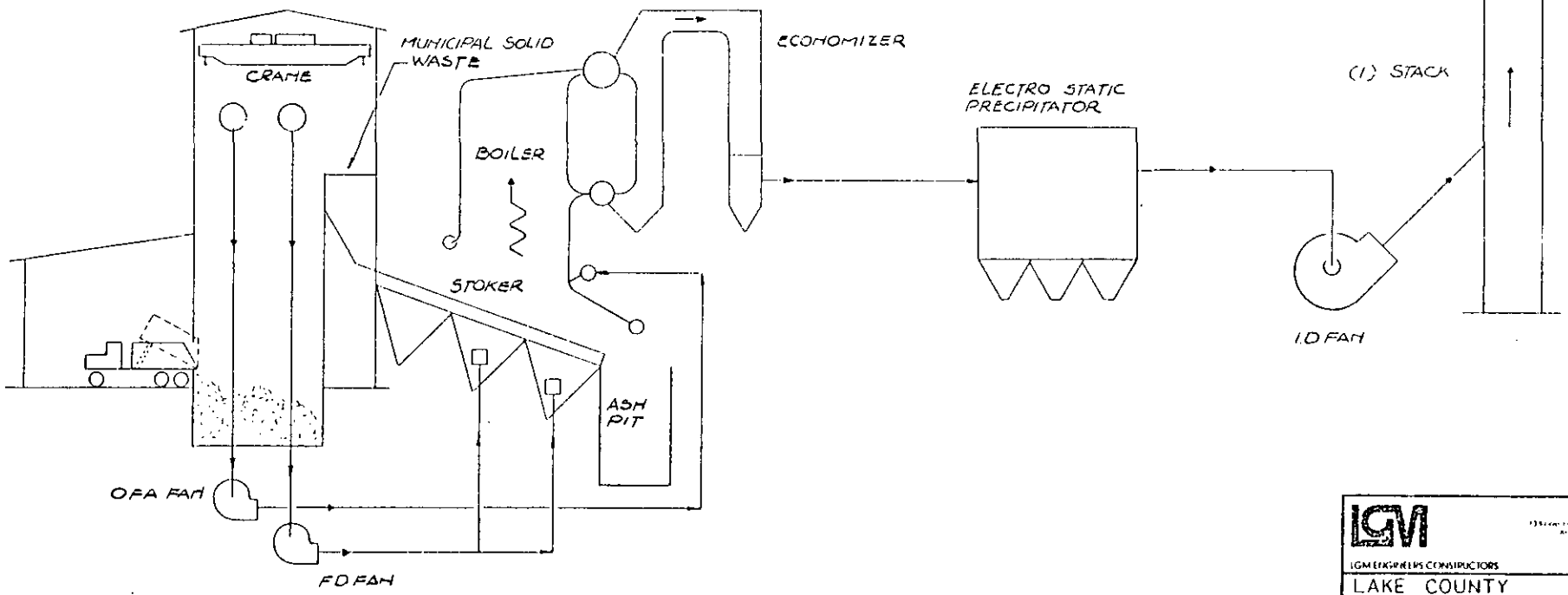

JIM ROGERS INDUSTRIAL PARK ROAD
UTM 3179.26 km.North
UTM 413.72 km. East
DISCHARGE STACK
UNITS NO. 1 & 2
WASTE WATER PERCOLATION POND NO. 1
WASTE WATER PERCOLATION POND NO. 2
WASTE WATER PERCOLATION POND NO. 3
STORM RETENTION POND NO. 1
STORM RETENTION POND NO. 2
STORM RETENTION POND NO. 3
STORM RETENTION POND NO. 4
FIRE WATER POND
SWITCH YARD
WASTE HANDLING BUILDING
BOILER
BOILER
ESP
ESP
FUTURE OFFICE BUILDING
FUTURE PARKING
TV CAMERA
BUILDING SETBACK LINE
BOTTOM OF POND
TOP OF POND (TYP)
S.E. CORNER OF SEC. 15-20-24
ASSUMED PLANT COORDINATES
N 5000.00
E 1000.00
N 5378.629
E 975.3579
N 4360.001
E 976.1761
N 5096.058
E 900.2168
N 4891.058
E 960.2168
N 5096.058
E 184.2168
N 4891.058
E 184.2168
SEC. 15-20-24
SEC. 22-20-24
N 5378.306
E 685.3586
N 4894.914
E 659.3214
N 4960.914
E 599.3214
N 4355.914
E 590.3214
N 4693.915
E 595.8214
N 4891.915
E 635.8214
N 4825.915
E 636.1624
E 583.3214
E 582.8214
E 555.162
E 495.16
E 537.992
E 464.3581
N 5150.914
N 5032.914
N 4825.914
E 570.1624
N 4890.914
E 465.3214
N 4923.714
E 412.8210
N 5222.914
E 316.011
E 378.617
N 5377.903
E 323.6783
S 0°06'03"E
677.50'
GRAPHIC SCALE F T.
40 20 0 50 100
50 30 10 25 75
IGM
IGM ENGINEERS CONSTRUCTORS
NRG/RECOVERY GROUP, INC.
WASTE TO ENERGY FACILITY
LAKE COUNTY, FLORIDA
SITE PLAN
AS SHOWN
1-15-86
8545.02
C-2

FIGURE 3

AF 36420A



TYPICAL FOR ONE
TWO REQUIRED

IGM ENGINEERS CONSTRUCTORS

LAKE COUNTY
WASTE TO ENERGY
FACILITY
OKAHUMPKA, FLA.

Title FUEL AIR COMBUSTION
FLOW DIAGRAM

Drawn By
Checked By
Coord Chk
Eng P.M.
Proj Dir
Client
Scale NONE
Date 5-8-85
Rev. No. A
Job No.
Dwg. No. M-101

FIGURE 4

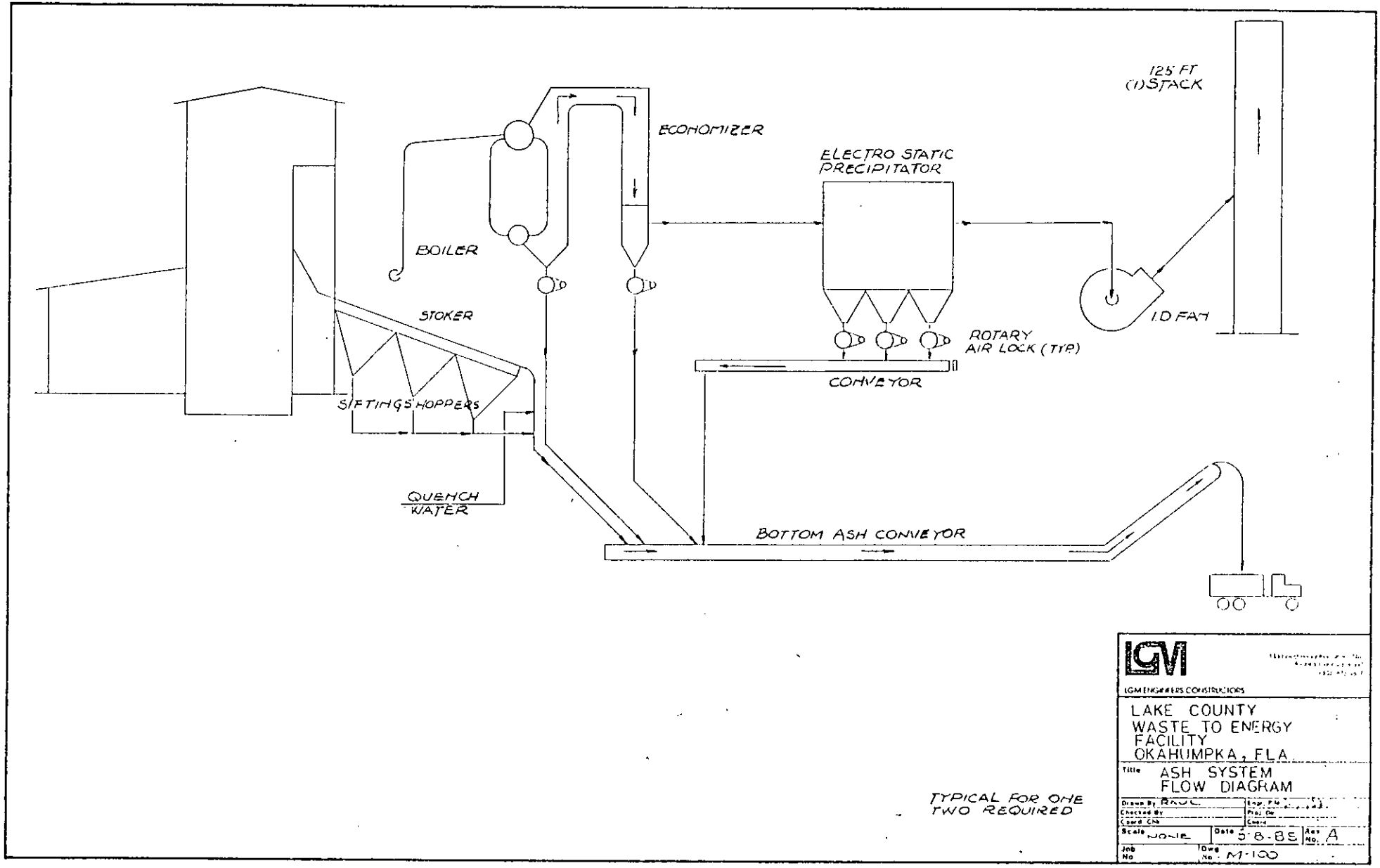
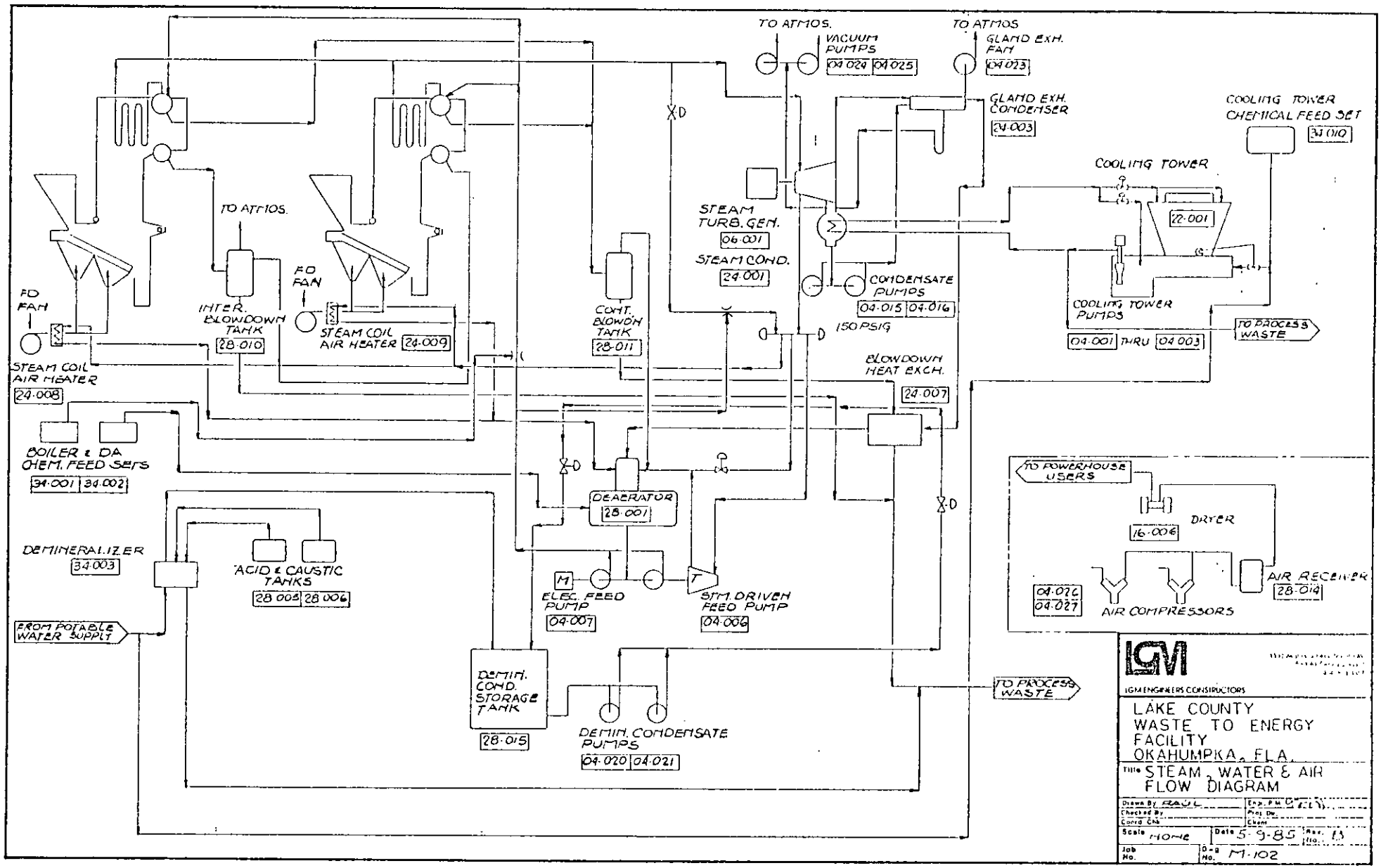

125 FT
(I) STACK
ECONOMIZER
ELECTRO STATIC
PRECIPITATOR
BOILER
STOKER
I.D FAN
ROTARY
AIR LOCK (TYP)
CONVEYOR
SIFTINGS HOPPERS
QUENCH
WATER
BOTTOM ASH CONVEYOR
TYPICAL FOR ONE
TWO REQUIRED
LGM ENGINEERS CONSTRUCTORS
LAKE COUNTY
WASTE TO ENERGY
FACILITY
OKAHUMPKA, FLA.
Title ASH SYSTEM
FLOW DIAGRAM
Drawn By RAC
Checked By
Scale NONE
Date 5-8-85
Rev No. A
Job No
Dwg No. M-100

FIGURE 5


AF 36420A
TO ATMOS.
VACUUM PUMPS
04-024 04-025
TO ATMOS
GLAND EXH. FAN
04-023
GLAND EXH. CONDENSER
24-003
COOLING TOWER CHEMICAL FEED SET
34-010
COOLING TOWER
22-001
STEAM TURB. GEN.
06-001
STEAM COND.
24-001
CONDENSATE PUMPS
04-015 04-016
COOLING TOWER PUMPS
04-001 THRU 04-003
TO PROCESS WASTE
150 PSIG
FD FAN
TO ATMOS.
INTER. BLOWDOWN TANK
28-010
FD FAN
STEAM COIL AIR HEATER 24-009
CONT. BLOWDN TANK
28-011
STEAM COIL AIR HEATER
24-008
BLOWDOWN HEAT EXCH.
24-007
BOILER & DA CHEM. FEED SETS
34-001 34-002
DEAERATOR
28-001
TO POWERHOUSE USERS
DRYER
16-006
DEMINERALIZER
34-003
ACID & CAUSTIC TANKS
28-005 28-006
ELEC. FEED PUMP
04-007
STM. DRIVEN FEED PUMP
04-006
04-026 04-027
AIR COMPRESSORS
AIR RECEIVER
28-014
FROM POTABLE WATER SUPPLY
DEMIN. COND. STORAGE TANK
28-015
DEMIN. CONDENSATE PUMPS
04-020 04-021
TO PROCESS WASTE
IGM
IGM ENGINEERS CONSTRUCTORS
LAKE COUNTY
WASTE TO ENERGY
FACILITY
OKAHUMPKA, FLA.
Title STEAM, WATER & AIR FLOW DIAGRAM
Drawn By RAUL
Checked By
Coord Chk
Engr. P.M.
Proj. Dir.
Chem.
Scale NONE
Date 5-9-85
Rev. No. 0
Job No.
D-a No. M-102

TWO

PREVENTION OF SIGNIFICANT DETERIORATION REPORT

FOR THE PROPOSED

NRG/RECOVERY GROUP

LAKE COUNTY WASTE TO ENERGY FACILITY

AT LAKE COUNTY, FLORIDA

MARCH 11, 1986

PREFACE

This PSD report has been prepared by LGM Engineers Constructors and Dames and Moore for the review of regulatory officials and interested parties. It is the objective of the report to provide a complete and thorough description of the proposed facility and its potential air quality impact. Questions regarding facility design, engineering, emissions estimates, and BACT analysis should be directed to Bob Chalfant of LGM Engineers Constructors. Questions regarding dispersion modeling and impact assessment may be directed to Bob Chalfant or to George Howroyd of Dames and Moore.

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1.0 INTRODUCTION

NRG/Recovery Group of Lakeland, Florida is a private developer of waste-to-energy resource recovery facilities. NRG/Recovery Group (NRG) proposes to install a new municipal solid waste (MSW) energy conversion facility having a design capacity of 500 tons per day near Leesburg, Florida in Lake County.

The waste-to-energy facility (WTE) will mass burn unprepared MSW in two waterwall incinerator/boiler units each having a capacity of 250 tons MSW per day. The incinerator/boiler units will generate high pressure steam for the purpose of generating electric power with conventional steam turbine - generator equipment. The facility will employ state-of-the-art incinerator/boilers and air pollution control equipment that will meet or exceed all current regulatory requirements to control emissions.

This report constitutes a complete application for a Prevention of Significant Deterioration (PSD) permit for construction of the proposed Lake County Waste to Energy Facility. It is intended to comply will all applicable federal and Florida air pollution control regulatory requirements. Information contained in this report includes the following:

1. A description of the proposed facility and air pollution control equipment.
2. Potential air pollutant emissions resulting from the proposed facility and the applicable air quality regulations.
3. A demonstration that the PSD preconstruction ambient air monitoring requirement is exempted for the proposed facility.
4. A demonstration that the emission control technology associated with the proposed facility is in conformance with Best Available

Control Technology (BACT) requirements for applicable air pollutants.

5. An atmospheric dispersion modeling analysis demonstrating that the proposed facility is in conformance with PSD increments and National Ambient Air Quality Standards (NAAQS).

6. A growth related air quality impact analysis and assessment of air quality impacts on soil, vegetation, and visibility associated with the proposed facility.

2.0 PROJECT DESCRIPTION

2.1 General

There is a contractural agreement between Lake County and NRG for Lake County to deliver its residential and commercial MSW to NRG, up to the 500 tons per day capacity of the facility. Lake County has interlocal agreements with Leesburg, Tavares, Eustis, Mt. Dora and Clermont. Lake County anticipates the initial annual delivery to be 120,000 tons MSW per year.

The NRG facility will dramatically reduce the Lake County landfill burden and is an important part of community planning. The residue from incineration at NRG will be disposed of by the County at its Astatula Landfill. While volume reduction is the primary purpose of the facility, electric power generation makes this project economically viable for NRG.

This section presents a description of the proposed facility and its associated air pollution control equipment.

2.2 Site Description

The proposed facility is to be located in Jim Rogers Industrial Park off Florida State Road 33 approximately three-quarters of a mile southeast of the community of Okahumpka and five miles south of Leesburg.

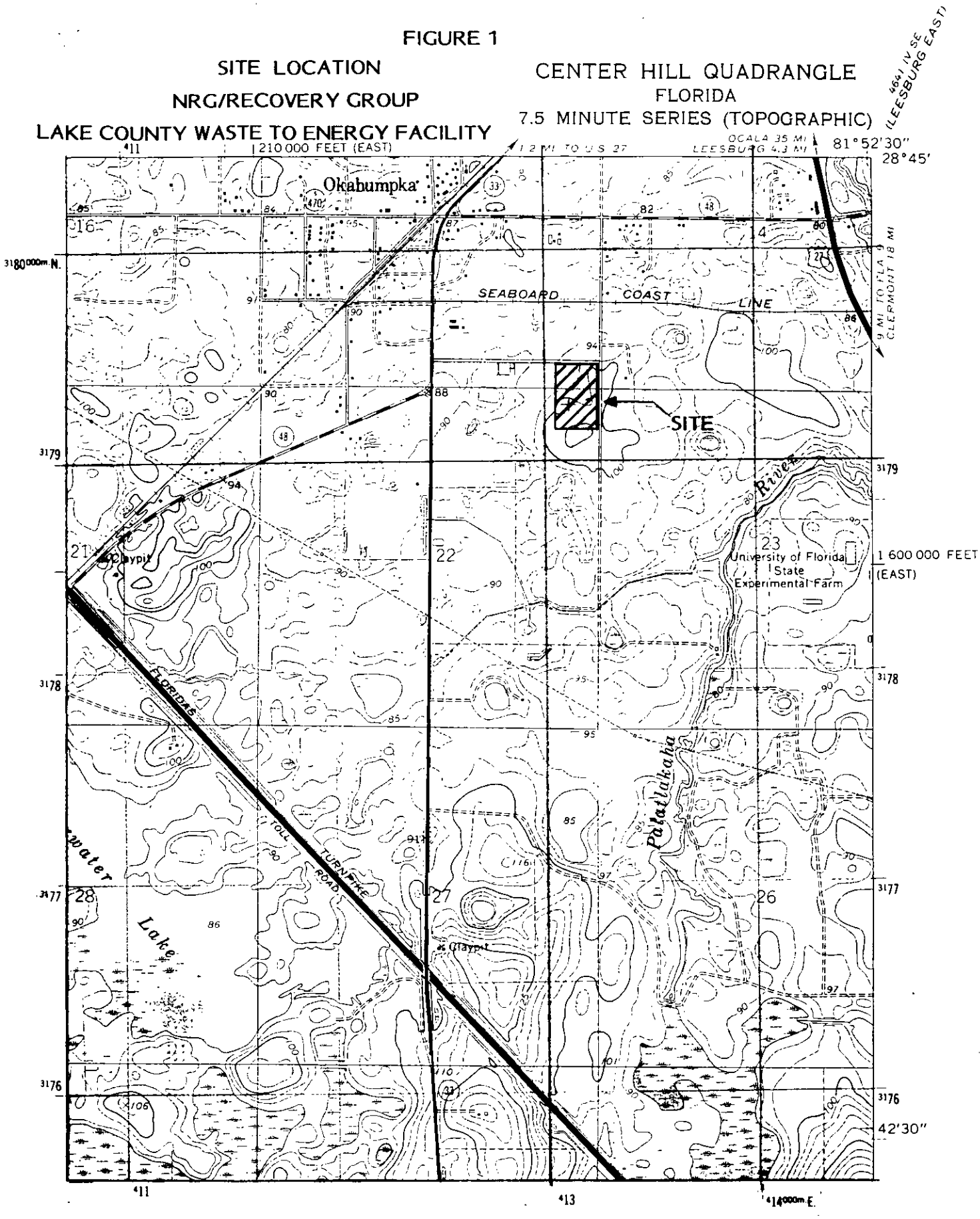
The site includes 15.24 acres within the property boundary and is in a rural location bound by land that was primarily dedicated to citrus groves. The WTE facility itself is confined to approximately 6 acres within the overall property site with the remaining property utilized for percolation ponds and buffer zone areas.

FIGURE 1

SITE LOCATION

NRG/RECOVERY GROUP

LAKE COUNTY WASTE TO ENERGY FACILITY



SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

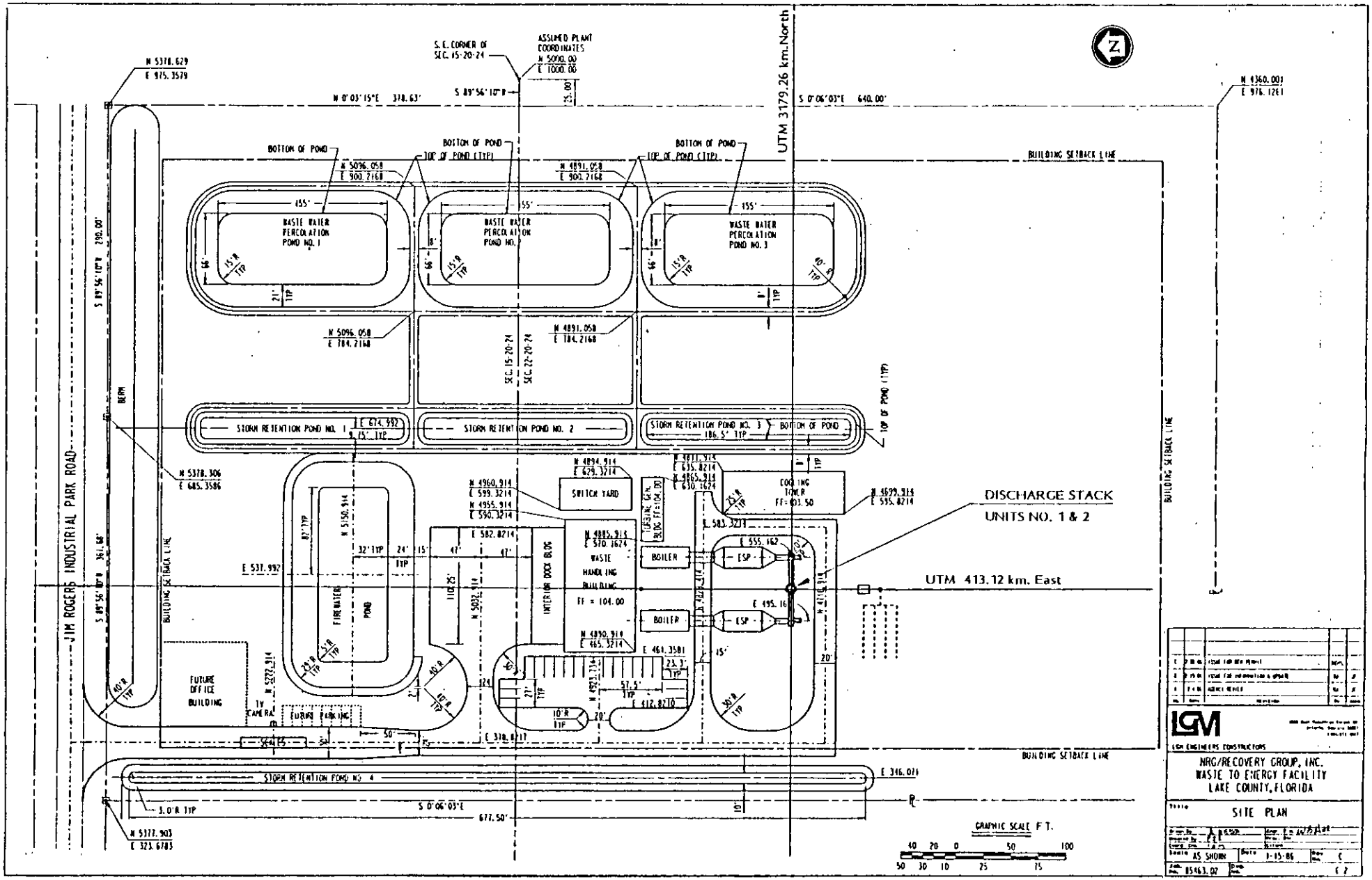
1 5 0 1 KILOMETER

CONTOUR INTERVAL 5 FEET

DATUM IS MEAN SEA LEVEL

QUADRANGLE LOCATION

FIGURE 2


JIM ROGERS INDUSTRIAL PARK ROAD
UTM 3179.26 km. North
UTM 413.12 km. East
BUILDING SETBACK LINE
BERM
BOTTOM OF POND
TOP OF POND (TYP)
WASTE WATER PERCOLATION POND NO. 1
WASTE WATER PERCOLATION POND NO. 2
WASTE WATER PERCOLATION POND NO. 3
STORM RETENTION POND NO. 1
STORM RETENTION POND NO. 2
STORM RETENTION POND NO. 3
STORM RETENTION POND NO. 4
FIRE WATER POND
SWITCH YARD
COOLING TOWER
WASTE HANDLING BUILDING
BOILER
ESP
DISCHARGE STACK
UNITS NO. 1 & 2
FUTURE OFFICE BUILDING
FUTURE PARKING
TV CAMERA
S. E. CORNER OF SEC. 15-20-24
ASSUMED PLANT COORDINATES
N 5090.00
E 1000.00
SEC. 15-20-24
SEC. 22-20-24
GRAPHIC SCALE F.T.
LGM ENGINEERS CONSTRUCTORS
NRG/RECOVERY GROUP, INC.
WASTE TO ENERGY FACILITY
LAKE COUNTY, FLORIDA
SITE PLAN
AS SHOWN
1-15-86
85463.02

The discharge stack will be located at approximate UTM coordinates 413.12 East and 3179.26 North in UTM Zone 17.

2.3 Process Description

Waste will be received from municipal and/or contractor trucks principally on a five day a week basis. Trucks will be routed to an enclosed waste pit with multiple unloading bays. The waste pit will have approximately four days storage volume (1800 tons). Overhead cranes with grapple feeders will distribute the waste to the combustion equipment. Combustion air fans will take suction from the enclosed unloading and waste pit area to aid in ventilation and provide odor control.

The waste will be distributed to two boilers for combustion and generation of stream. The combustion system for each boiler will consist of a waste hopper, hydraulic ram feeder and reciprocating grates. The combustion process will be controlled by modulating feed rate, reciprocating grates, undergrate combustion air and overfire air. Furnace draft will be controlled by modulating inlet dampers to the induced draft fan.

The fuel supply will be Lake County MSW supplemented with up to twenty-five percent of total heat input with wood chips having a heat value of 4,500 BTU/lb. at fifty percent moisture content. The total daily input of combined fuels per unit shall not exceed the total heat input from 250 TPD of 5,000 BTU/lb. MSW only. The intent is to utilize wood only at times when there is a deficiency of MSW.

FIGURE 3

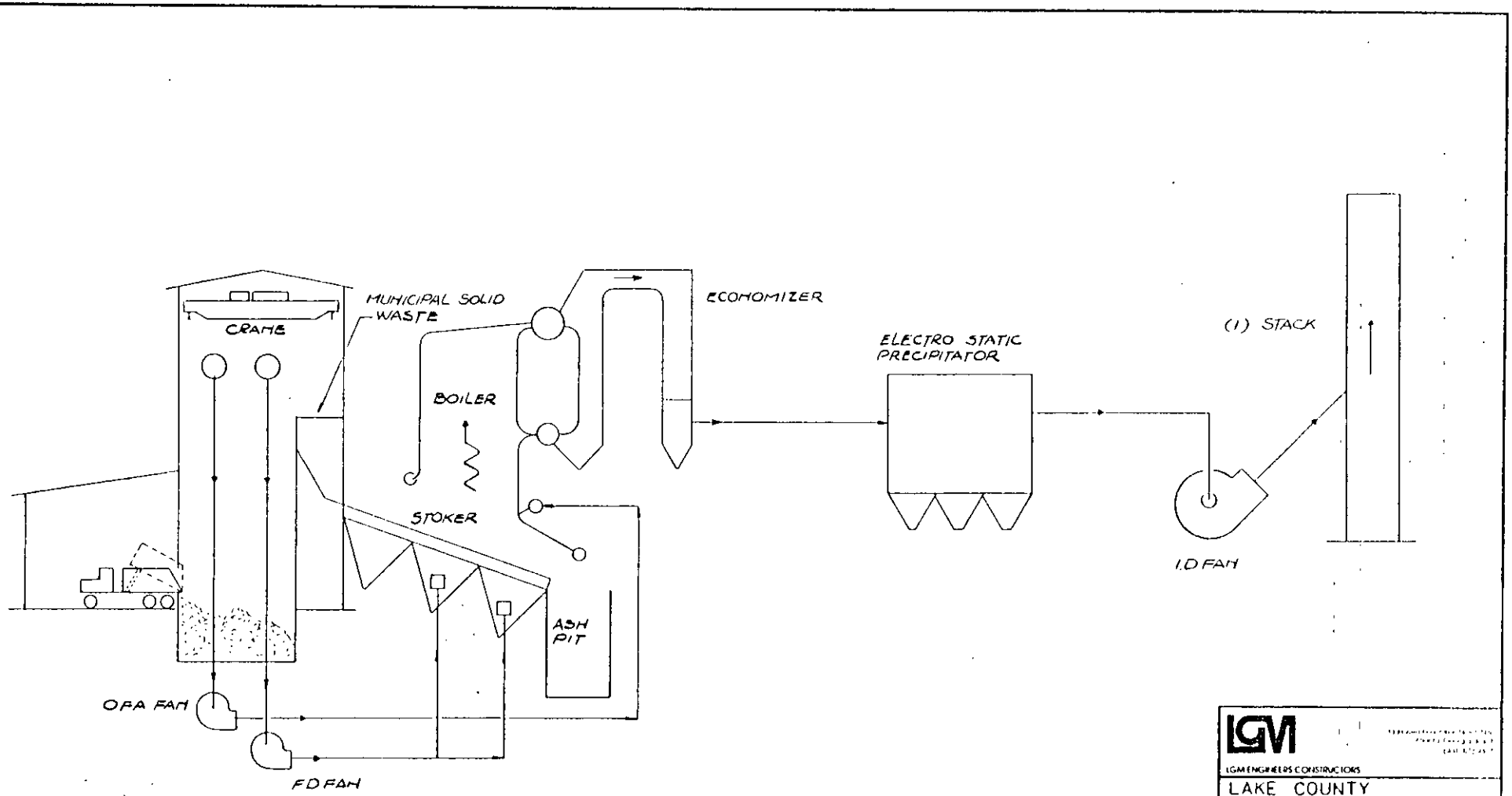

CRANE
MUNICIPAL SOLID WASTE
BOILER
STOKER
ASH PIT
OFA FAN
FD FAN
ECONOMIZER
ELECTRO STATIC PRECIPITATOR
(1) STACK
I.D FAN
TYPICAL FOR ONE
TWO REQUIRED
LGM ENGINEERS CONSTRUCTORS
LAKE COUNTY
WASTE TO ENERGY
FACILITY
OKAHUMPKA, FLA.
Title FUEL AIR, COMBUSTION
FLOW DIAGRAM
Drawn By RAUL
Checked By
Coord. Chk
Eng. Pkg. No.
Proj. Dr.
Chart
Scale NONE
Date 5-8-85
Rev. No. A
Job No
Dwg No M-101

FIGURE 4

AF 36420A

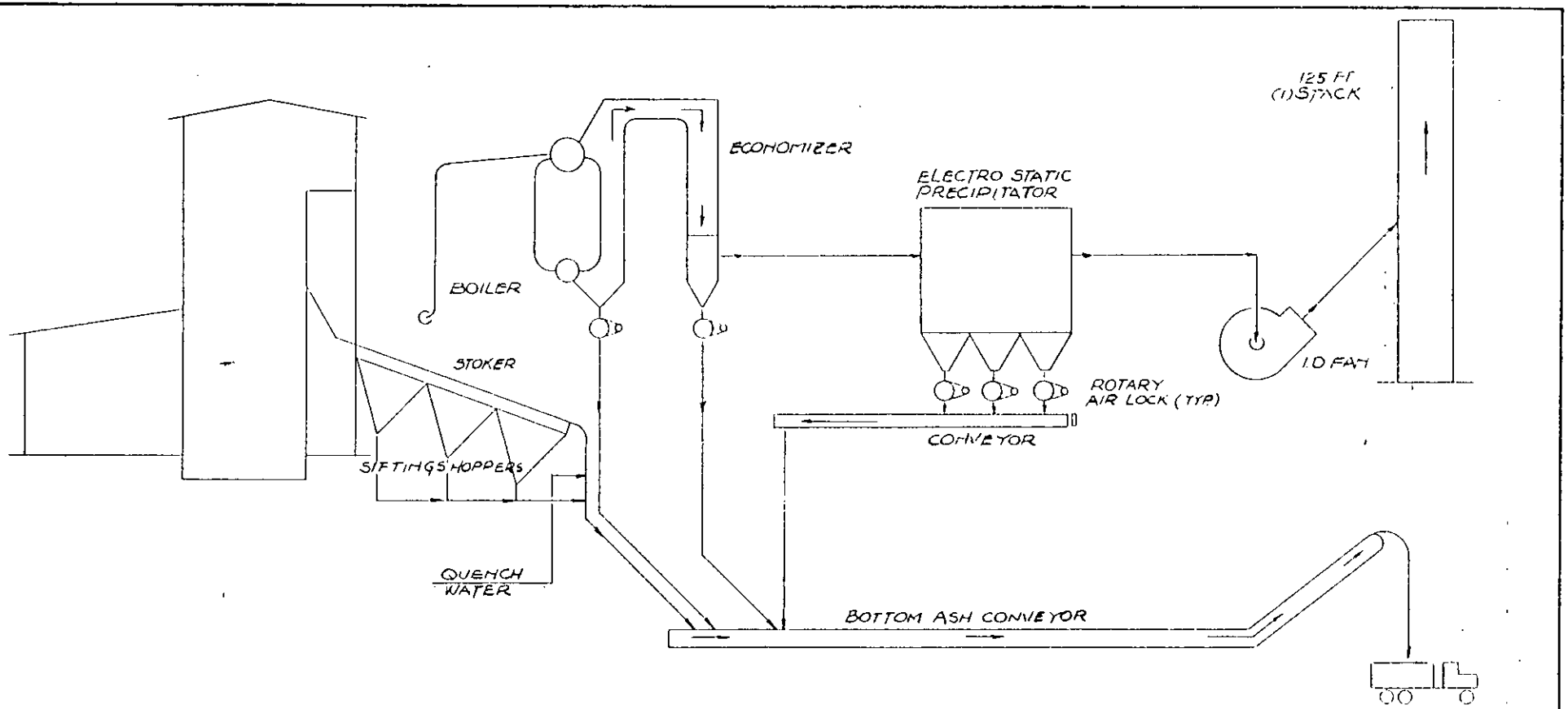
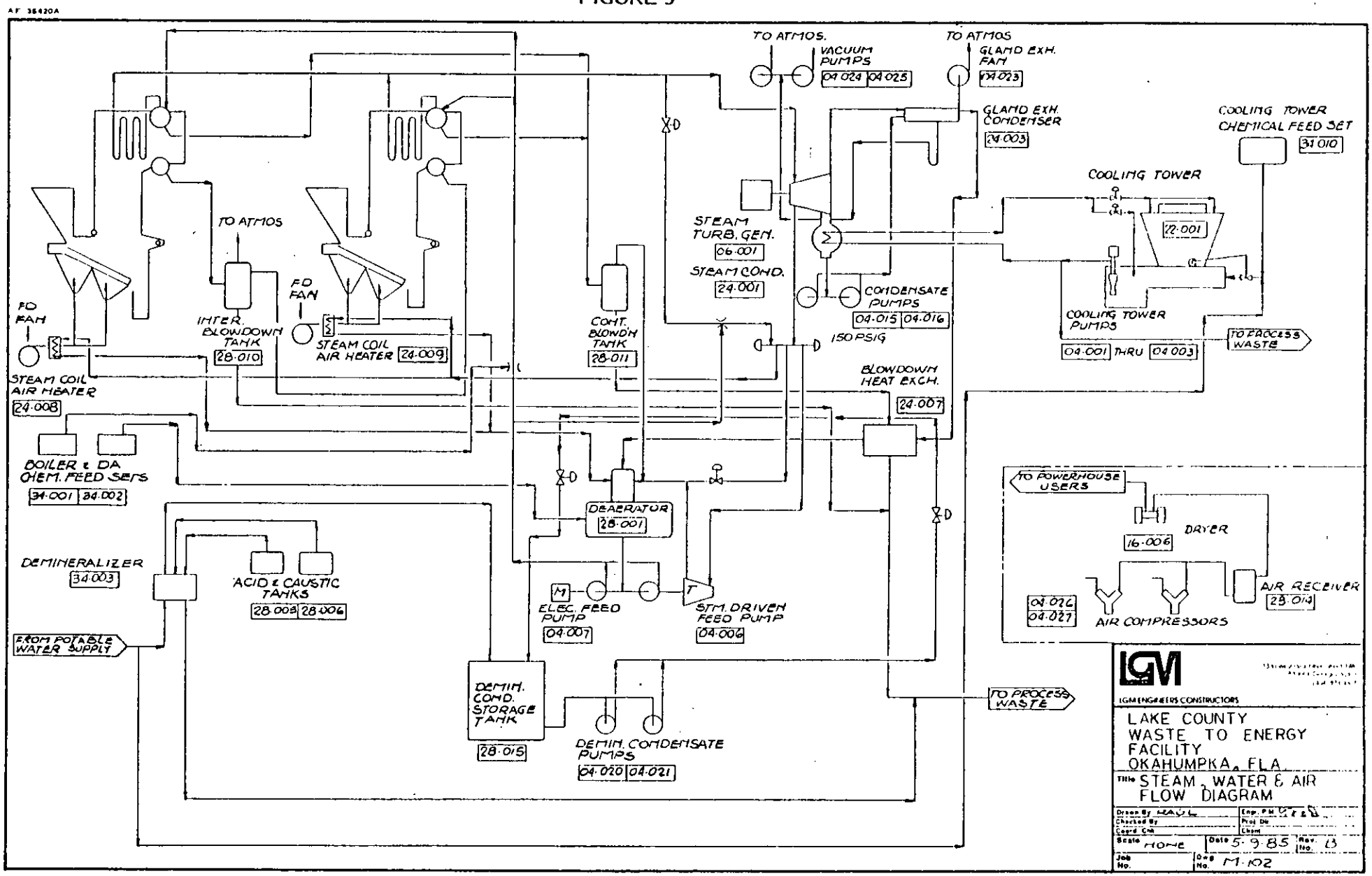


FIGURE 5


AF 38420A
TO ATMOS.
VACUUM PUMPS
04-024 04-025
TO ATMOS
GLAND EXH. FAN
04-023
GLAND EXH. CONDENSER
24-003
COOLING TOWER CHEMICAL FEED SET
31-010
COOLING TOWER
22-001
STEAM TURB. GEN.
06-001
STEAM COND.
24-001
CONDENSATE PUMPS
04-015 04-016
150 PSIG
COOLING TOWER PUMPS
04-001 THRU 04-003
TO PROCESS WASTE
TO ATMOS
FD FAN
INTER. BLOWDOWN TANK
28-010
FD FAN
STEAM COIL AIR HEATER 24-009
CONT. BLOWDN TANK
28-011
FD FAN
STEAM COIL AIR HEATER
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BLOWDOWN HEAT EXCH.
24-007
BOILER & DA CHEM. FEED SETS
34-001 34-002
DEAERATOR
28-001
TO POWERHOUSE USERS
DRYER
16-006
DEMINERALIZER
34-003
ACID & CAUSTIC TANKS
28-003 28-006
ELEC. FEED PUMP
04-007
STM. DRIVEN FEED PUMP
04-006
04-026
04-027
AIR COMPRESSORS
AIR RECEIVER
28-014
FROM POTABLE WATER SUPPLY
DEMIN. COND. STORAGE TANK
28-015
DEMIN. CONDENSATE PUMPS
04-020 04-021
TO PROCESS WASTE
IGM ENGINEERS CONSTRUCTORS
LAKE COUNTY
WASTE TO ENERGY
FACILITY
OKAHUMPKA, FLA.
Title STEAM, WATER & AIR FLOW DIAGRAM
Drawn By HAVLE
Checked By
Coord. Chk
Scale NONE
Date 5-9-85
Rev. No. B
Job No.
Dwg No. M-102

The furnace shall have a gross heat liberation rate not to exceed 10,000 BTU/cu. ft. to insure maximum destruction of volatile organic components and minimum products of incomplete combustion.

The steam generator shall be of the water tube type. Normal steam flow per unit shall be 60,000 lb./hr. net (at 250 TPD of MSW). Steam conditions shall be 650 PSIG and 755°F with a feedwater temperature of 228° F.

The steam from the two boilers will be used to generate power with a single extraction-condensing turbine generator having a nominal capacity of 12.3 megawatts.

Particulate emissions are proposed to be controlled by a three field electrostatic precipitator (ESP) serving each boiler. Each induced draft fan will discharge to a free standing stack 125 feet in height.

2.4 Emission Sources and Controls

The potential sources of emissions include the regulated incinerator/boilers and fugitive sources. Fugitive emissions could potentially come from the waste receiving and storage pit and the ash handling system.

Dust can be generated during handling of the waste. The waste will be discharged, stacked and reclaimed with an overhead grapple and then fed to the incinerators. Unless the waste is very dry, these

operators do not generate visible dust. Rigo & Rigo Associates reports that at the Resource Authority in Sumner County Waste-to-Energy Plant (incineration system) at Gallatin, Tennessee, Cooper engineers measured dust levels in the storage pit area less than 10 mg/m^3. Similar dust levels have been observed and reported for operations at: North Little Rock, Arkansas; Franklin, Ohio; and Baltimore, Maryland. It is also reported that ambient high volume air monitors located up-wind and down-wind of the North Little Rock plant were unable to detect any fugitive emissions from the facility. Odor, which may be associated with the waste, cannot be quantitatively assessed, but it should only rarely be detectable outside the waste building and should not be detectable at the property line. Dust and odor will be controlled by locating the combustion air intakes over the storage and feed hopper areas keeping the area under negative pressure and directing these pollutants to the incinerator combustion chamber.

Fugitive emissions are not expected from the ash handling system. The incinerator bottom ash and the ESP flyash handling systems are totally enclosed conveyors operating under negative pressure and only discharge the ash residue in the enclosed housings to the ash drag-out or water spray conditioning systems. As a result, ash removed from the incinerator system will be moistened and will not be subject to dusting. Ash deposited in the removal containers should have 20 to 35% moisture.

In consideration of the fugitive dust controls to be employed and the fact that there are not references or emission factors indicating these areas to be a source of quantifiable emissions, potential emissions are projected to be negligible.

The primary source and only quantifiable source of emissions is the combustion process. Emissions of air pollutants from incineration depend largely upon the waste type and quantity to be combusted, which may vary significantly from day to day and from one geographic location to another, and upon the combustion process and emission controls. The facility will receive Lake County residential and commercial refuse. Any waste, inadvertently delivered to the facility, which cannot be incinerated will be sorted and separated by the loader operators. Separated materials may include non-burnable wastes such as tree stumps, white goods and hazardous materials such as gas cylinders that might normally be collected with MSW. This material will be trucked off site for appropriate disposal. Wood chips may be received to supplement the MSW waste input. NRG will not accept hazardous waste or waste of a special nature incompatible with the facility design. Standard plant operating procedures will counteract the accidental or illicit disposal of these wastes at the NRG facility.

Each incinerator unit will be capable of incinerating 250 tons of MSW per 24 hour day. The incinerator will be a reciprocating grate type with controlled under fire and over fire air for optimum combustion conditions. The rate of combustion will be controlled by modulating the amount of primary and secondary air, the rate of waste feed, and the waste detention time in the combustion chamber. This method of control will be utilized to maintain heat rate to the boiler system and control steam flow. Good gas flow control is ensured by the design of the incinerator package, mixing and burning of the waste,

and the use of primary and secondary air. The products of combustion will be mixed and burned to completion within the incinerator.

Gaseous pollutants such as sulfur dioxide, acid gases, and trace element contaminants in the flue gas are largely a fact of the waste analysis and the amount of retention with the ash. Gaseous pollutants such as CO and NO_x are somewhat dependent upon the incinerator design and operating conditions. Particulate matter is emitted as a result of incomplete combustion of fuel as well as entrainment of noncombustibles in the flue gas stream. Particulate may exist as solids or aerosols. The size of these particles range from less than 0.1 micron to more than 500 microns. In some instances, the particles may contain metals or polycyclic organic matter.

When solids are burned particulate matter comes from three sources: inorganic substances, organometallic substances, or the fuel molecules themselves. Inorganic matter is not destroyed during the combustion process, and most of this material remains as bottom ash. Turbulent mixing during combustion result in the entrainment of some of these inorganic materials as fly ash. High temperatures and oxidizing conditions can result in volatilization and oxidation of organometallic compounds present in solid fuels. As a result, the metallic portion of the organometallic compounds may appear as inorganic oxides or metal salts in the flue gases. Fuel molecules themselves can contribute a significant portion of particulate matter emissions resulting from combustion of solid fuels. Little is known about the

exact mechanisms of particle formation. However, it is known that pyrolytic reactions occurring near the fuel bed can lead to formation of large organic molecules. Further growth of these molecules may be induced by inorganic materials that act as nucleation sites. It is also possible that organic particles can result from self nucleation. Agglomeration processes lead to larger aggregates of small particles.

The size and quantity of particles emitted from solid fuel combustion depends on such factors as residence time, temperature, oxidizing/reducting conditions of the furnace, and trace chemistry of the particles and fuel. Long residence times allow for more complete burnout of organic particles with a commensurate decrease in particle size and mass. High temperatures and oxidizing conditions promote more complete combustion.

The grate system and refactory walled section of the incinerator is designed to maintain combustion temperatures in the range of 1800°F in the lower refractory walled section of the combustion chamber. The radiant waterwall section of the combustion chamber cools the flue gases to approximately 1300°F before entering the superheater section of the boiler. The flue gases must be cooled to prevent excessive slagging and high temperature corrosion of the boiler tubes. The design furnace heat release rate is low, in the range of 10,000 BTU/cu. ft. hr., to provide long residence time for more complete combustion of the fuel and to minimize products of incomplete combustion. At design capacity and fuel conditions the furnace residence time to 1800°F is greater than 1 second and furnace residence time to 1500°F is greater than 3 seconds.

The reciprocating grate system design is relatively long and narrow with a gross heat release rate not to exceed 300,000 BTU/sq. ft. hr. to provide for maximum burnout of the combustible portion of the waste fuel. The forced draft fans are provided with steam coil air heaters to be used to assist in drying the waste fuel on the grates and improving combustion when incoming fuel is excessively wet.

Particulate laden gases leaving the boiler are directed to an electrostatic precipitator for particulate control before being discharged to the atmosphere through a common 125 ft. stack serving the two units. The stack will have either a common flue serving the two units or two flues contained in a common shell stack.

2.5 Project Schedule

The projected start of construction is July 1986 and initial start of operation is December 1987.

2.6 Operating Schedule

The project operating schedule is 24 hours per day, 7 days per week. Each unit will have an annual maintenance shutdown, however, these are not yet scheduled. Emission potentials are based on 100 percent capacity, while the actual capacity factor is projected to be closer to 85 percent.

3.0 PROJECT EMISSION SOURCE INFORMATION

3.1 Emission Sources and Emission Rates

As indicated previously, this project will involve only one primary point source of emission, namely the single exhaust stack serving two municipal solid waste energy recovery mass burn incinerators. Each of these units will have a capacity of 250 tons per unit, for a total facility capacity of 500 tons/day. The waste will be distributed to two boilers for combustion and the generation of steam. The fuel supply will be Lake County Municipal solid waste (MSW) supplemented (with up to 25 percent of total heat input) with wood chips. A summary of the maximum emission rates for the two boilers combined is provided in Table 3-1. The emission stack parameters are provided in Table 3-2.

The estimated annual emissions (ton/yr) for each of the pollutants listed in Table 3-1 are shown in Table 3-3. Also shown are the EPA-defined significant emission rates for use in determining pollutant applicability for PSD review. As illustrated in the table, the pollutants that will be emitted in quantities greater than the EPA-defined levels of significant emission are SO_2, NO_x, PM, CO, Hg, and F^-. The reader will note that no significant emission rate has been defined for HCl emissions. This pollutant was included in the analysis at the request of FDER.

The estimated emission rates and proposed emission limitations are based on numerous governmental and private industry reports and personal communications. These data are considered to be more

TABLE 3-1

SUMMARY OF CONTROLLED POTENTIAL EMISSION RATES
FROM THE PROPOSED NRG WASTE TO ENERGY FACILITY

MAXIMUM EMISSION RATES[a]	lb/hr	g/s
Sulfur Dioxide (SO_2)	125.3	15.80
Nitrogen Oxides (NO_x)	104.0	13.12
Particulate Matter (PM)	13.8	1.74
Carbon Monoxide (CO)	92.8	11.70
Lead (Pb)	0.25	0.03
Volatile Organic Compounds (VOC)	8.3	1.05
Mercury (Hg)	0.15	0.02
Fluorides (F^-)	1.25	0.16
Beryllium (Be)	2×10^{-5}	2.5×10^{-6}
Asbestos (As)	Neg[b]	-
Vinyl Chloride (CH_2 CHCl)	Neg[b]	-
Sulfuric Acid Mist (H_2SO_4)	0.9	0.11
Hydrogen Sulfide (H_2S)	Neg[b]	-
Hydrogen Chloride (HCl)	187	23.6
Total Reduced Sulfur (TRS)	Neg[b]	-
Reduced Sulfur Compounds (RSC)	Neg[b]	-

a Worst case hourly emissions from both units.

b Negligible emissions (O'Connel, et al., 1982).

TABLE 3-2

STACK PARAMETERS FOR NRG UNITS No. 1 and No. 2

STACK CHARACTERISTICS		
Exhaust Stack Height	125.0 ft.	38.1 m
Stack Exit Diameter[a]	6.0 ft.	1.83 m
Stack Gas Exit Velocity	65.6 ft./sec.	20.0 m/s
Stack Gas Exit Temperature	350°F	450°K
INCINERATOR BUILDING DIMENSIONS:		
Height	72.0 ft.	22.0 m
Length	125.0 ft.	38.1 m
Width	65.0 ft.	19.8 m

[a] The single stack will have either a single flue 6'-0" diameter combining the two gas flows or two flues each 4'-3" diameter.

TABLE 3-3

SOURCE APPLICABILITY DETERMINATION

Pollutant	Potential Annual Emissions (tons/yr)[a]	Significant Emission (tons/yr)[b]	PSD Pollutant Applicability
SO_2	547	40	Yes
NO_x	455	40	Yes
PM	60	25	Yes
CO	101	100	Yes
Pb	1.1	0.6	Yes
VOC	36	40	No
Hg	0.6	0.1	Yes
F^-	5.5	3	Yes
Be	0.0001	.0004	No
As	-	.007	No
CH_2CHCl	-	1	No
H_2SO_4	4	7	No
H_2S	-	10	No
HCl	(547 to 820)[c]	N/A[c]	N/A
TRS	-	10	No
RSC	-	10	No

a Based on 500 tons MSW/day, 365 days/yr.

b As defined by EPA

c No significant emission rate is defined for HCl.

reliable than the U.S. EPA Report No. AP-42, Compilation of Air Pollutant Emission Factors. To account for waste variability, average emission factors were adjusted upward on a pollutant specific basis to arrive at "worst-case" hourly emission rates for all regulated pollutants. While the MSW fuel may be supplemented with wood chips, emissions are based on 100 percent MSW fuel, because it is projected that for all regulated pollutants emissions should be equivalent or less when burning mixed MSW and wood chip fuel.

Stack gas characteristics are based on calculated exhaust gas flow rate at capacity with 82 percent excess air at the boiler exit plus in-leakage at the ESP. Exhaust gas temperature is based on a low vendor estimate and a 25°F drop in temperature across the flues and ESP resulting in a 350°F outlet temperature. If vendor equipment having a higher exhaust gas temperature is selected, effective plume height should be greater and modeling results should be lower than those included in this report.

3.2 Derivation of Emission Rates

3.2.1 Sulfur Dioxide

There is no applicable sulfur dioxide standard. Sulfur dioxide emissions are a result of the sulfur content of the waste fuel and rate of conversion to sulfur dioxide. Review of numerous test results finds a wide range of sulfur dioxide emissions from less than 1 lb./ton MSW to over 7 lb./ton MSW. A 1984 California Air Resources Board (CARB) report, Air Pollution Control at Resource Recovery Facilities, states that Florida refuse has approximately 0.3 percent sulfur and that refractory wall mass burning facilities release approximately 25 percent of the sulfur

as SO_2, with the remaining sulfur distributed in the grate ash and fly ash. A Battelle report indicates a 50 percent retention factor. These sulfur content and retention values would indicate a sulfur dioxide emission rate in the range of 3 to 6 lb./ton MSW, and we presently find most test results in the range of 3 lb. SO_2/ton MSW. For NRG the expected initial average emission is around 3 lb./ton MSW and the maximum expected and requested limit is 6 lb./ton MSW.

3.2.2 Nitrogen Oxides

There is no applicable NO_x standard. The emission of nitrogen oxides from combustion sources are due to the conversion of nitrogen in the fuel to nitrogen oxides and the fixation of atmospheric nitrogen. Emission factors are in the range of 4 lb./ton MSW (0.4 to 0.5 lb./million BTU), and emissions at NRG are projected to be less than 0.5 lb./million BTU input.

3.2.3 Particulate Matter

Each 250 TPD waste fuel boiler has a design heat input rating of approximately 100 million BTU/hr., which is at the lower end of applicability of proposed Subpart Db NSPS. The proposed standard is 0.10 lb./million BTU (0.045 grains/dscf corrected to 12% CO_2). The existing Subpart E standard is 0.08 grains/dscf. The projected uncontrolled emission factors for the vendor units under consideration are 40 to 90 lb./ton MSW. NRG proposes to install an electrostatic precipitator designed for 98.5% to

99% control and having an emission limit of 0.067 lb./million BTU (0.03 grains/dscf corrected to 12% CO_2). Average emissions are expected to be less than this value.

3.2.4 Carbon Monoxide

There is no applicable standard for carbon monoxide. Carbon monoxide emissions from a well tuned boiler are normally negligible. Boiler design for good turbulent mixing and use of fuel/air ratio controls insures that excess oxygen does not fall below necessary levels for near complete combustion of the fuel. It is projected that carbon monoxide levels in the exhaust gas should average less than 400 ppm (0.45 lb./million BTU) over an eight hour period and that the long term average should be in the range of 100 ppm.

3.2.5 Lead

There is no applicable lead emission standard. The predicted uncontrolled lead emission factor is 0.3 lb./ton MSW. The proposed ESP should provide better than 96% control of potential lead emissions for estimated emission rate of 0.012 lb./ton MSW.

3.2.6 Volatile Organic Compounds (VOC)

There is no applicable emission standard for VOC. As with carbon monoxide, emissions of VOC are minimized by good design and combustion practices. As long as carbon monoxide emissions are below 400 ppm, emissions of VOC are very small.

Emissions of VOC are projected to be less than 0.04 lb./million BTU.

3.2.7 Mercury

Trace amounts of mercury have been found in the emissions of MSW incinerators. Reported emission factors are primarily in the range of 0.003 to 0.007 lb./ton MSW. A conservative emission factor of 0.007 lb./ton MSW has been chosen as an emission estimate.

3.2.8 Fluorides

There is no applicable emission standard for fluorides from MSW incinerators. However, traces of hydrogen fluoride from the combsution of fluorinated plastics or similar materials appear in the flue gas of MSW incinerators. Average test results at existing facilities range from 0.03 to 0.08 lb./ton MSW. A conservative fluoride emission factor of 0.06 lb./ton MSW has been projected.

3.2.9 Beryllium

Very little data exist regarding the emission of beryllium from MSW incineration, and the data that are available offer a wide range of emission factors. The ESP should provide greater than 98% control, and the emission rate of beryllium is projected to be less than 1.0×10^{-6} lb./ton MSW.

3.2.10 Asbestos

No emission of asbestos is projected because it is not likely to be present in the waste streams in any significant quantity. Strict environmental regulations preclude disposal of asbestos in the NRG facility, and NRG will not receive demolition type waste which might contain asbestos.

3.2.11 Vinyl Chloride

Vinyl chloride is used primarily as a feedstock for production of PVC and will not be disposed of in the NRG facility. Also, if present it would not be likely to survive the combustion conditions in its original toxic form. There is no available data in the literature that can be used to derive any meaningful emission rate.

3.2.12 Sulfuric Acid Mist

Very little data is available on sulfuric acid emissions from MSW incineration. The reaction carrying SO_2 to sulfuric acid mist is highly dependent upon variable combustion conditions. Estimates have projected conversion rates of approximately 1.5 percent of the SO_2 emission rate or 0.04 lb./ton MSW.

3.2.13 Hydrogen Sulfide, Total Reduced Sulfur, Reduced Sulfur Compounds

Hydrogen sulfide, total reduced sulfur and other reduced sulfur compounds are not expected to be present in the flue gas. These compounds, if formed in the precombustion process, will be converted principally to SO_2.

3.2.14 Hydrogen Chloride

There is no applicable hydrogen chloride emission standard, and HCl is not regulated under PSD. However, HCl is a pollutant of concern. HCl emission is determined by fuel chlorine content and rate of conversion to HCl. The CARB report indicates conversion in the range of 50 percent for mass burning units and chlorine content for Florida waste in the range of 0.3 percent by weight.

Emission test reports indicate average HCl emission rates in the range of 2 to 6 lbs./ton MSW with excursions higher. The chlorine content of MSW is expected to increase in the future. For review purposes the initial HCl emission rate is expected to be less than 6 lb./ton MSW with the future average emission rate going as high as 9 lb./ton MSW.

3.3 Stack Height

Federal stack height regulations (40 CFR 51.1, 50FR27892, July 8, 1985) require that the maximum stack height used to predict the concentration of pollutants in the ambient air be no taller than that dictated by Good Engineering Practice (GEP). GEP stack height is the greater of:

1) 65 meters; or

2) Hg, where Hg is given by the following equation:

$Hg = H + 1.5\ H_L$, where

H = height of nearby structure(s)

H_L = lesser dimension (height or projected width) of nearby structure(s).

The GEP stack height for this facility calculated by method (2) is approximately 180 ft. (54.8m) based on the boiler house dimensions given in Table 3-2. The proposed stack height for this facility is 125 ft. (38.1m) which is less than the GEP stack height, thereby necessitating the consideration of building wake and downwash effects in the dispersion modeling analysis (Section 7.0).

4.0 APPLICABLE REGULATIONS

4.1 Applicable Pollutants

Expected emission rates for the NRG/Recovery Group MSW energy recovery facility were previously given in Section 3.0. As discussed in that section, emissions for sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter (PM), carbon monoxide (CO), and lead (Pb) will each be emitted in quantities greater than EPA's defined significant emission rates. As a result, an ambient air quality impact analysis and demonstration of Best Available Control Technology (BACT) will be required for each of these pollutants. Additionally, emissions of mercury (Hg) and fluoride (F^-) will also be emitted in excess of EPA's significant emission rates. Since no ambient standards exist for these pollutants, it is only necessary to demonstrate BACT for those pollutants. VOC emissions are expected to be less than EPA's significant emission rate, therefore no further analysis of this pollutant is required.

4.2 Ambient Air Quality Impact Analysis Requirements

The ambient limits with which the proposed project must comply are the National Ambient Air Quality standards for SO_2, NO_2, CO, PM, and Pb, and the PSD Class II and Class I increments for SO_2 and PM. These limits are listed in Table 4-1. Compliance with ambient limits is discussed in Section 7.0.

Also listed in Table 4-2 are the "significant" impact levels for SO_2, NO_2, CO, and PM. When the ambient concentrations at a particular

TABLE 4-1

APPLICABLE AMBIENT AIR QUALITY LIMITS
AND SIGNIFICANT IMPACT LEVELS
(Concentrations in $\mu g/m^3$)

Pollutant and Averaging Period	National Ambient Air Quality Standards		PSD Increments		Significant Impact Levels
	Primary	Secondary	Class II	Class I	
SO_2					
3-Hour	---	1,300[a]	512[a]	25[a]	25
24-Hour	365[a]	---	91[a]	5[a]	5
Annual	80	---	20	2	1
NO_2					
Annual	100	100	N/A[b]	N/A	1
PM					
24-Hour	260[a]	150[a]	37[a]	10[a]	5
Annual	75	--	19	5	1
CO					
1-Hour	40,000[a]	--	N/A	N/A	2,000
8-Hour	10,000[a]	--	N/A	N/A	500
Pb					
3 Month	1.5	--	N/A	N/A	--

a Concentrations not to be exceeded more than once a year.

b N/A denotes no increments applicable.

location attributable to a given emission source are below these levels, the impact of the source at that location is considered insignificant. Correspondingly, "significant impact area" refers to the area from the source to the distance at which the source no longer produces a significant impact.

In addition to showing compliance with ambient limits, a PSD impact analysis must also comment on the potential for adverse effects on visibility, vegetation and soils, and on the air quality consequences of any industrial, commercial, or residential growth associated with the proposed project. These requirements are covered in Section 8.0.

4.3 Emission Limits and Performance Standards

The only emission limit regulations applicable to this project are FDER regulation 17-2.600(1)(c), and the proposed Federal New Source Performance Standard for Incinerators, 40 CFR 60, Subpart Db. The State of Florida regulation limits PM emissions to 0.08 grains/dscf, corrected to 12 percent CO_2, and specify that no objectionable odor is allowed. There are no Florida emission limit regulations applicable to this project for any other pollutant. Proposed federal new source performance standards (NSPS) for Industrial-Commercial-Institutional Steam Generating Units (40 CFR 60 Subpart Db) as proposed June 19, 1984 (49FR25146) would limit PM emissions from this facility to 0.10 lb/million BTU heat input (which equates to approximately 0.045 grains/dscf, corrected to 12 percent CO_2). There are no existing or proposed federal emission limits applicable to this project for any other pollutant.

Emission limits for all pollutants that will be emitted from this facility will necessarily result from a judgement on what constitutes Best Available Control Technology for this facility. BACT is discussed in Section 5.0.

4.4 Preconstruction Ambient Air Quality Monitoring Requirements

PSD regulations require an analysis of ambient air quality in the area of the proposed project at the time an application is submitted. An acceptable means for doing this is to establish an air quality monitoring program specifically for project permitting needs. In lieu of preconstruction monitoring, the applicant has three alternatives:

1. Provide support to show that available data from nearby existing monitoring stations are representative.
2. Show through modeling that the maximum concentration attributable to the project will probably be less than the de minimis impact level.
3. Show through modeling of existing emission sources (with addition of a suitable background concentration to account for sources not specifically modeled) that predicted current concentrations are less than the de minimis level, and therefore that little if anything would be detected if a monitoring program were carried out.

As will be shown in Section 7, support for an exemption from preconstruction monitoring has been developed for SO_2 based on alternative No. 3. The predicted impact of the emissions of all other pollutants from the NRG facility is less than EPA's de minimis levels for those pollutants, thereby providing for an exemption from monitoring for all pollutants.

5.0 BEST AVAILABLE CONTROL TECHNOLOGY ANALYSIS

5.1 Pollutants and Emission Sources Requiring BACT Analysis

The proposed Lake County Waste to Energy Facility is a major stationary source, and as such, PSD regulations require that best available control technology (BACT) be applied for each pollutant subject to regulation under the Act that the source has the potential to emit in significant amounts. The pollutants subject to BACT analysis are sulfur dioxide (SO_2), nitrogen oxides (NO_x), particulate matter (PM), carbon monoxide (CO), lead (Pb), mercury (Hg) and fluorides (F^-). A summary of the proposed BACT emission limitations is given in Table 5-1.

5.2 Comparative Analysis of Alternative Flue Gas Treatment Technology

Pollutant emission controls fall into the category of combustion modifications or flue gas emission controls. Each applicable flue gas emission control has impact on a multiple of pollutants.

Flue gas emission control systems having demonstrated applicability to MSW incineration were considered for the NRG facility. Wet scrubbing for particulate and gaseous emission control was determined not to be applicable for the proposed facility because the site location is in a rural area without sewer service, and wastewater from scrubber blowdown could not be disposed of in an acceptable manner. Two devices for dry particulate control were given consideration: an electrostatic presipitator (ESP) and a baghouse. The ESP is utilized successfully on most existing MSW incineration facilities. An in depth evaluation of applicability of a baghouse was undertaken, and it was

TABLE 5-1

SUMMARY OF PROPOSED BACT EMISSION LIMITATIONS AND CONTROL TECHNOLOGIES FOR LAKE COUNTY WASTE TO ENERGY FACILITY

Pollutant	Proposed BACT Emission Limit		Control Technology
	lb./million BTU	gr/dscf corrected to 12% CO_2	
Sulfur Dioxide	0.6	0.27	Low sulfur fuel
Nitrogen Oxides	0.5	0.23	Combustion Controls
Particulate Matter	0.067	0.03	ESP
Carbon Monoxide	0.45	0.20	Combustion Control to 400 ppm 8 hr. avg.
Lead	0.0012	0.0005	ESP
Mercury	0.0007	0.0003	ESP
Fluorides	0.006	0.0027	ESP

determined from vendors and users that a baghouse alone without additive injection would have severe potential for blinding problems and unacceptable bag life due to chemical attack. Both the ESP and baghouse are applicable to particulate control when used in conjunction with lime slurry spray dryer systems for sulfur dioxide and acid gas control, including HCl reduction.

ESP alone, baghouse with spray dryer system and ESP with spray dryer system were determined to be flue gas emission control alternatives for the NRG facility. These systems were compared with regard to emission reduction and operating costs. It was determined that particulate alone could be controlled by the ESP for an annual cost of approximately $136 per ton of particulate controlled. The incremental cost for a spray dryer system to remove sulfur dioxide and acid gases would be approximately $1,200 per ton of gaseous pollutant controlled. The added cost to the local government and waste haulers for gaseous control would be approximately $4.50 per ton of MSW delivered to the NRG facility. The capital and operation and maintenance costs including energy, are summarized in Table 5-2, and the pollutant reduction and economic comparison of the pollution control alternatives is given in Table 5-3.

5.3 BACT for Sulfur Dioxide

There is no applicable sulfur dioxide emission standard for MSW incineration systems. Larger coal fired boiler systems are allowed 1.2 lb./million BTU under present NSPS for that category. The

TABLE 5-2

CAPITAL AND O & M COSTS FOR ALTERNATIVE POLLUTION CONTROL STRATEGIES
($1000)

	ESP	Baghouse w/Spray Dryer	ESP w/Spray Dryer
Capital Costs			
Capital Cost	2,100	4,200	4,500
Annualized(1)	294	588	630
O & M			
Power(2)	34	148	67
Op. Labor(3)	30	120	120
Maintenance(4)	42	100	114
Chemical Cost(5)	-	79	88
Bag Replacement(6)	-	60	-
Waste Disposal(7)	-	20	20
Total O & M	106	527	409
Total Annualized Cost	400	1,115	1,039

1. 14% lease rate
2. $0.08/Kwh, base i.d. fan power cost is with ESP
3. Base shift labor rate $30,000/yr. including benefits, 4 shifts/week
4. BH 1%, ESP 2%, spray dryer systems 3%
5. 85% annual capacity factor, 150,000 tons MSW/yr.
6. Bag replacement 50%/yr., $50/bag, $10 installation, approx. 1000 bags/bh
7. Added cost for acid reagent disposal at $10/ton

TABLE 5-3

POLLUTANT REDUCTION AND ECONOMIC COMPARISON
OF POLLUTION CONTROL ALTERNATIVES

	ESP	Baghouse w/Spray Dry	ESP w/Spray Dry
Particulate Reduction[1] Tons/yr. (% of 3000)	2950 (98.3%)	2967 (98.9%)	2950 (98.3%)
Acid Gas Reduction[1]			
SO_2 tons/yr. (% 225)	-	180 (80%)	135 (60%)
F, SO_3 tons/yr. (% 6)	-	5 (90%)	5 (90%)
HCl tons/yr. (% 450)	-	405 (90%)	405 (90%)
Total Gas	0	590 (87%)	545 (80%)
Total Pollutant Removed	2950	3557	3495
Annualized Cost $1000/year	400	1115	1039
$/Ton Pollutant Removed	136	313	297
Increment $/Ton Acid Gas Removed	-	1212	1173
$/Ton MSW	2.67	7.43	6.92
Increment $/Ton MSW for Acid Gas Removal	-	4.77	4.26

1. Based on average emission rate and annual capacity factor, 150,000 tons MSW/yr.

BACT/LAER Compilation for Refuse Incineration includes BACT emission limitations ranging from 0.2 to 1.3 lb./million BTU.

NRG proposes a BACT emission limitation of 0.6 lb./million BTU. This is accomplished without add-on flue gas controls and is well within the range of low sulfur fuel fired combustion systems.

The alternative lime slurry spray dryer system with an ESP or a baghouse could possibly accomplish a 70 percent reduction of SO_2 and 90 percent reduction of acid gases, but at significant cost. The installation of the dry scrubber system could add over $2.0 million in capital investment and $400,000 in annual operation and maintenance. The incremental cost for SO_2 and acid gas removal is approximately $1,200 per ton of pollutant removed, and the added cost, to dispose of the waste is $4.50 to $5.00 per ton MSW. It is proposed that a lime slurry spray dryer system is excessively costly and would impose an unreasonable economic burden on the residents of Lake County.

The flue gas SO_2 control system would have minimal environmental benefit. Projected impact without control is well within accepted standards. The potential for upset conditions and reliability problems would be dramatically increased requiring the bypass of gaseous and particulate emission controls. Water usage would be significantly increased over current requirements. Increased solid waste products would be generated.

5.4 BACT for Nitrogen Oxides

There is no applicable MSW incineration standard for nitrogen oxides. The BACT/LAER compilation includes BACT emission limitations ranging from 0.3 to 0.7 lb./million BTU.

NRG proposes a BACT emission level for NO_x of 0.5 lb./million BTU. Furnace design and combustion controls provide for emission control. Grate burning with over fire air provides for staged combustion, which is recognized to reduce emissions. Injection systems and flue gas controls are rejected as being unproven and unnecessary. Operation at low excess air is rejected as having a detrimental effect on control of CO and products of incomplete combustion.

5.5 BACT for Particulate Matter

The most stringent particulate emission standard for MSW incineration is the proposed Subpart Db for industrial boilers larger than 100 million BTU input/hr. The proposed units at 100 million BTU/hr. are just at the lower size limit of applicability. The proposed standard is 0.10 lb./million BTU (0.045 grains/dscf corrected to 12% CO_2). The BACT/LAER compilation includes BACT emission limitations for particulate matter ranging from 0.044 lb./million BTU (0.02 gr./dscf) to 0.11 lb./million BTU (0.05 yr./dscf).

NRG proposes a BACT emission limitation of 0.067 lb./million BTU (0.03 gr./dscf corrected to 12% CO_2). The proposed limitation is well within the standards.

As demonstrated in the comparative analysis of alternative controls, the cost of alternative fabric filter systems with lime injection is excessively costly. The projected ambient impact resulting from the proposed emission level is less than significant, and it is believed that additional reduction of particulate matter emissions is unjustified.

5.6 BACT for Carbon Monoxide

There is no applicable carbon monoxide emission standard for MSW incineration. BACT/LAER compilation includes BACT emission limitations for CO ranging from 0.1 to 0.5 lb./million BTU.

NRG proposes a BACT emission limit for CO of 0.45 lb./million BTU (400 ppm corrected to 12% CO_2). Furnace design and combustion controls provide for emission control.

5.7 BACT for Lead, Mercury and Fluorides

There are no applicable emissions standards for lead, mercury or fluoride emissions from MSW incineration. These elements are found in trace amounts in MSW.

NRG proposes that an effective ESP is BACT for these pollutants and that additional emission reduction is unnecessary.

6.0 EXISTING AIR QUALITY CONDITIONS

6.1 Other Emission Sources

As is discussed in Section 7.0, the only pollutant for which NRG emissions are predicted to result in a significant ambient air quality impact (as defined by EPA) is SO_2. Therefore, in evaluating the interaction of the NRG facility with other emission sources, it is only necessary to consider sources of SO_2. To assist in the impact modeling analysis, FDER supplied a comprehensive source inventory of all PSD and baseline SO_2 emission sources in the area that might interact with emissions from the proposed NRG facility. The source inventory was developed by FDER and was based in part on the predicted radius of influence of NRG's SO_2 emissions of 8 km (see Section 7.0) and FDER's knowledge of the area.

FDER's emission source inventory consisted of only one source with significant SO_2 emission potential. That source is Asphalt Production Coporation near Leesburg, Florida. The emissions and emission source characteristics for this source are as follows:

Source: Asphalt Production Corporation

UTM Location: 407.1 E, 3180 9N

SO_2 Emission Rate: 20.0 lb./hr.

Stack Height: 25 ft.

Stack Diameter: 7.5 ft.

Stack Temperature: 165°F

Stack Velocity: 15.1 ft./sec.

This source is a baseline source and does not consume PSD increment. There are no existing or permitted PSD increment consuming sources in the area.

6.2 Existing Air Quality

As previously discussed, the only pollutant predicted to result in "significant" impact is SO_2. As will be shown in Section 7.0, the ambient ground-level concentrations of all other pollutants are predicted to be less than EPA's defined levels of significant impact. Therefore existing or background levels of those pollutants need not be considered.

There are no nearby ambient air quality monitors presently being operated that can provide air quality data representative of the site. The closest monitor is located at Zellwood, approximately 30 km east of the site and only monitors for particulate matter. There are no other monitors being operated within 50 km of the site.

Due to the relatively remote nature of the proposed site it is expected that ambient levels of all pollutants will be very low in the area and that no threat to any ambient standard exists.

6.3 PSD Class I and Nonattainment Areas

The nearest PSD Class I area is the Chassahowitzka National Wilderness area about 70 km west of the NRG site. There are no other Class I areas within 100 km of the site. There are no nonattainment areas within 50 km of the proposed facility site.

7.0 MODELING METHODOLOGY

The dispersion modeling analyses documented here were designed to assess the impact on ambient air quality of the proposed MSW energy recovery facility. The dispersion model, meterological data, modeling methodology, and results are described in this section.

7.1 Dispersion Model

Dispersion modeling results were obtained by using EPA's Industrial Source Complex (ISC) Model (EPA, 1979). The short-term version of this model (ISCST) was used to determine both short-term (24-hours or less) and annual average concentrations.

7.2 Meteorological Data

Meterological input data required for the ISCST model were supplied by the FDER. Five years of hourly data were made available covering the period 1974 through 1978. These data are based on hourly surface observations made at the Orlando airport National Weather Service (NWS) station and twice daily upper air balloon soundings from the NWS station at Tampa, Florida. The data were supplied in a format for direct use in the model without further processing. These data sets have previously been used by FDER for air quality evaluations in this area, and are the most recent data available in a processed format for modeling.

7.3 Receptor Grids

The general procedure for determining maximum concentrations in the vicinity of the site was to perform initial modeling using a grid spacing of 0.5 or 1.0 km. For areas within the grid where higher concentrations were predicted, a more refined analysis was performed using a grid spacing of 0.1 km for short-term averaging periods. A polar coordinate system was utilized for all analyses, with a radial spacing of 10 degrees (10°, 20°, 30° etc.). For modeling of the proposed facility alone, only offsite concentrations were considered.

The determination of the significant impact area of the proposed facility was made using a greater receptor ring spacing than discussed above. Range distances used in this analysis extended out to distances of up to 12 km.

The actual receptor grids used in the analyses are specifically identified in the computer printouts contained in Appendix A.

7.4 Other Modeling Considerations

The ISCST model contains options that determine the way in which calculations are made. The choice of options was made consistent with the normally recommended approach; for example, gradual plume rise calculations were used in conjunction with the building wake effects option and final plume rise calculations were used when wake effects were not considered. Options were also selected consistent

with the land use and topography of the site area. Specifically, the site environment was treated as a rural, level-terrain area.

The ISCST model is not considered suitable for evaluating short-term concentrations during calm or very light wind conditions. Therefore, all short-term modeling results were checked for the possible influence of calm winds and EPA's calm wind adjustment method was utilized where necessary. (U.S. Environmental Protection Agency, 1984).

7.5 Modeling Results

7.5.1 Maximum Facility Impact and Significant Impact Area

The emissions from the proposed NRG facility have previously been discussed in Section 3.0. As indicated in that section, the emissions of SO_2, NO_x, PM, CO, Pb, Hb, and F^- from this facility are all expected to be greater than the EPA-Defined levels of significant emission, and an ambient air quality modeling analysis must be performed for each of these pollutants. No other regulated pollutants will have a significant rate of emission as a result of the operation of this facility. The emissions and source data for the above mentioned pollutants were used in the dispersion modeling analysis to determine the significant impact area (as defined by the radius of influence) and the maximum impact of the proposed facility.

A determination of the consumption of PSD increments and a demonstration of compliance with the NAAQS must be made within the above-mentioned radii of influence. The radii of influence for

this facility have been determined by dispersion modeling of SO_2, NO_x, PM, and CO. There are no significant impact levels defined for Pb, Hg, and F^-. The size of this region of influence is characterized by the distance (radius) at which ground-level concentrations (that result from facility emissions) fall below the following levels of significant concentrations defined by EPA (43FR26398):

	Significant Impact Level ($\mu g/m^3$)				
Pollutant	Annual	24-Hour	8-Hour	3-Hour	1-Hour
SO_2	1	5	--	25	--
NO_2	1	--	--	--	--
PM	1	5	--	--	--
CO	--	--	500	--	2000

The ISCST program was used to determine the radius of influence for each of the above pollutants. Ground level concentrations for each averaging period were calculated at distances of up to 12 km using a polar receptor grid.

The results of this analysis are shown in Table 7-1. As can be seen, the maximum radius of influence for SO_2 was found to be 8 km, based on the highest predicted concentrations for the 24-hour averaging period using 1974 data. For NO_2, PM, and CO, the radius of influence was predicted to be zero, with the maximum predicted concentrations for each pollutant being less than their respective significant impact levels. As a result, no further modeling of those pollutants is required.

TABLE 7-1

SUMMARY OF MAXIMUM PREDICTED RADII OF SIGNIFICANT IMPACT FOR SO_2 RESULTING FROM THE OPERATION OF THE PROPOSED NRG WASTE TO ENERGY FACILITY

	PREDICTED RADIUS OF SIGNIFICANT IMPACT (km)[a]		
YEAR	ANNUAL	24-HOUR	3-HOUR
1974	0	8.0	1.7
1975	0	6.0	1.5
1976	0	5.0	1.5
1977	0	7.0	2.0
1978	0	6.0	3.0

[a] Based on highest predicted concentrations.

The maximum predicted concentrations of SO_2 from this facility are summarized in Table 7-2. As can be seen, the highest predicted annual average SO_2 concentration is 0.9 $\mu g/m^3$ and was obtained using both the 1976 and 1978 meteorological data. Highest predicted 24-and 3-hour SO_2 concentrations were 29 $\mu g/m^3$ and 78 $\mu g/m^3$, which were obtained using the 1976 and 1978 data, respectively. Also shown in the table are the locations at which the highest concentrations were predicted and the days on which the short-term concentrations were calculated. The reader will note that all of the short-term concentrations reported in Table 7-2 were predicted at a distance of 200 meters from the source. The reason that these values were predicted at such a close distance (the closest average offsite distance) was that building wake and downwash effects were included in the analysis. Analysis made without downwash and wake effect result in predicted concentrations that were approximately 35 percent of those given in Table 7-2.

Maximum predicted concentrations of Pb for the annual and 24 hour averaging periods (i.e. as determined by ratioing the results of the SO_2 impact analysis according to the ratio of Pb to SO_2 emissions) were 0.002 and 0.06 Mg/m^3, respectively. Although there are no significant impact levels defined for Pb, the highest predicted 24 hour concentration is less than the de minimis impact level of 0.1 Mg/m^3. Inasmuch as there are no other sources of lead in the area, no further modeling analysis of this pollutant should be required.

TABLE 7-2

SUMMARY OF MAXIMUM PREDICTED SO_2 CONCENTRATIONS ATTRIBUTABLE TO THE OPERATION OF THE PROPOSED NRG WASTE TO ENERGY FACILITY

YEAR	SO_2 CONCENTRATION ($\mu g/m^3$)[a]		
	ANNUAL	24-HOUR	3-HOUR
1974	0.6 [1500, 180°]	24 [200, 180°, 279]	66 [200, 10°, 354]
1975	0.7 [1000, 360°]	20 [200, 340°, 12]	70 [200, 360°, 290]
1976	0.9 [1500, 180°]	29 [200, 180°, 302]	68 [200, 110°, 17]
1977	0.8 [1500, 360°]	28 [200, 180°, 40]	70 [200, 110°, 51]
1978	0.9 [1000, 270°]	27 [200, 120°, 53]	78 [200, 360°, 25]

[a] Locations of highest predicted concentrations and associated meterological episodes (for short-term) concentrations given as follows:

ANNUAL: [Distance (m), Direction (°)]
24-,3-HOUR: [Distance (m), Direction (°); Julian Day]

7.5.2 Compliance with PSD Class II Increments

Presently, the only pollutants for which PSD increments exist are SO_2 and PM. Inasmuch as the projected impact of this facility on ambient PM concentrations is less than the significance levels for PM, it is necessary only to demonstrate that the proposed emissions of SO_2 from this facility will not result in an exceedance of the PSD increments at any location. Since there are no existing or permitted PSD increment consuming sources in the area (refer to Section 6.0), the only source that will consume any increment will be the proposed NRG waste to energy facility.

In light of these facts, the maximum annual, 24-hour, and 3-hour concentrations obtained for this facility (based on highest predicted concentrations using five years of data) will be representative of increment consumption in the vicinity of the site. These results, compared with the Class II increments are:

Averaging Period	Maximum SO_2 Concentration (PSD Increment Consumption) ($\mu g/m^3$)	Class II PSD Increment ($\mu g/m^3$)
Annual	0.9	20
24-Hour	29	91
3-Hour	78	512

As can be seen, the maximum percentage consumption of the annual, 24-hour, and 3-hour increments are 5, 32, and 15 percent, respectively.

7.5.3 Compliance with PSD Class I Increments

The nearest PSD Class I area is Chassahowitzka National Wilderness area about 70 km west of the NRG site. Pollutant emissions from this facility are not expected to result in any measurable impact on this PSD Class I area, due to its distance from the site. To verify this, the SO_2 emissions from this facility were modeled, using 1974 meterological data, in the Class I area. The maximum predicted annual, 3-hour and 24-hour concentrations were 0.04, 4.3, and 0.8 $\mu g/m^3$, all of which are well below the PSD Class I increment levels set by EPA (Table 4-1).

7.5.4 Compliance with Ambient Air Quality Standards

The purpose of this section is to demonstrate that the operation of the proposed NRG facility will not cause or contribute to a violation of the NAAQS for any pollutant. Inasmuch as SO_2 is the only pollutant for which this facility will result in a significant impact, it is necessary only to address that pollutant.

As explained in Section 6.0, there is only one source of SO_2 emissions (existing or permitted) in the area. This source is Asphalt Production Corporation, which is located approximately 6 km to the west of the proposed NRG site. The SO_2 emissions and emission source characteristics for this source were provided in Section 6.0.

The methodology employed to determine the maximum predicted ground-level SO_2 concentration (for comparison with the NAAQS) was to model the existing SO_2 source using five years of data and a receptor grid in the vicinity of the NRG maximum impact area (i.e., within 0.5 km of the NRG stack) and then conservatively add

the highest results obtained to the corresponding maximum impacts attributable to the NRG facility. Table 7-3 summarizes these results. A review of the results reveals that the maximum predicted percentage consumption of the NAAQS are:

Averaging Period	Maximum Percentage Consumption of NAAQS (%)
Annual	1.3
24-Hour	8.6
3-Hour	7.1

The reader will note that no ambient background concentrations have been included in these results. FDER guidance suggests that background concentrations in this area are so low that they can be expected to be on the order of the sensitivity threshold of the monitoring instrumentation. In light of these very low concentrations, it is clearly evident that the emissions from this facility will in no way threaten or cause an exceedance of the NAAQS for SO_2.

7.5.5 Preconstruction Ambient Monitoring Exemption

The purpose of this section is to provide a justification for an exemption from the ambient air monitoring requirements as discussed in Section 4.4. This exemption is being sought on the basis of a less than de minimis impact of existing and permitted sources of SO_2 in the vicinity of the proposed site and a less than de minimis impact of the proposed facility for all other pollutants. The predicted existing source impacts were previously shown in Table 7-3. As can be seen, the predicted 24-hour SO_2 concentrations from the existing sources are less than the de minimis monitoring exemption level of 13 μ/gm^3. Furthermore,

TABLE 7-3

COMPARISON OF MAXIMUM POSSIBLE SO_2 CONCENTRATIONS WITH NAAQS IN THE VICINITY OF THE PROPOSED NRG WASTE TO ENERGY FACILITY

		Predicted SO_2 Concentrations ($\mu g/m^3$)			
		A	B		
YEAR	Averaging Period	Existing Sources ($\mu g/m^3$)[a]	NRG Facility ($\mu g/m^3$)[a]	A + B	NAAQS ($\mu g/m^3$)
1974	Annual	0.1	0.6	0.7	80
	24-Hour	3.9	24.0	27.9	365
	3-Hour	19.1	66.0	85.1	1300
1975	Annual	0.2	0.7	0.9	80
	24-Hour	5.7	20.0	25.7	365
	3-Hour	18.4	70.0	88.4	1300
1976	Annual	0.1	0.9	1.0	80
	24-Hour	2.5	29.0	31.5	365
	3-Hour	15.4	68.0	83.5	1300
1977	Annual	0.1	0.8	0.9	80
	24-Hour	2.7	28.0	30.7	365
	3-Hour	13.3	70.0	83.3	1300
1978	Annual	0.1	0.9	1.0	80
	24-Hour	2.6	27.0	29.6	365
	3-Hour	13.7	78.0	91.7	1300

with the exception of the 24-hour value for 1975, all predicted concentrations are less than EPA's significant impact levels. (In fact, the highest second-highest values are all less than the significant impact levels). For all other pollutants, predicted concentrations of all other pollutants attributable to the operation of the NRG facility itself are less than both the respective de minimis and significant impact levels. Therefore, preconstruction ambient monitoring should not be required for this facility for any pollutant.

7.5.6 Impact of Hydrogen Chloride (HCl) Emissions

At the request of FDER an assessment was made of the impact of HCl emissions on ambient ground-level concentrations. As stated in Section 3.0, maximum HCl emissions from this facility are expected to be 187 lb./hr. [23.6 g/s]. On the basis of the modeling analyses performed for SO_2, the maximum hourly ground-level HCl concentration is estimated to be approximately 150 $\mu g/m^3$. This estimate was obtained by scaling the maximum 3-hour NRG SO_2 results by the ratio of HCl to SO_2 emissions and estimating the 1-hour concentration by using a conversion ratio of 0.8 for 3-hour to 1-hour concentrations (U. S. Environmental Protection Agency, 1977).

For comparison purposes, the published thereshold limit value (TLV) (American Conference of Governmental Industrial Hygienists, 1985) for HCl is 7000 $\mu g/m^3$. This TLV is published as a ceiling value that should not be exceeded in areas of human exposure. Repeated human exposures at levels below this TLV are considered to be permissible

with no adverse effects. Given the fact that the highest predicted HCl concentration is only about 2 percent of the TLV for HCl, there should be no adverse health effects associated with HCl emissions from this facility.

8.0 ADDITIONAL IMPACT ANALYSIS

8.1 Visibility Effect

The visibility impact of SO_2 emissions from NRG's proposed MSW incinerator was assessed on the Chassahowitzka Class I area using EPA's Level-1 Screening Analysis method (U. S. Environmental Protection Agency, 1980). With this method, three contrast parameters are calculated and compared with a reference value of 0.10. If the absolute values of all of the contrast parameters are less than the reference value, it is highly unlikely that adverse visibility impairment will result.

The first two contrast parameters, designated C_1 and C_2 were estimated to be .0006 and .0001, based on the proposed emissions of PM and NO_x. The third contrast parameter, C_3, represents a change in sky/terrain contrast caused by primary and secondary aerosols. It therefore depends in part on SO_2 emissions which lead to secondary aerosol formation. For the NRG facility, C_3 is computed to have an absolute value of .0002, thus indicating that SO_2 emissions are not likely to cause noticeable visibility impairment in the Class I area.

8.2 Vegetation and Soils Effects

Vegetation

As pointed out in a draft EPA document reviewing the effects of SO_2 on vegetation (U. S. Environmental Protection Agency, 1981), the response of vegetation to SO_2 exposure depends on a variety of factors such as pollutant dose (concentration times duration of exposure), the time of day at which exposure occurs, plant maturity

stage, and the stress which a plant may be undergoing as a result of disease organisms, soil moisture, and soil nutrient conditions. In addition, potential vegetation response to the presence of SO_2 vary from no detectable responses, to increased growth, to visible damage symptoms with no reduction in growth and yield, to reduction in growth and yield without visible symptoms, etc. Obviously, a detailed discussion of vegetation effects due to pollutant exposure is beyond the scope of this report.

One indicator of potential vegetation effects is a comparison of predicted ambient concentrations with ambient air quality standards. In particular, the 3-hour secondary SO_2 ambient standard was established to protect against adverse "welfare" effects such as vegetation damage. As discussed in Section 7.0, predicted 3-hour concentrations attributable to NRG facility emissions and all other sources within its radius of influence are well within the ambient standard for SO_2. Based on this comparison, vegetation damage due to operation of this facility is not likely.

Another indication that vegetation damage is unlikely can be found in the results of research on vegetation effects in the southeastern U.S. near coal-fired power plants (Jones and others, 1974). Based on visible injury, plant species were grouped into three categories of response to SO_2 exposure: sensitive, intermediate, and resistant. Among the sensitive species were Southern pines such as would be found in the vicinity of the NRG facility site. Even among these sensitive species, however, the concentrations estimated to produce

the injuries observed are considerably greater than those predicted for this project. Specifically, the 3-hour second-high concentrations due to the emission from this project and all other sources considered are well below the lower end of this range.

Soils

The direct addition of sulfur compounds to the soils in the vicinity of the NRG site poses little likelihood of adverse effects. The site is within an area where soils are considered sulfur deficient for agricultural purposes (U. S. Environmental Protection Agency, 1981).

Any contribution of SO_2 emissions to regional acid deposition could have some adverse effect on soils since the soils of this area by one estimate are considered medium in sensitivity to acidification (National Wildlife Federation, 1982). However, this project will increase existing SO_2 emissions within the site region by only a very small amount.

8.3 Air Quality Impact of Project Related Growth

Construction of the NRG MSW Energy Recovery facility will last approximately 20 months. Construction impact on air quality will consist mainly of the relatively minor amounts of pollutants emitted from construction equipment required for site preparation and from fugitive dust emissions. General construction vehicles (both gasoline and diesel-powered) and other diesel-powered engines will be used. These engines emit minor amounts of VOC, SO_2, CO, NO_2, and PM. The contaminants are expected to cause localized, temporary increases in existing air quality levels, but are not expected to cause any adverse impacts on or beyond the site boundary.

Fugutive dust emissions will probably be the most noticeable impact during construction. Dust associated with ground excavation, cut-and-fill operations, and other activities should add only minimally to existing background PM levels in the area. Various control techniques will be taken to prevent PM from becoming airborne.

The operation of the proposed facility will result in inconsequential population or commercial growth in the Lake County area. Several new jobs will be created to maintain and operate the proposed facility.

The majority of the plant employees will most likely live in the general area surrounding the plant. Emission increases due to additional residential housing or employee traffic in the plant site area resulting from the operation of the proposed facility are not expected to be significant.

9.0 REFERENCES

1. California Air Resources Board, Air Pollution Aspects of Resource Recovery, March 1980.

2. California Air Resources Board, Air Pollution Control at Resource Recovery Facilities, May 24, 1984.

3. Cooper Engineers, Inc., Air Emissions Tests of Solid Waste Combustion in a Rotary Combustor/Boiler System at Gallatin, Tennessee, Richmond, CA., 1983.

4. Edwards, L.O., et. al., "Trace Metals and Stationary Conventional Combustion Processes", Project Summary, EPA Report No. 600/S7-80-155, February 1981.

5. Hay, D., Finkelstein, A., and Klicius, R., "The National Incinerator Testing and Evaluation Program (NITEP)", Environmental Protection Services, Environment Canada, Ottawa, Ontario.

6. Jones, H., Weber, D., and Balsillie, F., 1974. "Acceptable Limits for Air Pollution Dosages and Vegetation Effect: Sulfur dioxide" Presented at the 67th Annual Meeting of the Air Pollution Control Association, Denver, Colorado, Paper No. 74-225.

7. National Wildlife Federation, 1982. "Acid Rain Vulnerability of the 27 States East of the Mississippi River". Presented at the 46th Annual Meeting, Milwaukee, Wisconsin.

8. O'Connell , W., Stotler, G., and Clark, R., Battelle's Columbus Laboratories, "Emissions and Emission Controls in Modern Municipal Incinerators", Proceedings of 1982 National Waste Processing Conference, American Society of Mechanical Engineers, pp. 285-297.

9. Ozvacic, V., et. al., "Emissions of Chlorinated Organics from Two Municipal Incinerators in Ontario", JAPCA, Vol. 35 No. 8, Aug. 1985, p. 849.

10. Rigo & Rigo Associates, "NEMMS Resource Recovery Project, Technical Description and Environmental Assessment", Unpublished report for NEMMS, Keene, New Hampshire, 1985.

11. Sommer, E., Kenny, G., Kearley, J., and Roos, C., "Effects of MSW Preprocessing on Thermal Conversion of MSW in Mass Burn Incineration", Executive Summary, DOE/SBIR Phase I Research, Contract No. DE-AC05-84ER80177, May 31, 1985.

12. Sussman, D.B., U.S. Environmental Protection Agency, Communication and summary of Municipal Waste Combustor Working Group Meeting, June 25, 26, 1985.

13. U. S. Environmental Protection Agency, 1975. "Compilaton of Air Pollutant Emission Factors, Forth Edition". Office of Air Quality Planning and Standards, Publication No. AP-42.

14. U. S. Environmental Protection Agency, 1977. "Guidelines for Air Quality Maintenance Planning and Analysis Volume 10": Procedures for Evaluating Air Quality Impact of New Stationary Sources. Office of Air Quality Planning and Standards. EPA-450/4-77-001. October, 1977.

15. U. S. Environmental Protection Agency, 1979. "Industrial Source Complex (ISC) Dispersion Model User's Guide, Volume I." Office of Air Quality Planning and Standards, Publication No. EPA-450/4-70-030.

16. U. S. Environmental Protection Agency, 1980. "Workbook for Estimating Visibility Impairment". Office of Air Quality Planning and Standards, Publication No. EPA-450/4-80-031.

17. U. S. Environmental Protection Agency, 1981. "Air Quality Criteria for Particulate Matter and Sulfur Oxides, Volume III". Office of Health and Environmental Assessment, External Review Draft No. 2.

18. U. S. Environmental Protection Agency, 1983 (revised). "Regional Workshop on Air Quality Modeling: a Summary Report". Office of Air Quality Planning and Standards, Publication No. EPA-450/4-82-015, p. 5 and 5a.

19. U. S. Environmental Protection Agency, 1984. "Guideline on Air Quality Models (Revised)". Draft Document. Office of Air Quality Planning and Standards, November 1984.

20. Weston, Roy F., Inc., "Toxic Air Risk Assessment of the Proposed Greater Portland (Maine) Resource Recovery Facility", Unpublished report, October, 1985.

APPENDIX A

COMPUTER PRINT OUTS

SUMMARY OF MODELING RUNS

RUN NO.	DESCRIPTION
IST 1-13	NRG facility only - 1974-1978 met data. Includes separate runs to determine maximum concentration on selected days and to establish maximum radii of influence.
14-18	Existing SO_2 sources only. Maximum impact in immediate vicinity of NRG site.
19	NRG facility only. 1974 met data used to check impact in Chassahowitzka Class I area.

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 2
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION)	
WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 1
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE	
SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 1
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 2
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(28) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 5
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 36
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK = .10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 74
UPPER AIR STATION NO.	IUS = 12842
YEAR OF UPPER AIR DATA	IUY = 74
ALLOCATED DATA STORAGE	LIMIT = 43500 WORDS

IST - 1

1974 NRG ONLY SO_2

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** METEOROLOGICAL DAYS TO BE PROCESSED ***
(IF=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 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 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 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 0
```

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
B	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
C	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00
D	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00
E	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00
F	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

500.0, 1000.0, 1500.0, 2000.0, 2500.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0,	20.0,	30.0,	40.0,	50.0,	60.0,	70.0,	80.0,	90.0,	100.0,
110.0,	120.0,	130.0,	140.0,	150.0,	160.0,	170.0,	180.0,	190.0,	200.0,
210.0,	220.0,	230.0,	240.0,	250.0,	260.0,	270.0,	280.0,	290.0,	300.0,
310.0,	320.0,	330.0,	340.0,	350.0,	360.0,				

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG. K); VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ. DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
101	0	0	0	0.15800E+02	0.0	0.0	0.0	38.10	450.00	20.00	1.83	22.00	38.10	19.80

"N"-DAY
365 DAYS
SCROUP# 1

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 365-DAY AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 0.57149 AND OCCURRED AT (1500.0, 180.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	0.34112	0.51839	0.53369	0.46943	0.43976
350.0 /	0.29206	0.41856	0.41371	0.36874	0.32429
340.0 /	0.33282	0.45164	0.45634	0.41617	0.37242
330.0 /	0.26656	0.37517	0.36085	0.31735	0.27838
320.0 /	0.27271	0.40460	0.39712	0.35386	0.31265
310.0 /	0.26977	0.41746	0.42296	0.38427	0.34248
300.0 /	0.27729	0.42413	0.45864	0.42726	0.38447
290.0 /	0.25872	0.39852	0.41152	0.38027	0.34119
280.0 /	0.27384	0.42773	0.44487	0.41042	0.36654
270.0 /	0.29836	0.46209	0.47701	0.43911	0.39486
260.0 /	0.27296	0.42109	0.42421	0.38738	0.35015
250.0 /	0.26836	0.44204	0.46023	0.43806	0.40033
240.0 /	0.30099	0.47061	0.49023	0.45102	0.40432
230.0 /	0.36602	0.52387	0.53741	0.49501	0.44611
220.0 /	0.37249	0.50984	0.50928	0.46671	0.42389
210.0 /	0.30635	0.42604	0.42465	0.38856	0.35140
200.0 /	0.29595	0.41796	0.44557	0.43088	0.40511
190.0 /	0.22252	0.33370	0.34503	0.31943	0.28851
180.0 /	0.33960	0.51949	0.57149	0.55554	0.52320
170.0 /	0.21023	0.36179	0.38276	0.35172	0.31569
160.0 /	0.15526	0.28371	0.29557	0.26390	0.22994
150.0 /	0.16957	0.28715	0.30731	0.28185	0.24898
140.0 /	0.24339	0.36369	0.37123	0.33493	0.29365
130.0 /	0.24288	0.34201	0.34484	0.31201	0.27453
120.0 /	0.25793	0.35871	0.36064	0.32924	0.29428
110.0 /	0.22684	0.31717	0.31728	0.28970	0.26024
100.0 /	0.20826	0.29033	0.29356	0.26884	0.23989
90.0 /	0.19469	0.28382	0.28935	0.27053	0.24748
80.0 /	0.21454	0.29571	0.28274	0.25400	0.22678
70.0 /	0.22476	0.32728	0.31579	0.28154	0.24822
60.0 /	0.24137	0.36209	0.36224	0.33003	0.29474
50.0 /	0.24039	0.35652	0.34982	0.31085	0.27141
40.0 /	0.21737	0.32278	0.32132	0.28874	0.25557
30.0 /	0.18646	0.29002	0.28865	0.25949	0.23043
20.0 /	0.24178	0.36030	0.34670	0.30487	0.26652
10.0 /	0.29522	0.43666	0.42127	0.36618	0.31538

HIGH
3-HR
GROUP# 1

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* HIGHEST 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 33.37221 AND OCCURRED AT (500.0, 50.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	21.93350 (135, 4)	26.48906 (135, 4)	19.25830 (135, 4)	17.85899 (28, 5)	16.06267 (176, 1)
350.0 /	17.60119 (131, 5)	21.44637 (130, 5)	17.60302 (27, 4)	16.53598 (27, 4)	14.75706 (27, 4)
340.0 /	25.28077 (132, 1)	23.11578 (132, 1)	24.72700 (186, 4)	21.37229 (186, 4)	17.89935 (186, 4)
330.0 /	23.99370 (250, 4)	23.69375 (250, 4)	17.63807 (63, 4)	16.94285 (63, 4)	15.17637 (63, 4)
320.0 /	25.48696 (103, 5)	23.68771 (103, 5)	17.77888 (103, 5)	14.35951 (131, 3)	12.27661 (24, 5)
310.0 /	14.02879 (207, 7)	19.37129 (49, 5)	18.31600 (49, 5)	14.85582 (52, 4)	13.35735 (51, 6)
300.0 /	18.82389 (241, 5)	21.62689 (241, 5)	19.24624 (239, 6)	16.39780 (239, 6)	14.24007 (184, 4)
290.0 /	20.69789 (139, 5)	24.48147 (139, 5)	19.95887 (243, 5)	17.90046 (3, 6)	18.08550 (3, 6)
280.0 /	15.27675 (111, 4)	18.74595 (133, 5)	15.40622 (215, 6)	14.48114 (102, 3)	13.79951 (102, 3)
270.0 /	25.29728 (111, 4)	21.60755 (140, 4)	17.11919 (287, 4)	13.36149 (54, 6)	11.52447 (25, 7)
260.0 /	17.43761 (101, 5)	23.48090 (224, 5)	20.06702 (224, 5)	16.27010 (301, 5)	13.22778 (301, 5)
250.0 /	14.23489 (235, 5)	19.80170 (340, 5)	17.25467 (224, 5)	14.05901 (198, 4)	12.92107 (306, 6)
240.0 /	15.00062 (117, 6)	17.55171 (110, 4)	16.09870 (255, 6)	17.98722 (73, 7)	18.04065 (73, 7)
230.0 /	27.13737 (278, 5)	31.43979 (195, 4)	26.48208 (195, 4)	19.92370 (195, 4)	15.19869 (133, 7)
220.0 /	23.01605 (225, 5)	27.01716 (258, 5)	23.23509 (258, 5)	17.60823 (258, 5)	15.26047 (283, 5)
210.0 /	26.53164 (330, 4)	23.20473 (330, 4)	21.40722 (330, 4)	18.57986 (330, 4)	15.84314 (330, 4)
200.0 /	20.51489 (296, 5)	18.82485 (296, 5)	18.89486 (296, 6)	19.06810 (296, 6)	18.11222 (296, 6)
190.0 /	13.60620 (276, 6)	18.56251 (265, 4)	17.94978 (108, 3)	16.99695 (108, 3)	14.57200 (108, 3)
180.0 /	27.64359 (279, 6)	29.66875 (297, 5)	27.12409 (297, 5)	22.95057 (297, 4)	19.89506 (297, 4)
170.0 /	11.29461 (96, 4)	23.64062 (72, 4)	18.46170 (311, 2)	20.21770 (311, 2)	19.72769 (311, 2)
160.0 /	12.22004 (279, 8)	16.81384 (76, 4)	15.99223 (338, 5)	14.92764 (338, 5)	12.52353 (338, 5)
150.0 /	18.99012 (211, 4)	17.90875 (196, 5)	17.15870 (326, 4)	15.22113 (280, 4)	14.00106 (280, 4)
140.0 /	25.18256 (211, 4)	24.94367 (163, 4)	19.75440 (325, 4)	18.23065 (325, 4)	16.66635 (316, 8)
130.0 /	17.89514 (151, 5)	20.54650 (163, 4)	17.71074 (196, 6)	15.97422 (196, 6)	13.82475 (355, 3)
120.0 /	24.95053 (145, 4)	28.10335 (145, 4)	19.87960 (145, 4)	15.47537 (326, 5)	14.05274 (326, 5)
110.0 /	25.07877 (150, 5)	21.50875 (202, 4)	19.97994 (202, 4)	17.46431 (335, 3)	15.94597 (335, 3)
100.0 /	19.48418 (99, 5)	31.78459 (99, 5)	25.37569 (99, 5)	21.47611 (113, 6)	19.26079 (113, 6)
90.0 /	18.50892 (123, 4)	16.31327 (270, 6)	18.20155 (270, 6)	15.40349 (270, 6)	12.67194 (150, 3)
80.0 /	16.19451 (123, 4)	17.46176 (203, 4)	15.58527 (193, 5)	14.63629 (146, 7)	15.21622 (146, 7)
70.0 /	19.70891 (89, 5)	23.65402 (203, 4)	17.38913 (203, 4)	14.79315 (163, 3)	13.02362 (324, 6)
60.0 /	26.89107 (176, 4)	21.47279 (230, 5)	17.81469 (98, 5)	15.99941 (88, 5)	14.71054 (90, 6)
50.0 /	33.37221 (174, 5)	26.74454 (174, 5)	20.98876 (174, 5)	18.12713 (349, 8)	17.26119 (349, 8)
40.0 /	21.28988 (125, 5)	23.53102 (153, 4)	19.79919 (143, 6)	20.70703 (143, 6)	19.70937 (143, 6)
30.0 /	15.96645 (84, 4)	16.74500 (34, 5)	16.01520 (34, 5)	13.81040 (34, 5)	12.17061 (174, 8)
20.0 /	23.00479 (50, 5)	21.23848 (78, 4)	19.09087 (78, 4)	15.11300 (38, 4)	13.10832 (38, 4)
10.0 /	27.89272 (354, 5)	25.95272 (354, 5)	24.80759 (354, 5)	22.00515 (354, 5)	19.01911 (354, 5)

2ND HIGH
3-HR
SGROUP# 1

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* SECOND HIGHEST 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 25.57455 AND OCCURRED AT (1500.0, 180.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	16.68400 (98, 4)	20.06440 (15, 5)	18.82319 (28, 5)	17.45158 (176, 1)	16.02973 (28, 5)
350.0 /	17.48256 (152, 5)	20.28677 (152, 5)	16.42499 (130, 5)	13.41364 (353, 5)	13.30652 (342, 8)
340.0 /	20.54462 (177, 2)	22.75543 (94, 5)	21.83488 (132, 1)	19.24204 (132, 1)	16.55576 (132, 1)
330.0 /	20.50034 (94, 4)	19.75613 (94, 4)	17.31815 (250, 4)	13.67075 (94, 4)	11.40612 (238, 4)
320.0 /	19.09790 (243, 4)	21.42059 (159, 4)	16.45317 (131, 3)	13.45478 (24, 5)	12.15266 (131, 3)
310.0 /	13.32336 (142, 4)	17.25167 (62, 4)	16.96990 (52, 4)	14.84611 (70, 6)	12.90185 (70, 6)
300.0 /	15.75809 (131, 4)	18.39930 (62, 5)	17.22136 (65, 4)	15.54079 (184, 4)	13.20435 (239, 6)
290.0 /	13.61335 (321, 4)	21.73475 (243, 5)	19.22820 (139, 5)	15.60491 (243, 5)	12.52899 (52, 6)
280.0 /	12.67208 (221, 4)	18.46734 (246, 4)	15.32623 (264, 6)	14.31713 (264, 6)	12.49378 (264, 6)
270.0 /	15.79714 (140, 4)	21.04427 (111, 4)	16.40767 (357, 4)	12.70422 (287, 4)	11.17359 (243, 6)
260.0 /	16.94701 (140, 5)	19.56967 (301, 5)	19.43197 (301, 5)	15.16086 (224, 5)	11.47647 (73, 5)
250.0 /	11.96420 (303, 4)	19.22532 (262, 4)	16.99725 (262, 4)	13.57182 (235, 5)	12.60008 (198, 4)
240.0 /	13.30123 (111, 5)	16.47206 (195, 3)	16.04667 (195, 3)	14.77599 (255, 6)	12.27196 (255, 6)
230.0 /	21.27057 (195, 4)	21.99427 (278, 5)	19.04637 (278, 5)	16.22907 (285, 5)	15.02723 (195, 4)
220.0 /	20.25920 (117, 5)	24.44456 (100, 4)	18.94292 (283, 5)	17.36223 (283, 5)	13.31936 (258, 5)
210.0 /	24.65697 (277, 5)	21.00089 (238, 5)	18.78317 (238, 5)	15.07166 (277, 5)	12.59140 (277, 5)
200.0 /	16.91511 (276, 5)	16.33606 (296, 6)	17.98995 (257, 4)	16.72881 (257, 4)	14.00935 (257, 4)
190.0 /	13.35825 (279, 4)	16.43044 (319, 4)	17.34123 (265, 4)	13.50104 (265, 4)	11.65834 (330, 7)
180.0 /	20.21565 (279, 5)	25.48751 (298, 4)	25.57455 (297, 4)	21.54437 (298, 4)	18.94650 (297, 3)
170.0 /	10.52104 (72, 4)	16.54654 (149, 4)	18.29479 (57, 4)	16.41192 (57, 4)	13.99147 (57, 4)
160.0 /	10.17223 (48, 4)	16.77737 (72, 4)	15.34896 (107, 4)	12.28726 (107, 4)	10.50320 (114, 3)
150.0 /	17.10671 (196, 5)	16.59291 (326, 4)	15.92935 (163, 6)	14.79757 (326, 4)	12.29001 (326, 4)
140.0 /	19.27361 (325, 4)	20.58538 (291, 4)	19.43486 (163, 4)	17.25445 (316, 8)	16.08622 (325, 4)
130.0 /	17.86643 (337, 4)	20.20912 (96, 5)	15.96042 (337, 4)	14.33952 (337, 4)	13.18524 (196, 6)
120.0 /	19.24887 (150, 5)	20.60681 (201, 4)	17.35040 (201, 4)	13.76394 (145, 4)	12.25148 (325, 6)
110.0 /	19.55165 (163, 5)	20.42275 (150, 5)	18.05890 (167, 5)	16.07326 (351, 6)	14.25344 (351, 6)
100.0 /	15.91393 (150, 5)	20.36094 (113, 6)	22.63970 (113, 6)	19.41441 (99, 5)	13.58510 (99, 5)
90.0 /	13.01694 (147, 6)	14.35423 (192, 3)	15.75637 (192, 3)	14.26514 (192, 3)	12.34755 (270, 6)
80.0 /	14.93261 (132, 6)	17.09307 (193, 5)	13.13090 (168, 3)	13.38062 (193, 5)	11.34162 (193, 5)
70.0 /	15.90382 (132, 6)	17.50812 (89, 5)	16.04958 (163, 3)	14.73037 (324, 6)	12.92462 (163, 3)
60.0 /	19.17968 (88, 5)	20.99333 (176, 4)	17.15314 (88, 6)	15.48149 (88, 6)	13.90424 (88, 5)
50.0 /	25.48583 (146, 5)	23.63065 (146, 5)	18.33484 (146, 5)	16.47019 (174, 5)	15.43937 (50, 7)
40.0 /	20.58689 (132, 4)	21.50392 (125, 5)	19.46561 (153, 4)	17.62211 (39, 2)	17.85916 (39, 2)
30.0 /	13.69041 (50, 5)	16.26226 (84, 4)	13.15176 (84, 4)	12.55212 (34, 4)	11.89500 (34, 4)
20.0 /	18.15893 (38, 4)	19.23991 (152, 4)	16.92611 (38, 4)	14.78041 (78, 4)	11.32757 (78, 4)
10.0 /	25.20721 (50, 6)	24.24519 (135, 4)	18.71718 (50, 6)	15.81530 (50, 6)	14.26677 (334, 8)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	33.37221	5	174	500.0	50.0	26	25.18258	4	211	500.0	140.0
2	31.78459	5	99	1000.0	100.0	27	25.13359	4	290	1500.0	180.0
3	31.43979	4	195	1000.0	230.0	28	25.07977	5	150	500.0	110.0
4	29.66875	5	297	1000.0	180.0	29	25.04288	6	279	1000.0	180.0
5	28.10335	4	145	1000.0	120.0	30	24.95053	4	145	500.0	120.0
6	27.89272	5	354	500.0	10.0	31	24.94367	4	163	1000.0	140.0
7	27.64359	6	279	500.0	180.0	32	24.80759	5	354	1500.0	10.0
8	27.13737	5	278	500.0	230.0	33	24.72700	4	186	1500.0	340.0
9	27.12409	5	297	1500.0	160.0	34	24.65697	5	277	500.0	210.0
10	27.01716	5	258	1000.0	220.0	35	24.48147	5	139	1000.0	290.0
11	26.89107	4	176	500.0	60.0	36	24.44456	4	100	1000.0	220.0
12	26.74454	5	174	1000.0	50.0	37	24.24519	4	135	1000.0	10.0
13	26.53164	4	330	500.0	210.0	38	24.14945	4	176	500.0	50.0
14	26.48906	4	135	1000.0	350.0	39	23.99370	4	250	500.0	330.0
15	26.48208	4	195	1500.0	230.0	40	23.69375	4	250	1000.0	330.0
16	25.95272	5	354	1000.0	10.0	41	23.68771	5	103	1000.0	320.0
17	25.57455	4	297	1500.0	180.0	42	23.65402	4	203	1000.0	70.0
18	25.48751	4	298	1000.0	180.0	43	23.64062	4	72	1000.0	170.0
19	25.48583	5	146	500.0	50.0	44	23.63065	5	146	1000.0	50.0
20	25.43696	5	103	500.0	320.0	45	23.53182	4	153	1000.0	40.0
21	25.37569	5	99	1500.0	100.0	46	23.50901	6	279	1500.0	180.0
22	25.36388	4	297	1000.0	180.0	47	23.48090	5	224	1000.0	260.0
23	25.28721	6	50	500.0	10.0	48	23.45840	4	265	1000.0	180.0
24	25.28077	1	132	500.0	340.0	49	23.23509	5	259	1500.0	220.0
25	25.23728	4	111	500.0	270.0	50	23.20473	4	330	1000.0	210.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 12.08277 AND OCCURRED AT (1500.0, 180.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	4.85656 (33, 1)	6.33211 (33, 1)	6.59551 (33, 1)	6.23728 (33, 1)	5.71989 (33, 1)
350.0 /	3.42336 (341, 1)	4.76969 (188, 1)	4.21912 (188, 1)	3.38627 (353, 1)	3.24927 (95, 1)
340.0 /	5.00174 (132, 1)	5.43325 (94, 1)	5.19273 (94, 1)	4.61766 (94, 1)	4.01333 (94, 1)
330.0 /	4.57753 (63, 1)	6.26116 (63, 1)	6.76354 (63, 1)	6.08567 (63, 1)	5.18182 (63, 1)
320.0 /	4.49553 (131, 1)	4.93296 (131, 1)	4.84671 (131, 1)	4.35240 (131, 1)	3.82126 (131, 1)
310.0 /	3.95178 (131, 1)	5.43732 (62, 1)	4.95093 (65, 1)	4.18529 (65, 1)	3.47502 (131, 1)
300.0 /	4.67033 (139, 1)	7.69860 (62, 1)	6.67573 (62, 1)	5.21943 (62, 1)	4.10760 (62, 1)
290.0 /	4.75767 (139, 1)	5.73659 (139, 1)	5.42696 (102, 1)	5.30711 (102, 1)	5.23997 (102, 1)
280.0 /	3.73878 (101, 1)	4.97824 (219, 1)	4.68662 (102, 1)	4.69298 (102, 1)	4.34198 (102, 1)
270.0 /	5.23448 (101, 1)	5.34136 (111, 1)	4.62847 (101, 1)	4.04475 (101, 1)	3.45906 (302, 1)
260.0 /	4.08298 (101, 1)	4.81659 (301, 1)	4.56126 (301, 1)	3.71997 (301, 1)	3.62669 (365, 1)
250.0 /	3.48962 (110, 1)	5.24706 (110, 1)	5.51576 (110, 1)	4.84802 (110, 1)	4.07726 (110, 1)
240.0 /	4.92380 (194, 1)	5.83448 (194, 1)	5.55736 (194, 1)	5.35350 (73, 1)	5.31920 (73, 1)
230.0 /	5.58342 (171, 1)	7.04208 (171, 1)	5.81668 (295, 1)	5.90114 (267, 1)	5.58939 (267, 1)
220.0 /	5.03201 (294, 1)	6.19053 (100, 1)	5.47446 (294, 1)	5.14053 (294, 1)	4.61111 (294, 1)
210.0 /	6.50348 (277, 1)	5.68991 (277, 1)	5.65984 (277, 1)	5.04180 (277, 1)	4.99489 (348, 1)
200.0 /	6.31717 (276, 1)	6.06226 (296, 1)	7.00539 (296, 1)	7.20503 (296, 1)	6.97015 (296, 1)
190.0 /	7.29198 (279, 1)	6.43709 (279, 1)	6.31732 (279, 1)	5.85307 (313, 1)	5.45311 (313, 1)
180.0 /	9.71472 (279, 1)	11.00757 (297, 1)	12.08277 (297, 1)	11.46839 (297, 1)	10.50395 (297, 1)
170.0 /	4.68406 (57, 1)	5.94565 (57, 1)	6.19202 (57, 1)	5.49479 (57, 1)	4.68038 (57, 1)
160.0 /	3.43227 (280, 1)	4.73119 (107, 1)	5.06250 (280, 1)	5.14002 (280, 1)	4.78661 (280, 1)
150.0 /	3.60970 (280, 1)	4.74258 (41, 1)	5.19427 (41, 1)	5.15800 (280, 1)	4.77125 (280, 1)
140.0 /	5.69084 (325, 1)	5.65322 (325, 1)	6.20218 (325, 1)	6.02551 (325, 1)	5.53578 (325, 1)
130.0 /	4.30454 (337, 1)	4.91696 (114, 1)	4.43165 (40, 1)	4.57271 (40, 1)	4.39705 (40, 1)
120.0 /	5.44634 (145, 1)	6.54010 (145, 1)	5.16630 (145, 1)	5.04885 (40, 1)	4.95498 (40, 1)
110.0 /	4.31047 (99, 1)	6.72504 (99, 1)	5.82475 (99, 1)	4.74832 (351, 1)	4.65875 (351, 1)
100.0 /	5.38034 (99, 1)	8.27948 (99, 1)	6.92807 (99, 1)	5.24449 (99, 1)	3.99902 (59, 1)
90.0 /	3.55389 (192, 1)	5.68211 (192, 1)	5.95182 (192, 1)	5.44563 (192, 1)	4.89841 (192, 1)
80.0 /	5.25604 (132, 1)	4.74471 (168, 1)	4.45239 (132, 1)	3.96769 (132, 1)	3.49524 (132, 1)
70.0 /	4.43633 (89, 1)	4.32937 (89, 1)	4.37703 (89, 1)	4.06806 (89, 1)	3.64609 (89, 1)
60.0 /	5.79059 (88, 1)	5.71837 (88, 1)	5.81280 (88, 1)	5.43282 (88, 1)	4.94538 (88, 1)
50.0 /	4.77996 (146, 1)	5.25216 (146, 1)	4.37492 (146, 1)	4.32669 (39, 1)	4.10892 (39, 1)
40.0 /	6.20269 (125, 1)	5.93493 (125, 1)	3.47641 (39, 1)	3.77636 (39, 1)	3.68454 (147, 1)
30.0 /	3.55559 (84, 1)	3.90070 (84, 1)	3.89137 (98, 1)	3.60044 (34, 1)	3.23845 (34, 1)
20.0 /	3.75065 (50, 1)	5.23658 (78, 1)	4.39423 (78, 1)	3.26178 (78, 1)	2.83880 (38, 1)
10.0 /	5.10821 (50, 1)	4.15186 (152, 1)	4.51939 (104, 1)	4.08165 (11, 1)	3.77137 (11, 1)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* SECOND HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 9.34561 AND OCCURRED AT (1000.0, 180.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	4.24673 (176, 1)	5.69470 (91, 1)	5.15693 (28, 1)	5.07756 (28, 1)	4.66499 (28, 1)
350.0 /	3.07382 (353, 1)	3.96157 (213, 1)	3.62109 (353, 1)	3.26115 (95, 1)	3.01372 (353, 1)
340.0 /	4.69084 (94, 1)	4.98202 (93, 1)	4.99244 (93, 1)	4.47942 (93, 1)	3.88123 (93, 1)
330.0 /	4.50610 (131, 1)	4.89883 (250, 1)	4.19271 (250, 1)	3.76337 (94, 1)	3.33655 (94, 1)
320.0 /	4.05826 (220, 1)	4.57570 (134, 1)	4.25525 (134, 1)	3.59770 (134, 1)	3.14603 (249, 1)
310.0 /	2.51763 (52, 1)	4.91346 (49, 1)	4.83407 (62, 1)	3.90673 (131, 1)	3.45919 (37, 1)
300.0 /	4.21008 (241, 1)	5.63024 (139, 1)	4.80422 (139, 1)	3.75639 (139, 1)	3.30307 (361, 1)
290.0 /	4.08459 (102, 1)	4.76033 (243, 1)	4.99581 (139, 1)	4.01500 (139, 1)	3.94951 (3, 1)
280.0 /	3.57995 (219, 1)	4.85034 (240, 1)	4.64783 (219, 1)	4.16423 (74, 1)	4.01958 (74, 1)
270.0 /	5.12113 (111, 1)	4.91433 (101, 1)	4.60942 (111, 1)	3.84960 (302, 1)	3.44591 (101, 1)
260.0 /	3.17968 (140, 1)	4.32451 (300, 1)	4.19899 (300, 1)	3.63157 (365, 1)	3.12179 (110, 1)
250.0 /	2.75170 (117, 1)	4.66582 (340, 1)	4.80330 (340, 1)	4.36521 (340, 1)	3.94123 (340, 1)
240.0 /	4.35169 (117, 1)	5.18053 (110, 1)	4.86841 (110, 1)	4.81480 (194, 1)	4.09480 (194, 1)
230.0 /	5.22192 (295, 1)	5.33693 (195, 1)	5.76508 (267, 1)	5.66624 (295, 1)	5.23501 (295, 1)
220.0 /	4.85343 (277, 1)	5.28453 (171, 1)	5.28473 (293, 1)	4.84845 (283, 1)	4.28538 (283, 1)
210.0 /	6.19093 (330, 1)	5.58125 (109, 1)	5.08961 (330, 1)	4.70675 (348, 1)	4.36067 (277, 1)
200.0 /	5.70830 (296, 1)	4.98810 (276, 1)	4.27715 (274, 1)	3.58587 (274, 1)	3.30910 (278, 1)
190.0 /	4.22399 (313, 1)	5.01742 (313, 1)	5.83370 (313, 1)	5.74350 (279, 1)	5.07348 (279, 1)
180.0 /	6.44133 (297, 1)	9.34561 (279, 1)	9.29819 (279, 1)	8.45161 (279, 1)	7.40371 (279, 1)
170.0 /	3.06400 (280, 1)	5.14492 (107, 1)	5.00164 (107, 1)	4.78279 (311, 1)	4.63908 (311, 1)
160.0 /	3.21388 (48, 1)	4.17830 (280, 1)	4.50204 (107, 1)	3.50206 (107, 1)	3.22345 (48, 1)
150.0 /	3.16502 (211, 1)	4.33830 (280, 1)	5.14589 (280, 1)	4.69191 (41, 1)	4.14011 (41, 1)
140.0 /	4.19710 (211, 1)	4.96760 (114, 1)	4.40420 (114, 1)	4.35575 (316, 1)	4.08877 (316, 1)
130.0 /	3.90921 (145, 1)	4.65844 (96, 1)	4.39531 (337, 1)	4.04830 (337, 1)	3.62575 (337, 1)
120.0 /	5.31413 (150, 1)	5.61415 (191, 1)	4.67758 (40, 1)	4.71484 (316, 1)	4.57474 (316, 1)
110.0 /	4.23567 (335, 1)	3.89783 (335, 1)	4.40311 (351, 1)	4.60342 (99, 1)	4.02207 (335, 1)
100.0 /	4.10689 (89, 1)	3.59790 (89, 1)	4.00921 (113, 1)	3.84671 (113, 1)	3.49096 (113, 1)
90.0 /	3.11001 (89, 1)	3.71813 (7, 1)	4.25633 (7, 1)	3.92293 (87, 1)	3.55846 (87, 1)
80.0 /	3.49958 (193, 1)	4.71545 (132, 1)	4.20927 (168, 1)	3.60434 (193, 1)	3.31185 (71, 1)
70.0 /	3.21943 (192, 1)	4.28280 (203, 1)	4.03232 (90, 1)	3.50278 (90, 1)	2.88700 (90, 1)
60.0 /	4.87967 (176, 1)	5.19343 (90, 1)	4.57544 (90, 1)	4.15313 (90, 1)	3.74524 (90, 1)
50.0 /	4.44227 (125, 1)	4.13620 (125, 1)	4.17109 (39, 1)	3.51567 (146, 1)	2.98394 (146, 1)
40.0 /	3.00789 (132, 1)	3.53576 (153, 1)	3.34816 (105, 1)	3.44679 (147, 1)	3.67545 (39, 1)
30.0 /	2.99191 (125, 1)	3.70880 (98, 1)	3.82955 (34, 1)	3.29738 (98, 1)	2.68113 (98, 1)
20.0 /	3.61777 (38, 1)	3.56562 (152, 1)	3.42105 (38, 1)	3.13356 (38, 1)	2.43672 (78, 1)
10.0 /	4.51995 (354, 1)	4.13073 (50, 1)	4.22127 (11, 1)	4.04359 (104, 1)	3.48077 (104, 1)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	12.08277	1	297	1500.0	180.0	26	6.52758	1	57	2500.0	180.0
2	11.46839	1	297	2000.0	180.0	27	6.50348	1	277	500.0	210.0
3	11.00757	1	297	1000.0	180.0	28	6.44133	1	297	500.0	180.0
4	10.50395	1	297	2500.0	180.0	29	6.43709	1	279	1000.0	190.0
5	9.71472	1	279	500.0	180.0	30	6.37080	1	57	500.0	180.0
6	9.34561	1	279	1000.0	180.0	31	6.33211	1	33	1000.0	360.0
7	9.29819	1	279	1500.0	180.0	32	6.31732	1	279	1500.0	190.0
8	8.45161	1	279	2000.0	180.0	33	6.31717	1	276	500.0	200.0
9	8.27948	1	99	1000.0	100.0	34	6.26116	1	63	1000.0	330.0
10	7.69800	1	62	1000.0	300.0	35	6.23728	1	33	2000.0	360.0
11	7.40371	1	279	2500.0	180.0	36	6.20269	1	125	500.0	40.0
12	7.31882	1	57	1500.0	180.0	37	6.20218	1	325	1500.0	140.0
13	7.29198	1	279	500.0	190.0	38	6.19202	1	57	1500.0	170.0
14	7.20503	1	296	2000.0	200.0	39	6.19093	1	330	500.0	210.0
15	7.11037	1	57	2000.0	180.0	40	6.19053	1	100	1000.0	220.0
16	7.04208	1	171	1000.0	230.0	41	6.16289	1	313	2000.0	180.0
17	7.00539	1	296	1500.0	200.0	42	6.08567	1	63	2000.0	330.0
18	6.97015	1	296	2500.0	200.0	43	6.06667	1	298	1500.0	180.0
19	6.92807	1	99	1500.0	100.0	44	6.06226	1	296	1000.0	200.0
20	6.76354	1	63	1500.0	330.0	45	6.04033	1	313	1500.0	180.0
21	6.72504	1	99	1000.0	110.0	46	6.02551	1	325	2000.0	140.0
22	6.67573	1	62	1500.0	300.0	47	5.95903	1	266	2000.0	180.0
23	6.59551	1	33	1500.0	360.0	48	5.95182	1	192	1500.0	90.0
24	6.56260	1	57	1000.0	180.0	49	5.94565	1	57	1000.0	170.0
25	6.54010	1	145	1000.0	120.0	50	5.93493	1	125	1000.0	40.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 2
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION) WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 0
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 0
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 2
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(28) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 10
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 36
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK = .10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 74
UPPER AIR STATION NO.	IUS = 12842
YEAR OF UPPER AIR DATA	IUY = 74
ALLOCATED DATA STORAGE	LIMIT = 43500 WORDS

IST-2

1974 - NRG ONLY SO_2
(Selected days)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** METEOROLOGICAL DAYS TO BE PROCESSED ***
(IF=1)

0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 1 0 0 0	0 1 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 1 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 1 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	1 0 0 1 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 1 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 1 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 1 0 0 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 1 0 0 0 0 0 0	0 0 0 0 0 0			

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
B	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
C	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00
D	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00
E	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00
F	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

200.0,	300.0,	400.0,	600.0,	700.0,	800.0,	900.0,	1200.0,	1400.0,	1700.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0,	20.0,	30.0,	40.0,	50.0,	60.0,	70.0,	80.0,	90.0,	100.0,
110.0,	120.0,	130.0,	140.0,	150.0,	160.0,	170.0,	180.0,	190.0,	200.0,
210.0,	220.0,	230.0,	240.0,	250.0,	260.0,	270.0,	280.0,	290.0,	300.0,
310.0,	320.0,	330.0,	340.0,	350.0,	360.0,				

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG. K); VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ. DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
101	0	0	0	0.15800E+02	0.0	0.0	0.0	38.10	450.00	20.00	1.83	23.00	38.10	19.80

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	65.70599	5	354	200.0	10.0	26	30.94335	4	195	900.0	230.0
2	64.79088	6	279	200.0	180.0	27	30.68432	6	354	200.0	360.0
3	57.37053	5	174	200.0	50.0	28	30.31571	4	195	1200.0	230.0
4	54.30011	5	354	300.0	10.0	29	29.97215	5	99	1200.0	100.0
5	53.42713	6	279	300.0	180.0	30	29.90605	5	99	800.0	100.0
6	52.12655	5	174	300.0	50.0	31	29.85774	5	297	1200.0	180.0
7	46.15890	5	279	200.0	180.0	32	29.67452	4	145	800.0	120.0
8	44.31376	7	279	200.0	180.0	33	29.29259	4	195	800.0	230.0
9	42.39250	5	174	400.0	50.0	34	29.28637	4	145	900.0	120.0
10	40.39884	5	354	400.0	10.0	35	29.23419	5	174	700.0	50.0
11	39.82148	6	279	400.0	180.0	36	29.07681	2	57	300.0	180.0
12	39.30048	1	57	200.0	180.0	37	29.04630	5	174	600.0	50.0
13	38.15720	5	279	300.0	180.0	38	28.72963	5	174	800.0	50.0
14	38.14175	4	297	200.0	180.0	39	28.68524	5	279	400.0	180.0
15	37.71254	2	279	200.0	190.0	40	28.60578	4	145	700.0	120.0
16	37.36956	2	57	200.0	180.0	41	28.55538	6	174	300.0	70.0
17	35.82644	7	279	300.0	180.0	42	28.33520	5	297	900.0	180.0
18	35.14147	6	174	200.0	70.0	43	28.23900	5	297	1400.0	180.0
19	34.48989	3	279	200.0	200.0	44	27.92768	3	279	300.0	200.0
20	34.29166	4	297	300.0	180.0	45	27.86917	4	195	1400.0	230.0
21	33.07432	8	279	200.0	160.0	46	27.83660	5	174	900.0	50.0
22	31.87090	1	57	300.0	180.0	47	27.72842	2	279	300.0	190.0
23	31.54053	5	99	900.0	100.0	48	27.35340	3	279	200.0	190.0
24	31.49869	4	279	200.0	190.0	49	27.23460	5	279	200.0	190.0
25	31.19017	4	354	200.0	340.0	50	26.96299	5	99	1400.0	100.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	24.37474	1	279	200.0	180.0	26	8.82170	1	279	800.0	180.0
2	20.17289	1	279	200.0	190.0	27	8.65411	1	57	300.0	170.0
3	19.85328	1	279	300.0	180.0	28	8.46206	1	354	200.0	360.0
4	18.29990	1	57	200.0	180.0	29	8.37454	1	279	700.0	180.0
5	15.72904	1	279	300.0	190.0	30	8.15836	1	99	900.0	100.0
6	14.46021	1	279	400.0	180.0	31	8.05798	1	174	200.0	50.0
7	14.30381	1	57	300.0	180.0	32	7.95151	1	99	1200.0	100.0
8	12.09255	1	297	1400.0	180.0	33	7.93568	1	297	400.0	180.0
9	11.91319	1	297	1700.0	180.0	34	7.79054	1	297	700.0	180.0
10	11.84919	1	297	1200.0	180.0	35	7.78329	1	279	600.0	180.0
11	11.54615	1	279	200.0	200.0	36	7.70976	1	99	800.0	100.0
12	11.40093	1	297	200.0	180.0	37	7.52209	1	62	1200.0	300.0
13	11.00122	1	279	400.0	190.0	38	7.47529	1	62	900.0	300.0
14	10.99101	1	354	200.0	10.0	39	7.30150	1	57	1700.0	180.0
15	10.23361	1	297	900.0	180.0	40	7.29267	1	99	1400.0	100.0
16	10.14117	1	57	200.0	170.0	41	7.27696	1	57	1400.0	180.0
17	10.13911	1	297	300.0	180.0	42	7.17077	1	174	300.0	50.0
18	9.87486	1	57	400.0	180.0	43	7.16988	1	171	900.0	230.0
19	9.49823	1	279	1200.0	180.0	44	7.06271	1	171	800.0	230.0
20	9.40589	1	279	1400.0	180.0	45	7.05070	1	57	1200.0	180.0
21	9.25045	1	297	800.0	180.0	46	6.98520	1	62	1400.0	300.0
22	9.13708	1	279	900.0	180.0	47	6.89547	1	62	800.0	300.0
23	9.00358	1	279	1700.0	180.0	48	6.82320	1	354	300.0	360.0
24	8.97241	1	354	300.0	10.0	49	6.80988	1	99	700.0	100.0
25	8.90965	1	279	300.0	200.0	50	6.66927	1	145	900.0	120.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 2
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION) WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 1
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 1
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 2
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(28) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 3
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 36
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK = .10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 = 0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 = 0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY = 0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 74
UPPER AIR STATION NO.	IUS = 12842
YEAR OF UPPER AIR DATA	IUY = 74
ALLOCATED DATA STORAGE	LIMIT = 43500 WORDS

IST-3

1974 - NRG ONLY - SO_2
Radius of Influence check

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*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-07      ***

                    *** METEOROLOGICAL DAYS TO BE PROCESSED ***
                                     (IF=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 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 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 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 0

           *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                  (METERS/SEC)

                        1.54,   3.09,   5.14,   8.23,  10.80,

                           *** WIND PROFILE EXPONENTS ***

  STABILITY                          WIND SPEED CATEGORY
  CATEGORY          1            2            3            4            5            6
     A         .10000E+00   .10000E+00   .10000E+00   10000E+00   .10000E+00   .10000E+00
     B         .15000E+00   .15000E+00   .15000E+00   .15000E+00   .15000E+00   .15000E+00
     C         .20000E+00   .20000E+00   .20000E+00   .20000E+00   .20000E+00   .20000E+00
     D         .25000E+00   .25000E+00   .25000E+00   .25000E+00   .25000E+00   .25000E+00
     E         .30000E+00   .30000E+00   .30000E+00   .30000E+00   .30000E+00   .30000E+00
     F         .30000E+00   .30000E+00   .30000E+00   .30000E+00   .30000E+00   .30000E+00

                  *** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
                            (DEGREES KELVIN PER METER)

  STABILITY                          WIND SPEED CATEGORY
  CATEGORY          1            2            3            4            5            6
     A         .00000E+00   .00000E+00   .00000E+00   .00000E+00   .00000E+00   .00000E+00
     B         .00000E+00   .00000E+00   .00000E+00   .00000E+00   .00000E+00   .00000E+00
     C         .00000E+00   .00000E+00   .00000E+00   .00000E+00   .00000E+00   .00000E+00
     D         .00000E+00   .00000E+00   .00000E+00   .00000E+00   .00000E+00   .00000E+00
     E         .20000E-01   .20000E-01   .20000E-01   .20000E-01   .20000E-01   .20000E-01
     F         .35000E-01   .35000E-01   .35000E-01   .35000E-01   .35000E-01   .35000E-01
```

*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

6000.0, 9000.0, 12000.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0,	20.0,	30.0,	40.0,	50.0,	60.0,	70.0,	80.0,	90.0,	100.0,
110.0,	120.0,	130.0,	140.0,	150.0,	160.0,	170.0,	180.0,	190.0,	200.0,
210.0,	220.0,	230.0,	240.0,	250.0,	260.0,	270.0,	280.0,	290.0,	300.0,
310.0,	320.0,	330.0,	340.0,	350.0,	360.0,				

*** SOURCE DATA ***

SOURCE NUMBER	T Y P E	W A K E	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K), VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC), HORZ. DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
101	0	0	0	0.15900E+02	0.0	0.0	0.0	38.10	450.00	20.00	1.83	22.00	38.10	19.80

MAX 50
3-HR
SGROUP# 1

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	65.70599	5	354	200.0	10.0	26	30.94335	4	195	900.0	230.0
2	64.79088	6	279	200.0	180.0	27	30.68432	6	354	200.0	360.0
3	57.37053	5	174	200.0	50.0	28	30.31571	4	195	1200.0	230.0
4	54.30011	5	354	300.0	10.0	29	29.97215	5	99	1200.0	100.0
5	53.42713	6	279	300.0	180.0	30	29.90605	5	99	800.0	100.0
6	52.12655	5	174	300.0	50.0	31	29.85774	5	297	1200.0	180.0
7	46.15090	5	279	200.0	160.0	32	29.67452	4	145	800.0	120.0
8	44.31376	7	279	200.0	180.0	33	29.29259	4	195	800.0	230.0
9	42.39250	5	174	400.0	50.0	34	29.28637	4	145	900.0	120.0
10	40.39884	5	354	400.0	10.0	35	29.23419	5	174	700.0	50.0
11	39.82148	6	279	400.0	180.0	36	29.07681	2	57	300.0	180.0
12	39.30048	1	57	200.0	180.0	37	29.04630	5	174	600.0	50.0
13	38.15720	5	279	300.0	180.0	38	28.72963	5	174	800.0	50.0
14	38.14175	4	297	200.0	180.0	39	28.68524	5	279	400.0	180.0
15	37.71254	2	279	200.0	190.0	40	28.60578	4	145	700.0	120.0
16	37.36956	2	57	200.0	180.0	41	28.55538	6	174	300.0	70.0
17	35.82644	7	279	300.0	180.0	42	28.33520	5	297	900.0	180.0
18	35.14147	6	174	200.0	70.0	43	28.23900	5	297	1400.0	180.0
19	34.48989	3	279	200.0	200.0	44	27.92768	3	279	300.0	200.0
20	34.29166	4	297	300.0	180.0	45	27.86917	4	195	1400.0	230.0
21	33.07432	8	279	200.0	160.0	46	27.83660	5	174	900.0	50.0
22	31.87090	1	57	300.0	180.0	47	27.72842	2	279	300.0	190.0
23	31.54053	5	99	900.0	100.0	48	27.35340	3	279	200.0	190.0
24	31.49869	4	279	200.0	190.0	49	27.23460	5	279	200.0	190.0
25	31.19017	4	354	200.0	340.0	50	26.96299	5	99	1400.0	100.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	24.37474	1	279	200.0	180.0	26	8.82170	1	279	800.0	180.0
2	20.17289	1	279	200.0	190.0	27	8.65411	1	57	300.0	170.0
3	19.85328	1	279	300.0	180.0	28	8.46206	1	354	200.0	360.0
4	18.29990	1	57	200.0	180.0	29	8.37454	1	279	700.0	180.0
5	15.72904	1	279	300.0	190.0	30	8.15836	1	99	900.0	100.0
6	14.46021	1	279	400.0	180.0	31	8.05798	1	174	200.0	50.0
7	14.30381	1	57	300.0	180.0	32	7.95151	1	99	1200.0	100.0
8	12.09255	1	297	1400.0	180.0	33	7.93568	1	297	400.0	180.0
9	11.91319	1	297	1700.0	180.0	34	7.79054	1	297	700.0	180.0
10	11.84919	1	297	1200.0	180.0	35	7.78329	1	279	600.0	180.0
11	11.54615	1	279	200.0	200.0	36	7.70976	1	99	800.0	100.0
12	11.40093	1	297	200.0	180.0	37	7.52209	1	62	1200.0	300.0
13	11.00122	1	279	400.0	190.0	38	7.47529	1	62	900.0	300.0
14	10.99101	1	354	200.0	10.0	39	7.30150	1	57	1700.0	180.0
15	10.23361	1	297	900.0	180.0	40	7.29267	1	99	1400.0	100.0
16	10.14117	1	57	200.0	170.0	41	7.27696	1	57	1400.0	180.0
17	10.13911	1	297	300.0	180.0	42	7.17077	1	174	300.0	50.0
18	9.87486	1	57	400.0	180.0	43	7.16988	1	171	900.0	230.0
19	9.49823	1	279	1200.0	180.0	44	7.06271	1	171	800.0	230.0
20	9.40589	1	279	1400.0	180.0	45	7.05070	1	57	1200.0	180.0
21	9.25045	1	297	800.0	180.0	46	6.98520	1	62	1400.0	300.0
22	9.13908	1	279	900.0	180.0	47	6.89547	1	62	800.0	300.0
23	9.00358	1	279	1700.0	180.0	48	6.82320	1	354	300.0	360.0
24	8.97241	1	354	300.0	10.0	49	6.80988	1	99	700.0	100.0
25	8.90965	1	279	300.0	200.0	50	6.66927	1	145	900.0	120.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 2
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION)	
WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 1
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE	
SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 1
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 2
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(28) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 3
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 36
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK = .10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 74
UPPER AIR STATION NO.	IUS = 12842
YEAR OF UPPER AIR DATA	IUY = 74
ALLOCATED DATA STORAGE	LIMIT = 43500 WORDS

IST-3

1974 - NRG ONLY - SO_2
Radius of Influence check

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                    *** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09       ***

                             *** METEOROLOGICAL DAYS TO BE PROCESSED ***
                                              (IF=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 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 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 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 0

                   *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                           (METERS/SEC)

                                1.54,   3.09,   5.14,   8.23,  10.80,

                                   *** WIND PROFILE EXPONENTS ***

    STABILITY                             WIND SPEED CATEGORY
    CATEGORY          1              2              3              4              5              6
       A         .10000E+00     .10000E+00     .10000E+00     .10000E+00     .10000E+00     .10000E+00
       B         .15000E+00     .15000E+00     .15000E+00     .15000E+00     .15000E+00     .15000E+00
       C         .20000E+00     .20000E+00     .20000E+00     .20000E+00     .20000E+00     .20000E+00
       D         .25000E+00     .25000E+00     .25000E+00     .25000E+00     .25000E+00     .25000E+00
       E         .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00
       F         .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00

                          *** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
                                   (DEGREES KELVIN PER METER)

    STABILITY                             WIND SPEED CATEGORY
    CATEGORY          1              2              3              4              5              6
       A         .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
       B         .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
       C         .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
       D         .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
       E         .20000E-01     .20000E-01     .20000E-01     .20000E-01     .20000E-01     .20000E-01
       F         .35000E-01     .35000E-01     .35000E-01     .35000E-01     .35000E-01     .35000E-01
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*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

6000.0, 9000.0, 12000.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0,	20.0,	30.0,	40.0,	50.0,	60.0,	70.0,	80.0,	90.0,	100.0,
110.0,	120.0,	130.0,	140.0,	150.0,	160.0,	170.0,	180.0,	190.0,	200.0,
210.0,	220.0,	230.0,	240.0,	250.0,	260.0,	270.0,	280.0,	290.0,	300.0,
310.0,	320.0,	330.0,	340.0,	350.0,	360.0,				

*** NRC/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG. K); VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ. DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
101	0	0	0	0.15900E+02	0.0	0.0	0.0	38.10	450.00	20.00	1.83	22.00	38.10	19.80

"N"-DAY
365 DAYS
SGROUP# 1

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 365-DAY AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 0.38949 AND OCCURRED AT (6000.0, 180.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 6000.0	9000.0	12000.0
360.0 /	0.27173	0.21409	0.17789
350.0 /	0.19421	0.14113	0.11547
340.0 /	0.22365	0.17149	0.13933
330.0 /	0.16206	0.12590	0.10335
320.0 /	0.19289	0.15495	0.13004
310.0 /	0.20005	0.15256	0.12337
300.0 /	0.23015	0.18255	0.15316
290.0 /	0.19631	0.14858	0.12028
280.0 /	0.20342	0.14898	0.11732
270.0 /	0.24108	0.18905	0.15666
260.0 /	0.23451	0.19399	0.16575
250.0 /	0.27441	0.22814	0.19523
240.0 /	0.24999	0.20344	0.17337
230.0 /	0.28343	0.22747	0.19049
220.0 /	0.29508	0.24419	0.20677
210.0 /	0.24084	0.20276	0.17520
200.0 /	0.29768	0.25255	0.21906
190.0 /	0.19479	0.14893	0.12538
180.0 /	0.38949	0.33042	0.28520
170.0 /	0.19641	0.15507	0.12902
160.0 /	0.12800	0.10031	0.08328
150.0 /	0.12873	0.09219	0.07207
140.0 /	0.14609	0.10141	0.07725
130.0 /	0.14142	0.10139	0.07910
120.0 /	0.17079	0.13093	0.10689
110.0 /	0.15618	0.12238	0.10122
100.0 /	0.13449	0.09894	0.07814
90.0 /	0.15414	0.11845	0.09567
80.0 /	0.13759	0.10658	0.08720
70.0 /	0.13966	0.10641	0.08641
60.0 /	0.17521	0.13497	0.11010
50.0 /	0.14292	0.10241	0.07959
40.0 /	0.15604	0.12172	0.09982
30.0 /	0.14186	0.11023	0.08993
20.0 /	0.15459	0.11771	0.09490
10.0 /	0.16501	0.12166	0.09690

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	14.45864	8	209	6000.0	360.0	26	10.45400	2	107	9000.0	180.0
2	13.95005	1	85	9000.0	180.0	27	10.23366	2	270	9000.0	320.0
3	13.00611	1	297	6000.0	200.0	28	10.22667	8	316	6000.0	140.0
4	12.83788	1	85	12000.0	180.0	29	10.21164	7	354	6000.0	40.0
5	12.72612	1	85	6000.0	180.0	30	10.19625	1	146	6000.0	80.0
6	12.29019	7	325	6000.0	90.0	31	10.14399	2	21	6000.0	350.0
7	12.21781	6	3	6000.0	290.0	32	10.11763	1	277	6000.0	170.0
8	12.05925	7	133	6000.0	230.0	33	10.06826	7	354	9000.0	40.0
9	11.96814	2	107	6000.0	180.0	34	10.05092	2	270	6000.0	320.0
10	11.95522	2	342	6000.0	350.0	35	9.98942	1	297	12000.0	200.0
11	11.95089	7	50	6000.0	50.0	36	9.93296	1	41	6000.0	150.0
12	11.83147	2	311	6000.0	170.0	37	9.92039	8	332	6000.0	200.0
13	11.76633	2	39	6000.0	40.0	38	9.89326	2	139	12000.0	270.0
14	11.58725	7	73	6000.0	240.0	39	9.86386	1	146	9000.0	80.0
15	11.56827	1	297	9000.0	200.0	40	9.80284	1	148	9000.0	220.0
16	11.56215	1	148	6000.0	220.0	41	9.66149	8	349	6000.0	50.0
17	11.51604	8	209	9000.0	360.0	42	9.64474	7	37	6000.0	310.0
18	11.48401	7	146	6000.0	80.0	43	9.61996	8	174	6000.0	30.0
19	11.46225	3	297	6000.0	180.0	44	9.53657	2	267	6000.0	220.0
20	11.32927	2	147	6000.0	40.0	45	9.51445	8	207	6000.0	360.0
21	11.13165	1	89	6000.0	60.0	46	9.50911	2	139	9000.0	270.0
22	11.09122	6	143	6000.0	40.0	47	9.43803	1	175	6000.0	30.0
23	10.88381	7	325	9000.0	90.0	48	9.42668	3	324	6000.0	360.0
24	10.69809	6	296	6000.0	200.0	49	9.39067	7	325	12000.0	90.0
25	10.52118	6	30	6000.0	60.0	50	9.37967	6	113	6000.0	100.0

*** NRC/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 5.91405 AND OCCURRED AT (6000.0, 180.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 6000.0	9000.0	12000.0
360.0 /	3.76177 (33, 1)	3.08406 (209, 1)	2.85397 (209, 1)
350.0 /	2.29921 (21, 1)	1.92485 (21, 1)	1.57407 (21, 1)
340.0 /	2.32068 (50, 1)	2.02318 (50, 1)	1.71973 (50, 1)
330.0 /	1.94701 (63, 1)	1.61484 (354, 1)	1.36685 (354, 1)
320.0 /	2.19026 (183, 1)	1.74477 (183, 1)	1.40017 (75, 1)
310.0 /	2.53313 (37, 1)	1.92522 (37, 1)	1.49900 (37, 1)
300.0 /	2.26276 (361, 1)	2.00776 (25, 1)	2.00207 (25, 1)
290.0 /	3.05965 (102, 1)	2.08400 (102, 1)	1.52489 (102, 1)
280.0 /	2.44253 (74, 1)	1.75183 (65, 1)	1.85135 (65, 1)
270.0 /	1.83236 (302, 1)	1.70612 (111, 1)	1.72570 (111, 1)
260.0 /	2.57091 (365, 1)	1.87753 (365, 1)	1.65623 (242, 1)
250.0 /	2.27182 (340, 1)	2.16515 (66, 1)	2.29452 (66, 1)
240.0 /	3.36618 (73, 1)	2.23668 (73, 1)	1.75632 (320, 1)
230.0 /	3.25835 (267, 1)	2.17620 (267, 1)	1.71805 (327, 1)
220.0 /	2.39359 (267, 1)	2.21172 (287, 1)	2.11786 (287, 1)
210.0 /	4.76534 (348, 1)	3.74682 (348, 1)	2.96003 (348, 1)
200.0 /	4.54831 (296, 1)	3.33598 (296, 1)	2.60129 (296, 1)
190.0 /	2.86450 (313, 1)	1.80712 (313, 1)	1.41645 (318, 1)
180.0 /	5.91405 (297, 1) ✓	4.11100 (297, 1) ✓	3.06265 (297, 1)
170.0 /	2.85057 (311, 1)	1.93005 (311, 1)	1.50937 (277, 1)
160.0 /	2.45600 (280, 1)	1.52399 (315, 1)	1.69346 (315, 1)
150.0 /	2.41797 (280, 1)	1.58920 (363, 1)	1.35101 (363, 1)
140.0 /	2.89185 (325, 1)	1.87989 (325, 1)	1.34706 (325, 1)
130.0 /	2.66784 (40, 1)	1.84132 (40, 1)	1.35993 (40, 1)
120.0 /	3.08333 (40, 1)	2.15412 (316, 1)	1.65506 (316, 1)
110.0 /	3.08413 (351, 1)	2.24474 (7, 1)	1.95457 (7, 1)
100.0 /	2.61997 (351, 1)	2.01755 (351, 1)	1.56548 (351, 1)
90.0 /	2.84419 (192, 1)	2.18064 (192, 1)	1.76882 (192, 1)
80.0 /	3.50526 (146, 1)	2.91912 (146, 1)	2.38116 (146, 1)
70.0 /	1.99164 (89, 1)	1.60382 (89, 1)	1.41974 (89, 1)
60.0 /	2.91125 (88, 1)	2.13840 (88, 1)	1.68854 (88, 1)
50.0 /	2.29760 (39, 1)	1.47776 (39, 1)	1.15636 (98, 1)
40.0 /	2.94078 (147, 1)	2.14867 (147, 1)	1.62067 (147, 1)
30.0 /	2.14898 (7, 1)	2.11255 (7, 1)	1.84146 (7, 1)
20.0 /	2.01037 (79, 1)	1.58619 (79, 1)	1.24538 (359, 1)
10.0 /	2.11217 (11, 1)	1.47388 (178, 1)	1.18431 (178, 1)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* SECOND HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 3.50303 AND OCCURRED AT (6000.0, 180.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 6000.0	9000.0	12000.0
360.0 /	3.08809 (209, 1)	2.81813 (33, 1)	2.18887 (33, 1)
350.0 /	2.17897 (95, 1)	1.51636 (95, 1)	1.12226 (95, 1)
340.0 /	2.29234 (217, 1)	1.93468 (217, 1)	1.62155 (217, 1)
330.0 /	1.80684 (354, 1)	1.39206 (27, 1)	1.32719 (27, 1)
320.0 /	1.85539 (248, 1)	1.66772 (75, 1)	1.39979 (183, 1)
310.0 /	1.98312 (130, 1)	1.57461 (130, 1)	1.36604 (190, 1)
300.0 /	2.19294 (357, 1)	1.82330 (357, 1)	1.83037 (221, 1)
290.0 /	2.66879 (3, 1)	1.87278 (3, 1)	1.40738 (3, 1)
280.0 /	2.19443 (102, 1)	1.61299 (74, 1)	1.52441 (60, 1)
270.0 /	1.77789 (361, 1)	1.46915 (112, 1)	1.49377 (112, 1)
260.0 /	2.11512 (302, 1)	1.65836 (302, 1)	1.44988 (139, 1)
250.0 /	2.08509 (248, 1)	1.86329 (248, 1)	1.89246 (111, 1)
240.0 /	2.07616 (320, 1)	1.96267 (320, 1)	1.60730 (73, 1)
230.0 /	2.79016 (295, 1)	1.89803 (327, 1)	1.58567 (267, 1)
220.0 /	2.35202 (258, 1)	1.92993 (258, 1)	1.65194 (258, 1)
210.0 /	1.85993 (224, 1)	1.64096 (224, 1)	1.37902 (224, 1)
200.0 /	2.86388 (360, 1)	2.37290 (360, 1)	1.94927 (360, 1)
190.0 /	2.38352 (279, 1)	1.59656 (318, 1)	1.26527 (313, 1)
180.0 /	3.50303 (276, 1) ✓	2.96678 (107, 1)	2.68711 (59, 1)
170.0 /	2.67528 (332, 1)	1.86053 (332, 1)	1.40972 (36, 1)
160.0 /	1.95621 (48, 1)	1.52054 (280, 1)	1.46554 (286, 1)
150.0 /	2.13563 (41, 1)	1.51924 (41, 1)	1.15801 (41, 1)
140.0 /	2.27721 (316, 1)	1.51301 (316, 1)	1.16712 (355, 1)
130.0 /	2.35092 (355, 1)	1.75480 (355, 1)	1.33950 (355, 1)
120.0 /	2.96465 (316, 1)	2.09180 (40, 1)	1.52225 (40, 1)
110.0 /	2.57850 (335, 1)	2.24028 (351, 1)	1.71882 (351, 1)
100.0 /	2.01511 (39, 1)	1.37893 (95, 1)	1.22260 (95, 1)
90.0 /	1.82773 (144, 1)	1.43025 (325, 1)	1.24829 (325, 1)
80.0 /	2.73949 (71, 1)	2.44464 (71, 1)	2.15643 (71, 1)
70.0 /	1.54772 (88, 1)	1.14701 (272, 1)	1.11712 (272, 1)
60.0 /	2.04485 (90, 1)	1.66928 (31, 1)	1.43294 (31, 1)
50.0 /	1.74137 (98, 1)	1.41062 (98, 1)	1.04415 (39, 1)
40.0 /	2.30301 (31, 1)	1.77176 (31, 1)	1.36654 (31, 1)
30.0 /	2.13429 (126, 1)	1.99429 (126, 1)	1.79548 (126, 1)
20.0 /	1.82498 (38, 1)	1.41089 (359, 1)	1.21396 (79, 1)
10.0 /	1.74311 (178, 1)	1.40791 (11, 1)	1.01827 (11, 1)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	5.91405	1	297	6000.0	180.0	26	2.96003	1	348	12000.0	210.0
2	4.76534	1	348	6000.0	210.0	27	2.94078	1	147	6000.0	40.0
3	4.54831	1	296	6000.0	200.0	28	2.91912	1	146	9000.0	80.0
4	4.11100	1	297	9000.0	180.0	29	2.91125	1	88	6000.0	60.0
5	3.76177	1	33	6000.0	360.0	30	2.89185	1	325	6000.0	140.0
6	3.74682	1	348	9000.0	210.0	31	2.86450	1	313	6000.0	190.0
7	3.50526	1	146	6000.0	80.0	32	2.86388	1	360	6000.0	200.0
8	3.50303	1	276	6000.0	180.0	33	2.85397	1	209	12000.0	360.0
9	3.41029	1	57	6000.0	180.0	34	2.85057	1	311	6000.0	170.0
10	3.36616	1	73	6000.0	240.0	35	2.84419	1	192	6000.0	90.0
11	3.33598	1	296	9000.0	200.0	36	2.81813	1	33	9000.0	360.0
12	3.30301	1	313	6000.0	180.0	37	2.79016	1	295	6000.0	230.0
13	3.29745	1	107	6000.0	180.0	38	2.73949	1	71	6000.0	80.0
14	3.28695	1	279	6000.0	180.0	39	2.69115	1	276	9000.0	180.0
15	3.26682	1	298	6000.0	180.0	40	2.68711	1	59	12000.0	180.0
16	3.25835	1	267	6000.0	230.0	41	2.67528	1	332	6000.0	170.0
17	3.10336	1	266	6000.0	180.0	42	2.66879	1	3	6000.0	290.0
18	3.08809	1	209	6000.0	360.0	43	2.66784	1	40	6000.0	130.0
19	3.08413	1	351	6000.0	110.0	44	2.61997	1	351	6000.0	100.0
20	3.08406	1	209	9000.0	360.0	45	2.60129	1	296	12000.0	200.0
21	3.08333	1	40	6000.0	120.0	46	2.59638	1	107	12000.0	180.0
22	3.06265	1	297	12000.0	180.0	47	2.57850	1	335	6000.0	110.0
23	3.05965	1	102	6000.0	290.0	48	2.57091	1	365	6000.0	260.0
24	2.96678	1	107	9000.0	180.0	49	2.56202	1	85	6000.0	180.0
25	2.96465	1	316	6000.0	120.0	50	2.55348	1	28	6000.0	360.0

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 2
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION) WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 1
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 1
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 2
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(29) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 5
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 36
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK = .10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 75
UPPER AIR STATION NO.	IUS = 12842
YEAR OF UPPER AIR DATA	IUY = 75
ALLOCATED DATA STORAGE	LIMIT = 43500 WORDS

IST-4

1975 NRG ONLY SO_2

SOURCE NUMBER	TYPE	W K E	NUMB PAR CAT
101	0	0	0

*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

500.0, 1000.0, 1500.0, 2000.0, 2500.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0, 20.0, 30.0, 40.0, 50.0, 60.0, 70.0, 80.0, 90.0, 100.0,
110.0, 120.0, 130.0, 140.0, 150.0, 160.0, 170.0, 180.0, 190.0, 200.0,
210.0, 220.0, 230.0, 240.0, 250.0, 260.0, 270.0, 280.0, 290.0, 300.0,
310.0, 320.0, 330.0, 340.0, 350.0, 360.0,

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K); VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ. DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG WIDTH TYPE=0 (METERS)
101	0	0	0	0.15800E+02	0.0	0.0	0.0	38.10	450.00	20.00	1.83	22.00	38.10	19.80

"N"-DAY
365 DAYS
SGROUP# 1

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 365-DAY AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 0.66194 AND OCCURRED AT (1000.0, 360.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	0.51133	0.66194	0.64829	0.58135	0.51475
350.0 /	0.39666	0.52007	0.50028	0.44306	0.38748
340.0 /	0.43814	0.58808	0.56566	0.49795	0.43315
330.0 /	0.37172	0.49414	0.46679	0.40612	0.35125
320.0 /	0.27637	0.38705	0.38120	0.34760	0.31425
310.0 /	0.25856	0.39341	0.38699	0.34931	0.31055
300.0 /	0.33308	0.49928	0.51364	0.47448	0.43000
290.0 /	0.25682	0.39796	0.38655	0.34152	0.30071
280.0 /	0.30075	0.45559	0.44607	0.39933	0.35195
270.0 /	0.35153	0.53846	0.57275	0.53988	0.49492
260.0 /	0.24739	0.37350	0.38132	0.34556	0.30789
250.0 /	0.28458	0.41245	0.42054	0.37042	0.35878
240.0 /	0.37351	0.54802	0.54673	0.49464	0.44370
230.0 /	0.40867	0.60845	0.63238	0.59013	0.54161
220.0 /	0.30076	0.46277	0.48470	0.45720	0.42676
210.0 /	0.27198	0.41381	0.42858	0.41503	0.38540
200.0 /	0.23262	0.34993	0.38335	0.37543	0.35870
190.0 /	0.19197	0.28527	0.30339	0.28615	0.26265
180.0 /	0.26443	0.39560	0.44146	0.43709	0.41760
170.0 /	0.21763	0.32874	0.34209	0.32011	0.29472
160.0 /	0.22222	0.33264	0.34705	0.32284	0.29316
150.0 /	0.21782	0.31607	0.31708	0.28580	0.25257
140.0 /	0.30272	0.41607	0.40366	0.35206	0.30145
130.0 /	0.35117	0.47360	0.46132	0.40699	0.35411
120.0 /	0.35173	0.47450	0.46109	0.40672	0.35334
110.0 /	0.31377	0.40847	0.39360	0.35031	0.30965
100.0 /	0.20080	0.27075	0.26087	0.23005	0.20086
90.0 /	0.18659	0.26307	0.27161	0.25020	0.22579
80.0 /	0.19725	0.28933	0.28704	0.25546	0.22326
70.0 /	0.23305	0.32938	0.32703	0.27435	0.26084
60.0 /	0.23517	0.32545	0.31596	0.28088	0.24672
50.0 /	0.31388	0.41513	0.40333	0.36222	0.32027
40.0 /	0.27360	0.38153	0.36334	0.31688	0.27419
30.0 /	0.23578	0.35087	0.33240	0.28048	0.23409
20.0 /	0.30510	0.43278	0.41685	0.36002	0.30904
10.0 /	0.38431	0.53236	0.50642	0.43549	0.37172

HIGH
3-HR
SGROUP# 1

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* HIGHEST 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 35.05761 AND OCCURRED AT (500.0, 30.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	30.84091 (290, 4)	27.48871 (290, 4)	25.27772 (290, 4)	21.91789 (290, 4)	18.69539 (290, 4)
350.0 /	22.04694 (109, 4)	20.69554 (120, 4)	16.58789 (209, 5)	15.99318 (71, 5)	14.64472 (71, 5)
340.0 /	27.27339 (359, 6)	23.93079 (359, 8)	24.78109 (194, 3)	22.58609 (194, 3)	19.43115 (194, 3)
330.0 /	23.25622 (10, 8)	23.58043 (10, 8)	24.01015 (10, 8)	22.04357 (10, 8)	19.42149 (10, 8)
320.0 /	12.65995 (120, 5)	15.82206 (316, 4)	14.08164 (108, 8)	13.56152 (108, 8)	13.47511 (290, 1)
310.0 /	14.40644 (104, 4)	15.54887 (281, 4)	15.38717 (19, 4)	12.63915 (19, 4)	12.00127 (364, 2)
300.0 /	24.90326 (87, 5)	25.15131 (87, 5)	22.74179 (87, 5)	19.28601 (87, 5)	16.16606 (87, 5)
290.0 /	14.09529 (86, 4)	21.17017 (196, 6)	17.93336 (205, 6)	17.43695 (77, 6)	16.04347 (77, 6)
280.0 /	22.69597 (114, 4)	26.48679 (114, 4)	20.55326 (114, 4)	15.45650 (205, 6)	13.26906 (126, 6)
270.0 /	25.71849 (112, 5)	23.13315 (112, 5)	18.85946 (112, 5)	15.89019 (347, 4)	15.97802 (287, 5)
260.0 /	20.16329 (112, 4)	18.36059 (287, 4)	17.04593 (287, 4)	15.32272 (210, 6)	13.96865 (210, 6)
250.0 /	21.75909 (181, 6)	32.35304 (181, 6)	27.63246 (181, 6)	20.95330 (181, 6)	15.88479 (181, 6)
240.0 /	20.43987 (174, 4)	23.00628 (284, 5)	22.27483 (182, 6)	19.20759 (182, 6)	16.14341 (182, 6)
230.0 /	19.57065 (306, 5)	22.07051 (141, 5)	18.06585 (338, 4)	16.72580 (131, 6)	15.57770 (131, 6)
220.0 /	15.90353 (295, 5)	19.66220 (175, 6)	19.43640 (175, 6)	15.64749 (175, 6)	14.85718 (319, 6)
210.0 /	18.49326 (285, 4)	24.06855 (285, 4)	21.58925 (285, 4)	17.82530 (285, 4)	14.62283 (285, 4)
200.0 /	17.98035 (17, 4)	16.78472 (17, 4)	19.14324 (52, 6)	19.77749 (52, 6)	18.68132 (52, 6)
190.0 /	18.99824 (106, 5)	23.02692 (131, 4)	21.00120 (303, 4)	18.80350 (303, 4)	16.14221 (303, 4)
180.0 /	19.59497 (85, 5)	20.24558 (293, 5)	17.33732 (293, 5)	14.56664 (303, 8)	13.95057 (74, 3)
170.0 /	13.58909 (155, 4)	16.38895 (14, 5)	16.05921 (14, 5)	14.44439 (353, 2)	13.91127 (353, 9)
160.0 /	15.28191 (353, 1)	21.24667 (165, 4)	20.64686 (68, 3)	18.04033 (68, 3)	15.39102 (353, 1)
150.0 /	16.16752 (94, 4)	21.58840 (94, 4)	17.94213 (361, 4)	15.41597 (352, 7)	14.01418 (352, 7)
140.0 /	21.33290 (231, 5)	31.07622 (231, 5)	23.77326 (231, 5)	21.68594 (355, 3)	19.55106 (355, 3)
130.0 /	30.08136 (317, 4)	27.56232 (244, 5)	24.39089 (317, 4)	21.23285 (317, 4)	18.15272 (317, 4)
120.0 /	24.50401 (317, 5)	20.91807 (317, 5)	18.98149 (317, 5)	17.62832 (6, 5)	16.32224 (356, 5)
110.0 /	22.00867 (93, 6)	25.86541 (129, 4)	18.52394 (93, 6)	18.41506 (344, 6)	17.57529 (344, 6)
100.0 /	26.31584 (138, 5)	26.00016 (186, 6)	23.57323 (186, 6)	18.23422 (186, 6)	14.12035 (124, 6)
90.0 /	20.96747 (78, 4)	20.56363 (1, 5)	19.31350 (1, 5)	15.47993 (325, 5)	13.42441 (325, 5)
80.0 /	24.42751 (157, 4)	29.12420 (157, 4)	20.70244 (325, 4)	18.81446 (91, 6)	16.84002 (91, 6)
70.0 /	25.67729 (73, 5)	27.56293 (110, 4)	22.20900 (73, 5)	19.63114 (73, 5)	16.92520 (73, 5)
60.0 /	21.53331 (186, 4)	24.16258 (186, 4)	18.24344 (186, 4)	14.12095 (43, 6)	12.17189 (43, 6)
50.0 /	29.04578 (25, 5)	22.34429 (186, 4)	18.77322 (89, 5)	15.80397 (89, 5)	14.75092 (61, 2)
40.0 /	20.22816 (83, 6)	25.86120 (166, 5)	18.58655 (166, 5)	14.00983 (83, 6)	11.92153 (83, 6)
30.0 /	35.05761 (89, 4)	29.14104 (89, 4)	24.66244 (89, 4)	20.49582 (89, 4)	17.07333 (89, 4)
20.0 /	21.53517 (119, 4)	24.41856 (119, 4)	21.09179 (119, 4)	17.06936 (119, 4)	14.62081 (19, 9)
10.0 /	24.30997 (119, 5)	26.38409 (167, 4)	20.36990 (167, 4)	16.01156 (331, 4)	14.14196 (331, 4)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* SECOND HIGHEST 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 26.46408 AND OCCURRED AT (1000.0, 250.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	23.47917 (109, 4)	23.25024 (190, 5)	19.35533 (13, 2)	19.24883 (13, 2)	17.77108 (13, 2)
350.0 /	17.30402 (55, 3)	20.07011 (115, 4)	16.33634 (120, 4)	14.30260 (209, 5)	12.49527 (72, 6)
340.0 /	22.11366 (266, 3)	22.74613 (151, 4)	23.59180 (8, 4)	21.90285 (8, 4)	19.42724 (8, 4)
330.0 /	18.98109 (359, 4)	21.45010 (210, 5)	16.53120 (359, 4)	15.55705 (359, 6)	14.06705 (359, 6)
320.0 /	12.56390 (123, 4)	14.89707 (53, 5)	13.91913 (316, 4)	13.31289 (266, 1)	12.89715 (266, 1)
310.0 /	13.52364 (117, 5)	14.85147 (19, 4)	13.63776 (197, 4)	12.41768 (364, 2)	10.11846 (19, 4)
300.0 /	19.75613 (113, 5)	20.78146 (117, 5)	19.47794 (103, 6)	17.29217 (103, 6)	14.84454 (103, 6)
290.0 /	12.75220 (77, 6)	18.67719 (205, 6)	17.59650 (77, 6)	15.88848 (86, 5)	14.45215 (86, 5)
280.0 /	19.03027 (197, 5)	23.33371 (197, 5)	19.22965 (197, 5)	15.38933 (340, 5)	13.10595 (205, 6)
270.0 /	20.59636 (114, 4)	22.22271 (114, 4)	17.73038 (347, 4)	15.56619 (203, 6)	13.82288 (347, 4)
260.0 /	16.57662 (287, 4)	17.79047 (112, 4)	15.72739 (210, 6)	14.47988 (287, 4)	12.07757 (287, 4)
250.0 /	15.19061 (103, 5)	26.46408 (144, 5)	20.90034 (144, 5)	14.82611 (144, 5)	13.46341 (239, 6)
240.0 /	20.28127 (142, 5)	22.99617 (182, 6)	19.41382 (300, 5)	17.20853 (174, 4)	14.92845 (307, 5)
230.0 /	18.42661 (141, 5)	21.40369 (338, 4)	17.71615 (294, 4)	14.73267 (306, 5)	13.63552 (306, 6)
220.0 /	15.31565 (2, 5)	19.30677 (96, 4)	17.93930 (283, 5)	15.53986 (319, 6)	13.63605 (76, 6)
210.0 /	15.63901 (141, 4)	21.22493 (320, 4)	17.92874 (320, 4)	14.38757 (183, 3)	14.15477 (262, 3)
200.0 /	14.19610 (141, 4)	16.57706 (45, 4)	16.44529 (21, 4)	14.61288 (17, 4)	14.05500 (292, 7)
190.0 /	18.52054 (64, 4)	22.73281 (64, 4)	20.26944 (131, 4)	14.67570 (131, 4)	14.20396 (5, 3)
180.0 /	16.59870 (106, 5)	19.90650 (85, 5)	14.97629 (7, 4)	14.37029 (74, 3)	13.78445 (303, 8)
170.0 /	13.50915 (85, 5)	14.92263 (95, 4)	14.64986 (68, 2)	14.23731 (68, 2)	13.70139 (94, 2)
160.0 /	14.70352 (230, 4)	20.60613 (102, 4)	19.68076 (165, 4)	16.98445 (353, 1)	15.08810 (68, 3)
150.0 /	14.77386 (125, 4)	20.74486 (125, 4)	15.50992 (94, 4)	14.67683 (361, 4)	12.72212 (268, 5)
140.0 /	21.11293 (355, 3)	21.14491 (355, 3)	22.77000 (355, 3)	16.77661 (231, 5)	12.14065 (231, 5)
130.0 /	19.67333 (244, 5)	26.34741 (317, 4)	22.52061 (244, 5)	17.50589 (244, 5)	15.37157 (105, 6)
120.0 /	23.15111 (55, 5)	18.52932 (55, 5)	18.57740 (6, 5)	17.43587 (356, 5)	15.81920 (6, 5)
110.0 /	20.16978 (129, 4)	22.08277 (128, 5)	18.28568 (344, 6)	16.17262 (93, 6)	13.79690 (93, 6)
100.0 /	19.54194 (93, 5)	22.55435 (138, 5)	17.31886 (124, 6)	15.98369 (124, 6)	13.92083 (186, 6)
90.0 /	20.51971 (124, 5)	20.22775 (267, 4)	18.88701 (267, 4)	15.24022 (1, 5)	11.92219 (70, 4)
80.0 /	21.52626 (157, 5)	24.04074 (157, 5)	19.86446 (91, 6)	17.94152 (325, 4)	15.49367 (81, 6)
70.0 /	20.66536 (186, 5)	23.41454 (73, 5)	18.90537 (110, 4)	16.78163 (150, 4)	12.45347 (150, 4)
60.0 /	21.34266 (37, 6)	20.27041 (191, 4)	16.15333 (37, 6)	13.74603 (37, 6)	11.59573 (37, 6)
50.0 /	25.43665 (89, 5)	21.65551 (91, 5)	17.64673 (91, 5)	15.22129 (61, 2)	13.31231 (4, 6)
40.0 /	18.02527 (188, 4)	21.20977 (188, 4)	16.35337 (188, 4)	13.17951 (50, 5)	11.41005 (50, 5)
30.0 /	19.10727 (66, 5)	20.35296 (66, 5)	17.40278 (66, 5)	13.99133 (186, 3)	12.93343 (186, 3)
20.0 /	18.14924 (207, 5)	19.47681 (207, 5)	16.40897 (245, 4)	15.25088 (245, 4)	13.82243 (119, 4)
10.0 /	20.61949 (167, 4)	23.71878 (119, 5)	19.42616 (191, 3)	15.61148 (119, 6)	13.20328 (119, 6)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	35.05761	4	89	500.0	30.0	26	25.15131	5	87	1000.0	300.0
2	32.35384	6	181	1000.0	250.0	27	24.90326	5	87	500.0	300.0
3	31.07622	5	231	1000.0	140.0	28	24.78109	3	194	1500.0	340.0
4	30.84091	4	290	500.0	360.0	29	24.66244	4	87	1500.0	30.0
5	30.08136	4	317	500.0	130.0	30	24.50401	5	317	500.0	120.0
6	29.14104	4	87	1000.0	30.0	31	24.43509	5	91	500.0	50.0
7	29.12420	4	157	1000.0	80.0	32	24.42751	4	157	500.0	80.0
8	29.04578	5	25	500.0	50.0	33	24.41856	4	119	1000.0	20.0
9	27.63246	6	181	1500.0	250.0	34	24.39089	4	317	1500.0	130.0
10	27.56293	4	110	1000.0	70.0	35	24.30797	5	119	500.0	10.0
11	27.56232	5	244	1000.0	130.0	36	24.16258	4	186	1000.0	60.0
12	27.48871	4	290	1000.0	360.0	37	24.06895	4	285	1000.0	210.0
13	27.27335	8	359	500.0	340.0	38	24.04074	5	157	1000.0	80.0
14	26.48679	4	114	1000.0	280.0	39	24.01015	8	10	1500.0	330.0
15	26.46408	5	144	1000.0	250.0	40	23.93079	8	359	1000.0	340.0
16	26.38409	4	167	1000.0	10.0	41	23.84385	4	128	1000.0	130.0
17	26.34741	4	317	1000.0	130.0	42	23.77326	5	231	1500.0	140.0
18	26.31584	5	138	500.0	100.0	43	23.71878	5	119	1000.0	10.0
19	26.00016	6	186	1000.0	100.0	44	23.59180	4	8	1500.0	340.0
20	25.86541	4	129	1000.0	110.0	45	23.58043	8	10	1000.0	330.0
21	25.86120	5	166	1000.0	40.0	46	23.57323	6	186	1500.0	100.0
22	25.71849	5	112	500.0	270.0	47	23.47917	4	109	500.0	360.0
23	25.67728	5	73	500.0	70.0	48	23.41454	5	73	1000.0	70.0
24	25.43565	5	89	500.0	50.0	49	23.33371	5	197	1000.0	280.0
25	25.27772	4	290	1500.0	360.0	50	23.25622	8	10	500.0	330.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 8.44108 AND OCCURRED AT (1500.0, 340.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	7.31763 (290, 1)	6.80225 (290, 1)	6.66606 (290, 1)	6.08182 (290, 1)	5.37425 (290, 1)
350.0 /	4.59277 (55, 1)	4.81611 (223, 1)	4.42435 (55, 1)	4.01798 (55, 1)	3.51987 (55, 1)
340.0 /	7.47675 (12, 1)	7.95079 (12, 1)	8.44108 (12, 1)	7.96771 (12, 1)	7.22423 (12, 1)
330.0 /	7.81122 (359, 1)	7.15500 (359, 1)	7.05115 (359, 1)	6.40784 (359, 1)	5.61664 (359, 1)
320.0 /	2.77991 (10, 1)	3.15224 (227, 1)	3.50597 (10, 1)	3.65973 (10, 1)	3.69472 (109, 1)
310.0 /	3.27850 (117, 1)	3.91952 (117, 1)	3.60936 (196, 1)	3.09117 (104, 1)	2.99544 (104, 1)
300.0 /	6.40713 (87, 1)	7.91571 (117, 1)	6.88427 (117, 1)	5.61520 (117, 1)	4.80266 (87, 1)
290.0 /	3.77064 (86, 1)	4.63100 (214, 1)	3.92741 (214, 1)	3.39116 (313, 1)	3.47991 (313, 1)
280.0 /	4.09967 (114, 1)	5.59609 (205, 1)	4.82498 (205, 1)	4.11149 (205, 1)	3.51227 (205, 1)
270.0 /	5.44931 (112, 1)	5.49124 (247, 1)	6.02613 (247, 1)	5.45602 (247, 1)	4.71656 (247, 1)
260.0 /	4.95596 (112, 1)	4.51471 (112, 1)	3.72978 (144, 1)	3.27332 (144, 1)	2.79309 (144, 1)
250.0 /	4.35207 (181, 1)	7.00483 (181, 1)	6.19293 (181, 1)	4.75658 (181, 1)	3.62331 (181, 1)
240.0 /	5.06243 (174, 1)	6.23379 (174, 1)	6.01705 (174, 1)	5.27309 (174, 1)	4.51631 (174, 1)
230.0 /	4.31322 (304, 1)	4.76707 (145, 1)	4.43532 (174, 1)	4.40383 (305, 1)	4.34368 (305, 1)
220.0 /	3.84790 (2, 1)	4.42042 (145, 1)	3.90846 (2, 1)	3.88820 (17, 1)	3.91522 (17, 1)
210.0 /	3.57360 (285, 1)	4.50713 (285, 1)	4.52181 (111, 1)	4.13093 (111, 1)	3.68609 (332, 1)
200.0 /	3.01000 (17, 1)	3.78421 (21, 1)	3.98129 (52, 1)	4.30614 (52, 1)	4.25048 (52, 1)
190.0 /	4.33794 (64, 1)	5.17816 (64, 1)	5.00922 (64, 1)	4.38830 (64, 1)	3.74328 (64, 1)
180.0 /	4.76730 (293, 1)	6.86058 (293, 1)	7.54538 (293, 1)	7.28059 (293, 1)	6.90298 (293, 1)
170.0 /	4.01506 (353, 1)	4.65124 (95, 1)	5.68347 (353, 1)	6.14422 (353, 1)	6.14462 (353, 1)
160.0 /	3.75639 (102, 1)	5.94298 (102, 1)	5.45025 (102, 1)	4.57799 (102, 1)	3.92276 (102, 1)
150.0 /	3.99467 (125, 1)	5.52127 (125, 1)	5.04785 (125, 1)	4.22229 (14, 1)	3.81628 (14, 1)
140.0 /	5.32438 (355, 1)	5.26643 (355, 1)	5.59802 (355, 1)	5.28190 (355, 1)	4.73124 (355, 1)
130.0 /	7.26215 (317, 1)	6.27492 (317, 1)	5.85999 (317, 1)	5.33965 (67, 1)	4.71653 (67, 1)
120.0 /	5.92969 (317, 1)	7.55708 (180, 1)	6.08877 (356, 1)	5.82511 (356, 1)	5.25089 (356, 1)
110.0 /	6.72741 (78, 1)	6.44387 (78, 1)	6.44236 (78, 1)	5.89066 (78, 1)	5.16648 (78, 1)
100.0 /	4.28530 (124, 1)	4.17503 (124, 1)	3.96706 (124, 1)	3.87500 (78, 1)	3.59588 (78, 1)
90.0 /	5.41174 (124, 1)	4.82102 (124, 1)	4.84436 (124, 1)	4.77758 (124, 1)	4.68843 (124, 1)
80.0 /	6.12324 (157, 1)	7.26304 (157, 1)	5.27105 (157, 1)	4.45231 (81, 1)	4.05185 (81, 1)
70.0 /	5.20703 (158, 1)	5.91281 (157, 1)	5.28481 (178, 1)	4.52158 (178, 1)	4.11002 (158, 1)
60.0 /	3.80509 (37, 1)	3.91882 (110, 1)	3.74917 (188, 1)	3.49299 (188, 1)	3.11636 (189, 1)
50.0 /	5.26425 (25, 1)	4.50086 (160, 1)	4.12384 (160, 1)	3.76345 (351, 1)	3.68185 (351, 1)
40.0 /	3.37996 (66, 1)	4.35527 (188, 1)	3.83698 (188, 1)	3.50004 (66, 1)	3.24484 (66, 1)
30.0 /	4.42956 (89, 1)	5.23610 (202, 1)	4.97161 (202, 1)	4.13476 (202, 1)	3.37739 (202, 1)
20.0 /	6.12873 (119, 1)	6.82587 (119, 1)	5.39599 (119, 1)	4.09410 (20, 1)	3.69449 (19, 1)
10.0 /	6.78487 (119, 1)	7.76253 (119, 1)	6.17548 (119, 1)	5.86479 (331, 1)	5.23751 (331, 1)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* SECOND HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 6.44393 AND OCCURRED AT (1000.0, 300.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	6.28229 (109, 1)	5.81180 (109, 1)	4.68890 (55, 1)	4.23408 (55, 1)	4.07273 (316, 1)
350.0 /	4.03813 (72, 1)	4.43610 (55, 1)	3.84924 (209, 1)	3.51957 (194, 1)	3.41321 (193, 1)
340.0 /	5.23435 (266, 1)	6.25524 (261, 1)	5.63343 (261, 1)	4.38154 (261, 1)	3.85719 (266, 1)
330.0 /	6.15017 (10, 1)	5.78024 (10, 1)	5.62023 (10, 1)	5.01654 (10, 1)	4.33876 (10, 1)
320.0 /	2.52249 (266, 1)	2.99989 (10, 1)	3.05094 (265, 1)	3.34273 (109, 1)	3.41192 (10, 1)
310.0 /	2.85140 (227, 1)	3.80643 (196, 1)	3.13042 (104, 1)	2.93956 (196, 1)	2.65398 (364, 1)
300.0 /	6.25088 (117, 1)	6.44393 (87, 1)	6.24468 (87, 1)	5.55592 (87, 1)	4.58945 (117, 1)
290.0 /	3.12619 (205, 1)	4.25581 (205, 1)	3.67879 (288, 1)	3.22377 (86, 1)	2.77415 (86, 1)
280.0 /	3.84184 (222, 1)	5.24706 (214, 1)	4.81307 (288, 1)	3.90781 (288, 1)	3.25822 (222, 1)
270.0 /	4.53534 (234, 1)	5.14429 (112, 1)	4.32823 (205, 1)	3.71753 (314, 1)	3.66369 (314, 1)
260.0 /	3.15274 (287, 1)	3.76406 (144, 1)	3.60512 (112, 1)	3.04330 (247, 1)	2.67032 (169, 1)
250.0 /	3.23260 (144, 1)	5.58523 (144, 1)	4.78635 (144, 1)	3.72334 (144, 1)	3.23510 (251, 1)
240.0 /	4.59080 (142, 1)	5.32104 (300, 1)	5.17864 (182, 1)	4.42703 (182, 1)	3.69424 (182, 1)
230.0 /	3.84163 (306, 1)	4.74433 (45, 1)	4.36240 (102, 1)	4.15341 (309, 1)	3.81241 (309, 1)
220.0 /	3.84527 (182, 1)	3.93328 (285, 1)	3.78016 (63, 1)	3.62777 (2, 1)	3.34964 (240, 1)
210.0 /	3.54766 (141, 1)	4.12157 (111, 1)	3.85873 (285, 1)	3.49907 (273, 1)	3.59052 (111, 1)
200.0 /	2.37040 (52, 1)	3.08441 (52, 1)	3.95703 (292, 1)	3.94484 (292, 1)	3.53329 (5, 1)
190.0 /	3.08581 (353, 1)	3.41231 (353, 1)	3.94427 (353, 1)	3.89317 (353, 1)	3.57250 (353, 1)
180.0 /	4.05597 (85, 1)	4.46428 (268, 1)	5.61937 (268, 1)	5.84303 (268, 1)	5.63613 (268, 1)
170.0 /	3.25868 (155, 1)	4.46023 (353, 1)	4.90042 (95, 1)	4.47395 (95, 1)	4.04453 (95, 1)
160.0 /	3.74410 (94, 1)	4.46151 (95, 1)	4.41123 (94, 1)	4.22759 (94, 1)	3.91330 (94, 1)
150.0 /	3.16276 (352, 1)	4.04698 (14, 1)	4.44229 (14, 1)	4.20013 (125, 1)	3.57244 (352, 1)
140.0 /	4.12679 (38, 1)	5.17550 (139, 1)	4.49914 (291, 1)	3.94253 (291, 1)	3.38325 (291, 1)
130.0 /	6.00642 (67, 1)	5.79318 (67, 1)	5.82764 (67, 1)	5.11604 (317, 1)	4.49973 (356, 1)
120.0 /	5.44173 (13, 1)	5.29052 (356, 1)	5.81054 (190, 1)	5.01928 (13, 1)	4.46605 (13, 1)
110.0 /	5.44688 (93, 1)	4.65168 (129, 1)	4.44029 (13, 1)	4.21364 (13, 1)	3.78722 (13, 1)
100.0 /	4.27285 (138, 1)	3.91911 (138, 1)	3.90903 (78, 1)	3.52813 (124, 1)	3.05898 (124, 1)
90.0 /	4.06965 (78, 1)	4.56729 (1, 1)	4.59051 (325, 1)	4.36940 (325, 1)	4.07075 (325, 1)
80.0 /	3.51649 (81, 1)	4.30151 (133, 1)	4.58217 (91, 1)	3.87756 (157, 1)	3.25666 (325, 1)
70.0 /	4.90806 (157, 1)	5.04244 (158, 1)	4.82604 (158, 1)	4.49344 (158, 1)	3.69152 (178, 1)
60.0 /	3.60794 (186, 1)	3.76168 (186, 1)	3.31453 (100, 1)	2.64223 (60, 1)	2.51146 (60, 1)
50.0 /	4.09474 (89, 1)	4.05483 (186, 1)	3.50705 (351, 1)	3.31782 (160, 1)	3.12801 (61, 1)
40.0 /	3.34031 (188, 1)	4.18391 (166, 1)	3.62891 (66, 1)	3.16950 (188, 1)	2.62298 (188, 1)
30.0 /	3.59179 (66, 1)	3.86997 (66, 1)	3.52366 (66, 1)	3.16016 (24, 1)	2.73849 (24, 1)
20.0 /	4.28415 (215, 1)	4.71506 (215, 1)	4.29497 (20, 1)	4.08231 (119, 1)	3.67832 (20, 1)
10.0 /	4.71237 (167, 1)	6.14623 (167, 1)	6.04040 (331, 1)	4.70206 (119, 1)	3.64205 (119, 1)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	8.44109	1	12	1500.0	340.0	26	6.44393	1	87	1000.0	300.0
2	7.96771	1	12	2000.0	340.0	27	6.44387	1	78	1000.0	110.0
3	7.95079	1	12	1000.0	340.0	28	6.44236	1	78	1500.0	110.0
4	7.91571	1	117	1000.0	300.0	29	6.40784	1	359	2000.0	330.0
5	7.81122	1	359	500.0	330.0	30	6.40713	1	87	500.0	300.0
6	7.76253	1	119	1000.0	10.0	31	6.28229	1	109	500.0	360.0
7	7.55706	1	180	1000.0	120.0	32	6.27492	1	317	1000.0	130.0
8	7.54538	1	293	1500.0	180.0	33	6.25524	1	261	1000.0	340.0
9	7.47675	1	12	500.0	340.0	34	6.25088	1	117	500.0	300.0
10	7.31763	1	290	500.0	360.0	35	6.24468	1	87	1500.0	300.0
11	7.28059	1	293	2000.0	180.0	36	6.23379	1	174	1000.0	240.0
12	7.26304	1	157	1000.0	80.0	37	6.19293	1	181	1500.0	250.0
13	7.26215	1	317	500.0	130.0	38	6.17548	1	117	1500.0	10.0
14	7.22423	1	12	2500.0	340.0	39	6.15017	1	10	500.0	330.0
15	7.15500	1	359	1000.0	330.0	40	6.14623	1	167	1000.0	10.0
16	7.05115	1	359	1500.0	330.0	41	6.14462	1	353	2500.0	170.0
17	7.00483	1	181	1000.0	250.0	42	6.14422	1	353	2000.0	170.0
18	6.88427	1	117	1500.0	300.0	43	6.12873	1	119	500.0	20.0
19	6.86058	1	293	1000.0	180.0	44	6.12324	1	157	500.0	80.0
20	6.82587	1	119	1000.0	20.0	45	6.08977	1	356	1500.0	120.0
21	6.80225	1	293	2500.0	180.0	46	6.08200	1	113	500.0	300.0
22	6.80225	1	290	1000.0	360.0	47	6.08162	1	290	2000.0	360.0
23	6.78457	1	119	500.0	10.0	48	6.04040	1	331	1500.0	10.0
24	6.72741	1	78	500.0	110.0	49	6.02613	1	247	1500.0	270.0
25	6.66606	1	290	1500.0	360.0	50	6.01705	1	174	1500.0	240.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 2
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION)	
WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 0
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE	
SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 0
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 2
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(28) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 10
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 36
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK =.10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 75
UPPER AIR STATION NO.	IUS = 12842
YEAR OF UPPER AIR DATA	IUY = 75
ALLOCATED DATA STORAGE	LIMIT = 43500 WORDS

IST-5

1975 NRG ONLY SO_2
(Selected Days)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** METEOROLOGICAL DAYS TO BE PROCESSED ***
(IF=1)

0 0 0 0 0 0 0 0 0	0 1 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 1 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1 0 1 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 1 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 1	1 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	1 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 1	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 1 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 1 0	0 0 0 0 0 0			

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
B	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
C	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00
D	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00
E	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00
F	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

200.0,	300.0,	400.0,	600.0,	700.0,	800.0,	900.0,	1200.0,	1400.0,	1700.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0,	20.0,	30.0,	40.0,	50.0,	60.0,	70.0,	80.0,	90.0,	100.0,
110.0,	120.0,	130.0,	140.0,	150.0,	160.0,	170.0,	180.0,	190.0,	200.0,
210.0,	220.0,	230.0,	240.0,	250.0,	260.0,	270.0,	280.0,	290.0,	300.0,
310.0,	320.0,	330.0,	340.0,	350.0,	360.0,				

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG. K); VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ. DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
101	0	0	0	0.15900E+02	0.0	0.0	0.0	38.10	450.00	20.00	1.83	22.00	38.10	19.80

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	70.19772	4	290	200.0	360.0	26	36.36890	7	317	200.0	110.0
2	68.90119	4	317	200.0	130.0	27	35.83118	5	89	400.0	50.0
3	63.91370	4	89	200.0	30.0	28	35.02093	5	317	400.0	120.0
4	63.32747	8	359	200.0	340.0	29	34.94394	8	12	200.0	340.0
5	58.23714	4	290	300.0	360.0	30	31.71664	6	181	900.0	250.0
6	57.92264	5	89	200.0	50.0	31	31.40389	6	181	1200.0	250.0
7	57.42823	4	89	300.0	30.0	32	31.22021	5	231	900.0	140.0
8	57.39693	5	317	200.0	120.0	33	30.54041	4	119	300.0	20.0
9	56.98250	4	317	300.0	130.0	34	30.45523	4	119	200.0	20.0
10	52.16842	8	359	300.0	340.0	35	30.38268	5	359	200.0	330.0
11	47.64022	5	89	300.0	50.0	36	30.36380	4	89	700.0	30.0
12	46.98251	5	317	300.0	120.0	37	30.29858	6	12	200.0	330.0
13	46.78093	4	359	200.0	330.0	38	30.29595	4	89	800.0	30.0
14	46.24045	4	12	200.0	340.0	39	30.26907	8	317	300.0	140.0
15	46.08212	5	290	200.0	360.0	40	30.09605	5	231	800.0	140.0
16	45.87842	4	89	400.0	30.0	41	29.89275	6	181	800.0	250.0
17	45.28519	1	290	200.0	320.0	42	29.83396	4	89	900.0	30.0
18	43.82031	4	290	400.0	360.0	43	29.77248	4	89	600.0	30.0
19	42.79799	4	317	400.0	130.0	44	29.69927	7	359	200.0	330.0
20	38.99323	8	359	400.0	340.0	45	29.59470	5	290	200.0	350.0
21	38.31227	4	12	300.0	340.0	46	29.48559	6	359	300.0	330.0
22	37.81305	4	359	300.0	330.0	47	29.19773	1	290	300.0	320.0
23	37.64730	5	290	300.0	360.0	48	29.08799	7	317	300.0	110.0
24	37.61814	8	317	200.0	140.0	49	29.01781	6	181	1400.0	250.0
25	36.88528	6	359	200.0	330.0	50	28.73603	5	231	1200.0	140.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	20.34323	1	12	200.0	340.0	26	8.30731	1	12	1700.0	340.0
2	19.85964	1	359	200.0	330.0	27	8.25084	1	89	200.0	30.0
3	17.95250	1	317	200.0	130.0	28	7.88555	1	119	900.0	10.0
4	17.77008	1	290	200.0	360.0	29	7.85725	1	89	300.0	50.0
5	16.00315	1	359	300.0	330.0	30	7.85455	1	117	900.0	300.0
6	15.98145	1	12	300.0	340.0	31	7.79979	1	119	800.0	10.0
7	14.92529	1	317	200.0	120.0	32	7.77966	1	12	300.0	330.0
8	14.52427	1	290	300.0	360.0	33	7.64484	1	117	1200.0	300.0
9	14.50667	1	317	300.0	130.0	34	7.62219	1	180	900.0	120.0
10	12.77227	1	359	200.0	340.0	35	7.59507	1	12	900.0	340.0
11	12.01709	1	317	300.0	120.0	36	7.55682	1	117	800.0	300.0
12	11.59301	1	359	400.0	330.0	37	7.51923	1	317	200.0	110.0
13	11.14864	1	12	400.0	340.0	38	7.48337	1	119	300.0	10.0
14	10.68823	1	290	400.0	360.0	39	7.46976	1	359	400.0	340.0
15	10.61707	1	317	400.0	130.0	40	7.39249	1	180	800.0	120.0
16	10.27340	1	359	300.0	340.0	41	7.38728	1	117	400.0	300.0
17	9.94777	1	12	200.0	330.0	42	7.38055	1	119	700.0	10.0
18	9.67830	1	89	200.0	50.0	43	7.36047	1	119	400.0	10.0
19	8.74404	1	317	400.0	120.0	44	7.34341	1	89	300.0	30.0
20	8.67047	1	317	200.0	140.0	45	7.22736	1	359	1200.0	330.0
21	8.65963	1	290	200.0	320.0	46	7.20688	1	119	1200.0	10.0
22	8.65426	1	117	200.0	300.0	47	7.19266	1	12	800.0	340.0
23	8.61537	1	117	300.0	300.0	48	7.15349	1	117	1400.0	300.0
24	8.46021	1	12	1400.0	340.0	49	7.13751	1	359	1400.0	330.0
25	8.35161	1	12	1200.0	340.0	50	7.06407	1	119	300.0	20.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 2
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION)	
WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 1
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE	
SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 1
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 2
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(28) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 5
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 36
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK = .10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 = 0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 = 0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY = 0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 76
UPPER AIR STATION NO.	IUS = 12842
YEAR OF UPPER AIR DATA	IUY = 76
ALLOCATED DATA STORAGE	LIMIT = 43500 WORDS

IST-6

1976 - NRG Only - SO2

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*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09       ***


                    *** METEOROLOGICAL DAYS TO BE PROCESSED ***
                                     (IF=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 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 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 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

           *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                  (METERS/SEC)

                        1.54,   3.09,   5.14,   8.23,  10.80,


                          *** WIND PROFILE EXPONENTS ***

  STABILITY                           WIND SPEED CATEGORY
  CATEGORY         1             2             3             4             5             6
     A        .10000E+00    .10000E+00    .10000E+00    .10000E+00    .10000E+00    .10000E+00
     B        .15000E+00    .15000E+00    .15000E+00    .15000E+00    .15000E+00    .15000E+00
     C        .20000E+00    .20000E+00    .20000E+00    .20000E+00    .20000E+00    .20000E+00
     D        .25000E+00    .25000E+00    .25000E+00    .25000E+00    .25000E+00    .25000E+00
     E        .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00
     F        .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00

                  *** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
                            (DEGREES KELVIN PER METER)

  STABILITY                           WIND SPEED CATEGORY
  CATEGORY         1             2             3             4             5             6
     A        .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
     B        .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
     C        .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
     D        .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
     E        .20000E-01    .20000E-01    .20000E-01    .20000E-01    .20000E-01    .20000E-01
     F        .35000E-01    .35000E-01    .35000E-01    .35000E-01    .35000E-01    .35000E-01
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*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

500.0, 1000.0, 1500.0, 2000.0, 2500.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0,	20.0,	30.0,	40.0,	50.0,	60.0,	70.0,	80.0,	90.0,	100.0,
110.0,	120.0,	130.0,	140.0,	150.0,	160.0,	170.0,	180.0,	190.0,	200.0,
210.0,	220.0,	230.0,	240.0,	250.0,	260.0,	270.0,	280.0,	290.0,	300.0,
310.0,	320.0,	330.0,	340.0,	350.0,	360.0,				

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K); VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ. DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
101	0	0	0	0.15800E+02	0.0	0.0	0.0	38.10	450.00	20.00	1.83	22.00	38.10	19.80

"N"-DAY
365 DAYS
SGROUP# 1

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 366-DAY AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 0.86354 AND OCCURRED AT (1500.0, 180.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	0.45008	0.61502	0.62806	0.58577	0.53649
350.0 /	0.28655	0.40703	0.39769	0.35677	0.31716
340.0 /	0.31200	0.45427	0.46607	0.43313	0.39337
330.0 /	0.25302	0.38540	0.39268	0.35522	0.31292
320.0 /	0.28190	0.43044	0.43720	0.39663	0.35239
310.0 /	0.30277	0.44537	0.45020	0.40850	0.36390
300.0 /	0.33915	0.47150	0.48707	0.45514	0.41688
290.0 /	0.31838	0.43787	0.43551	0.39549	0.35207
280.0 /	0.29418	0.41563	0.39716	0.34999	0.30545
270.0 /	0.32460	0.46367	0.47537	0.44783	0.41403
260.0 /	0.26789	0.37853	0.37881	0.34752	0.31485
250.0 /	0.26875	0.39402	0.39772	0.36604	0.33267
240.0 /	0.33244	0.47490	0.49305	0.46365	0.42579
230.0 /	0.35687	0.48621	0.50748	0.48479	0.45142
220.0 /	0.34439	0.43518	0.43758	0.40545	0.36772
210.0 /	0.36712	0.43636	0.43422	0.39977	0.36200
200.0 /	0.48940	0.56752	0.57603	0.53428	0.48258
190.0 /	0.46870	0.55491	0.57515	0.53461	0.47977
180.0 /	0.62520	0.77760	0.86354	0.84694	0.79283
170.0 /	0.34628	0.46154	0.50619	0.49151	0.45818
160.0 /	0.28397	0.38558	0.42555	0.41581	0.38902
150.0 /	0.26811	0.36181	0.36949	0.33895	0.30195
140.0 /	0.33835	0.44265	0.43977	0.39437	0.34416
130.0 /	0.33864	0.45437	0.45690	0.41033	0.35766
120.0 /	0.28613	0.38977	0.40111	0.37019	0.33282
110.0 /	0.22610	0.29794	0.30946	0.29174	0.26749
100.0 /	0.24494	0.31345	0.32103	0.29821	0.27116
90.0 /	0.32452	0.41727	0.42940	0.39440	0.35267
80.0 /	0.22522	0.30349	0.30251	0.26796	0.23221
70.0 /	0.21258	0.29691	0.29180	0.26089	0.23198
60.0 /	0.28086	0.39004	0.38540	0.34487	0.30630
50.0 /	0.31542	0.41730	0.41369	0.36956	0.32565
40.0 /	0.26231	0.35260	0.34226	0.30254	0.26464
30.0 /	0.26658	0.36233	0.34044	0.29079	0.24672
20.0 /	0.32033	0.42980	0.41520	0.36696	0.31970
10.0 /	0.35411	0.47676	0.44999	0.39195	0.34063

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* HIGHEST 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 30.22696 AND OCCURRED AT (500.0, 200.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	24.65615 (49, 4)	27.75782 (134, 4)	22.90251 (216, 4)	19.26638 (363, 4)	17.89923 (363, 4)
350.0 /	20.83274 (27, 4)	21.92368 (102, 4)	18.19680 (172, 3)	15.22206 (128, 5)	14.97660 (129, 5)
340.0 /	17.85574 (61, 8)	20.90864 (281, 4)	19.45202 (281, 4)	18.48754 (294, 2)	17.84403 (294, 2)
330.0 /	22.49744 (192, 4)	22.50924 (24, 5)	22.68348 (24, 5)	20.08636 (24, 5)	17.18665 (24, 5)
320.0 /	16.67089 (189, 5)	21.87045 (269, 4)	18.60517 (269, 4)	16.24210 (135, 3)	15.12001 (135, 3)
310.0 /	14.00655 (189, 5)	21.16171 (126, 4)	18.44481 (86, 4)	17.66958 (136, 2)	17.22298 (136, 2)
300.0 /	16.11446 (64, 4)	19.43320 (249, 5)	17.18630 (64, 4)	15.09387 (126, 6)	14.51990 (126, 6)
290.0 /	18.42505 (298, 4)	26.17892 (298, 4)	21.92174 (298, 4)	17.61536 (86, 6)	16.09232 (86, 6)
280.0 /	16.22847 (84, 5)	25.58028 (204, 5)	16.02822 (298, 5)	14.22053 (64, 6)	12.68894 (269, 6)
270.0 /	14.78328 (114, 6)	19.52705 (80, 5)	18.93883 (121, 6)	19.01068 (121, 6)	17.68319 (121, 6)
260.0 /	23.14207 (59, 4)	27.98689 (59, 4)	24.43754 (59, 4)	19.82943 (59, 4)	16.07160 (59, 4)
250.0 /	19.32009 (307, 5)	19.11445 (49, 5)	18.88310 (307, 5)	17.05566 (307, 5)	14.85095 (307, 5)
240.0 /	19.72365 (344, 5)	23.52058 (224, 5)	19.80101 (224, 5)	18.23587 (165, 6)	16.51634 (165, 6)
230.0 /	19.52814 (240, 4)	27.06534 (240, 4)	21.10429 (240, 4)	19.81377 (232, 2)	18.31599 (344, 6)
220.0 /	23.99130 (166, 4)	22.03458 (166, 4)	21.18133 (232, 4)	20.19525 (232, 4)	18.15000 (232, 4)
210.0 /	17.45915 (19, 6)	26.85423 (51, 5)	22.15553 (51, 5)	16.76819 (19, 6)	14.82642 (19, 6)
200.0 /	30.22696 (100, 5)	25.90606 (286, 5)	24.08648 (286, 5)	21.05814 (286, 5)	18.03864 (286, 5)
190.0 /	23.90232 (58, 4)	19.84289 (58, 4)	18.04110 (302, 3)	15.74138 (302, 3)	13.85362 (292, 7)
180.0 /	26.93621 (313, 4)	24.49432 (313, 4)	24.71043 (302, 1)	22.62187 (302, 1)	19.70793 (302, 1)
170.0 /	19.22173 (220, 5)	13.67783 (15, 1)	15.53371 (15, 1)	16.13245 (339, 2)	15.99433 (339, 2)
160.0 /	22.22017 (356, 3)	19.66150 (301, 4)	19.15655 (356, 3)	17.23939 (356, 3)	16.02065 (335, 8)
150.0 /	17.38885 (54, 1)	23.19472 (208, 4)	19.88478 (67, 5)	16.18490 (99, 8)	14.70085 (99, 8)
140.0 /	26.64396 (54, 2)	23.90794 (54, 2)	22.99550 (54, 2)	20.51264 (54, 2)	17.78196 (54, 2)
130.0 /	20.87429 (362, 1)	18.60881 (362, 1)	19.58852 (151, 4)	17.21218 (310, 1)	17.36656 (310, 1)
120.0 /	17.25323 (17, 4)	21.02572 (77, 6)	21.03118 (77, 6)	17.94160 (77, 6)	14.86809 (77, 6)
110.0 /	29.74504 (17, 6)	24.75850 (17, 6)	22.88154 (17, 6)	19.99995 (17, 6)	17.16708 (17, 6)
100.0 /	24.82898 (17, 5)	23.26868 (198, 3)	22.24594 (198, 3)	18.93397 (198, 3)	15.82520 (198, 3)
90.0 /	28.69705 (139, 5)	22.54531 (196, 5)	21.12626 (117, 6)	18.81133 (117, 6)	16.25766 (117, 6)
80.0 /	22.11150 (145, 5)	22.98470 (197, 3)	21.76890 (197, 3)	19.25406 (122, 6)	17.28649 (122, 6)
70.0 /	24.81938 (145, 4)	20.06553 (133, 3)	18.57094 (315, 5)	14.21022 (315, 5)	12.84168 (350, 5)
60.0 /	27.12601 (145, 3)	24.18960 (145, 3)	22.43162 (145, 3)	19.55532 (145, 3)	16.72576 (145, 3)
50.0 /	24.34703 (69, 5)	22.71605 (95, 5)	19.84171 (145, 2)	18.36679 (145, 2)	16.23981 (145, 2)
40.0 /	20.02534 (69, 5)	18.55443 (273, 4)	19.16825 (325, 6)	19.63119 (325, 6)	18.40176 (325, 6)
30.0 /	21.58353 (69, 4)	20.42531 (187, 4)	18.16205 (214, 3)	16.00787 (210, 5)	14.39867 (210, 5)
20.0 /	18.54016 (69, 4)	21.11223 (187, 4)	19.60705 (68, 5)	15.45405 (68, 5)	12.44980 (363, 8)
10.0 /	22.43026 (32, 5)	20.28118 (299, 4)	21.61131 (299, 4)	20.34332 (299, 4)	18.16731 (299, 4)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* SECOND HIGHEST 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 28.78926 AND OCCURRED AT (500.0, 200.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	21.19865 (222, 5)	24.83574 (216, 4)	21.90362 (134, 4)	18.95196 (75, 4)	17.52147 (75, 4)
350.0 /	18.13273 (102, 4)	20.41935 (148, 5)	18.04944 (148, 5)	15.88781 (172, 3)	13.54404 (48, 6)
340.0 /	17.44827 (331, 5)	18.89658 (229, 4)	17.24978 (294, 2)	15.29574 (281, 4)	13.17252 (331, 5)
330.0 /	17.38426 (360, 5)	20.26411 (153, 4)	16.93501 (187, 6)	15.08141 (360, 5)	13.13486 (360, 5)
320.0 /	16.34606 (47, 4)	21.79969 (168, 4)	18.27926 (2, 5)	15.63531 (2, 5)	14.50997 (169, 4)
310.0 /	13.98037 (135, 4)	19.56631 (86, 4)	16.38690 (126, 4)	15.20405 (149, 3)	13.41100 (149, 3)
300.0 /	13.49223 (126, 6)	18.14613 (62, 4)	16.79549 (126, 6)	15.91860 (64, 4)	14.10809 (64, 4)
290.0 /	15.43405 (134, 6)	18.29134 (279, 4)	17.95035 (86, 6)	16.43940 (298, 4)	14.65016 (345, 4)
280.0 /	14.36148 (64, 6)	18.44854 (63, 5)	15.56416 (63, 5)	13.92426 (269, 6)	12.57179 (64, 6)
270.0 /	13.64539 (121, 6)	16.17679 (121, 6)	15.95572 (80, 5)	13.41803 (241, 5)	12.27164 (241, 5)
260.0 /	16.46848 (278, 4)	22.02718 (290, 4)	19.36260 (290, 4)	14.91974 (290, 4)	13.93369 (240, 6)
250.0 /	15.72117 (141, 4)	19.01994 (307, 5)	14.58536 (43, 5)	12.97506 (303, 5)	11.48361 (303, 5)
240.0 /	19.12640 (224, 5)	18.52935 (119, 5)	18.88920 (165, 6)	15.82135 (344, 5)	14.66190 (257, 1)
230.0 /	17.76539 (118, 6)	20.71124 (242, 4)	19.89018 (232, 2)	19.05444 (344, 6)	18.27280 (232, 2)
220.0 /	17.45387 (232, 4)	19.43077 (232, 4)	16.78427 (329, 4)	15.80458 (57, 4)	14.46039 (57, 4)
210.0 /	16.97569 (204, 4)	17.32733 (19, 6)	18.06491 (19, 6)	15.31797 (51, 5)	13.21933 (57, 5)
200.0 /	28.78926 (286, 5)	25.56489 (100, 5)	21.50704 (100, 5)	19.60515 (318, 6)	18.00573 (318, 6)
190.0 /	22.38957 (302, 3)	19.42893 (302, 3)	17.98516 (58, 4)	15.48604 (58, 4)	13.63161 (159, 6)
180.0 /	24.61501 (302, 1)	24.41068 (302, 1)	23.69100 (313, 4)	21.16586 (313, 4)	18.69434 (335, 6)
170.0 /	13.16342 (313, 3)	13.49495 (220, 5)	15.44641 (114, 3)	15.15497 (15, 1)	13.92058 (15, 1)
160.0 /	13.08532 (313, 5)	19.57834 (356, 3)	15.99520 (301, 4)	16.67881 (335, 8)	15.01824 (356, 3)
150.0 /	14.82560 (100, 2)	20.64909 (67, 5)	16.64477 (99, 8)	15.55425 (124, 6)	13.93677 (124, 6)
140.0 /	21.21754 (8, 8)	22.94789 (295, 4)	20.45815 (309, 5)	16.20554 (309, 5)	13.16045 (18, 2)
130.0 /	17.35160 (361, 6)	18.31378 (235, 4)	18.19962 (362, 1)	16.73991 (151, 4)	14.13546 (362, 1)
120.0 /	14.48059 (213, 5)	18.67837 (323, 5)	18.30204 (30, 4)	16.14561 (30, 4)	13.59000 (22, 1)
110.0 /	21.06238 (213, 5)	21.05647 (275, 5)	18.47312 (275, 5)	16.04689 (16, 5)	14.26178 (16, 5)
100.0 /	19.31376 (204, 6)	19.34538 (213, 6)	19.00292 (213, 6)	15.31979 (213, 6)	15.41175 (361, 7)
90.0 /	25.43123 (196, 5)	21.85227 (117, 6)	17.45446 (195, 5)	15.87447 (261, 5)	14.13067 (361, 4)
80.0 /	18.54558 (198, 4)	21.82035 (198, 4)	20.26891 (122, 6)	17.69670 (197, 3)	14.10661 (197, 3)
70.0 /	17.96394 (53, 6)	19.81060 (145, 4)	17.35209 (133, 3)	14.09396 (145, 4)	11.74264 (145, 4)
60.0 /	26.73297 (117, 5)	20.71922 (117, 5)	17.62177 (41, 5)	15.23513 (139, 4)	14.03103 (137, 4)
50.0 /	20.98389 (117, 4)	19.84570 (117, 4)	18.08387 (254, 3)	16.81687 (258, 4)	15.35967 (258, 4)
40.0 /	17.87000 (8, 4)	18.14794 (186, 6)	17.10649 (355, 7)	15.95453 (355, 7)	14.20364 (355, 7)
30.0 /	19.29300 (49, 6)	19.57273 (214, 3)	17.70790 (98, 4)	14.39028 (214, 3)	12.27176 (97, 6)
20.0 /	16.66059 (187, 4)	20.92169 (68, 5)	16.42828 (187, 4)	14.11461 (363, 8)	11.95450 (68, 5)
10.0 /	18.76932 (299, 4)	17.39830 (152, 6)	16.26551 (187, 3)	12.66632 (187, 3)	11.15941 (53, 3)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	30.22696	5	100	500.0	200.0	26	24.49432	4	313	1000.0	180.0
2	29.74504	6	17	500.0	110.0	27	24.43754	4	59	1500.0	260.0
3	28.78726	5	286	500.0	200.0	28	24.41068	1	302	1000.0	180.0
4	28.69705	5	139	500.0	90.0	29	24.34703	5	69	500.0	50.0
5	27.98689	4	59	1000.0	260.0	30	24.18960	3	145	1000.0	60.0
6	27.75782	4	134	1000.0	360.0	31	24.16302	6	76	500.0	60.0
7	27.12601	3	145	500.0	60.0	32	24.13099	4	54	500.0	180.0
8	27.06534	4	240	1000.0	230.0	33	24.08648	5	286	1500.0	200.0
9	26.94376	4	100	500.0	200.0	34	23.99130	4	166	500.0	220.0
10	26.93521	4	313	500.0	180.0	35	23.80794	2	54	1000.0	140.0
11	26.85423	5	51	1000.0	210.0	36	23.69100	4	313	1500.0	180.0
12	26.73299	5	117	500.0	60.0	37	23.52058	5	224	1000.0	240.0
13	26.64396	2	54	500.0	140.0	38	23.26868	3	198	1000.0	100.0
14	26.17892	4	298	1000.0	290.0	39	23.19472	4	208	1000.0	150.0
15	25.80606	5	286	1000.0	200.0	40	23.14207	4	59	500.0	260.0
16	25.58028	5	204	1000.0	280.0	41	23.01945	6	117	500.0	90.0
17	25.56489	5	100	1000.0	200.0	42	22.99550	2	54	1500.0	140.0
18	25.43123	5	196	500.0	90.0	43	22.98470	3	197	1000.0	80.0
19	24.83574	4	216	1000.0	360.0	44	22.94789	4	295	1000.0	140.0
20	24.82998	5	17	500.0	100.0	45	22.90251	4	216	1500.0	360.0
21	24.81938	4	145	500.0	70.0	46	22.90232	4	58	500.0	190.0
22	24.75850	6	17	1000.0	110.0	47	22.88154	6	17	1500.0	110.0
23	24.71043	1	302	1500.0	180.0	48	22.71605	5	95	1000.0	50.0
24	24.65615	4	49	500.0	360.0	49	22.68348	5	24	1500.0	330.0
25	24.61501	1	302	500.0	180.0	50	22.62187	1	302	2000.0	180.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 11.56452 AND OCCURRED AT (500.0, 180.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
350.0 /	4.76880 (188, 1)	5.91260 (189, 1)	5.86360 (188, 1)	5.31180 (188, 1)	4.93028 (363, 1)
350.0 /	4.44757 (172, 1)	5.20100 (172, 1)	4.89403 (172, 1)	4.39627 (48, 1)	4.11262 (48, 1)
340.0 /	4.77525 (144, 1)	6.27146 (185, 1)	5.14673 (195, 1)	4.14779 (331, 1)	3.99338 (331, 1)
330.0 /	4.09797 (192, 1)	4.72836 (24, 1)	4.56289 (24, 1)	3.95292 (360, 1)	3.72635 (360, 1)
320.0 /	4.96584 (135, 1)	5.51220 (47, 1)	5.37715 (47, 1)	4.97878 (135, 1)	4.58847 (135, 1)
310.0 /	4.95674 (135, 1)	4.89725 (135, 1)	6.50593 (136, 1)	7.20267 (136, 1)	7.10628 (136, 1)
300.0 /	4.80967 (120, 1)	5.05963 (120, 1)	4.40297 (64, 1)	4.21395 (64, 1)	3.84678 (64, 1)
290.0 /	6.29968 (120, 1)	6.53891 (120, 1)	5.89996 (120, 1)	5.09812 (120, 1)	4.43526 (120, 1)
280.0 /	3.53468 (63, 1)	5.66443 (63, 1)	4.88327 (269, 1)	4.24045 (269, 1)	3.62204 (269, 1)
270.0 /	4.37166 (114, 1)	4.53079 (80, 1)	4.36747 (241, 1)	3.99661 (241, 1)	3.49644 (241, 1)
260.0 /	5.39115 (59, 1)	6.57444 (59, 1)	6.37109 (278, 1)	5.37994 (278, 1)	4.51384 (59, 1)
250.0 /	4.65771 (141, 1)	5.87527 (141, 1)	5.67587 (141, 1)	5.03277 (141, 1)	4.38219 (141, 1)
240.0 /	5.29991 (165, 1)	6.66661 (101, 1)	5.80693 (101, 1)	5.09858 (165, 1)	4.50648 (165, 1)
230.0 /	4.86480 (242, 1)	6.14411 (242, 1)	5.82781 (130, 1)	5.73426 (130, 1)	5.35152 (130, 1)
220.0 /	5.78502 (166, 1)	5.44313 (166, 1)	5.52123 (232, 1)	5.11548 (232, 1)	4.52655 (232, 1)
210.0 /	5.51211 (100, 1)	5.50001 (164, 1)	5.71367 (98, 1)	5.51456 (98, 1)	5.04885 (98, 1)
200.0 /	7.18974 (100, 1)	6.02191 (292, 1)	6.50176 (57, 1)	6.68639 (57, 1)	6.33798 (57, 1)
190.0 /	9.39582 (318, 1)	8.62594 (318, 1)	9.10919 (318, 1)	8.51921 (318, 1)	7.57120 (319, 1)
180.0 /	11.56452 (302, 1)	10.86030 (302, 1)	10.73517 (302, 1)	9.71076 (302, 1)	8.48044 (302, 1)
170.0 /	4.64669 (77, 1)	5.18951 (77, 1)	5.58464 (337, 1)	5.48101 (337, 1)	4.99998 (337, 1)
160.0 /	4.88991 (356, 1)	4.56765 (337, 1)	5.44432 (337, 1)	5.50362 (337, 1)	5.13576 (337, 1)
150.0 /	4.83335 (100, 1)	4.76844 (28, 1)	5.06114 (327, 1)	4.93825 (327, 1)	4.52275 (327, 1)
140.0 /	7.34921 (18, 1)	8.15697 (18, 1)	8.45411 (18, 1)	7.71742 (18, 1)	6.75015 (18, 1)
130.0 /	6.30079 (362, 1)	6.67626 (362, 1)	7.00697 (362, 1)	6.41016 (362, 1)	5.59037 (362, 1)
120.0 /	4.44301 (17, 1)	5.45380 (93, 1)	5.10144 (22, 1)	5.77513 (22, 1)	6.01745 (22, 1)
110.0 /	6.49088 (17, 1)	5.83280 (17, 1)	5.90496 (17, 1)	5.55359 (17, 1)	5.06618 (17, 1)
100.0 /	5.86066 (17, 1)	4.68413 (17, 1)	4.28277 (17, 1)	3.77352 (17, 1)	3.70482 (16, 1)
90.0 /	8.16536 (196, 1)	7.90596 (196, 1)	7.84660 (197, 1)	7.07173 (197, 1)	6.18226 (197, 1)
80.0 /	5.18647 (145, 1)	4.14961 (195, 1)	3.96730 (197, 1)	3.31086 (197, 1)	2.99047 (122, 1)
70.0 /	5.40142 (145, 1)	4.18966 (133, 1)	3.76363 (315, 1)	3.95698 (350, 1)	3.96619 (350, 1)
60.0 /	4.99860 (76, 1)	5.20076 (95, 1)	4.52938 (95, 1)	3.67609 (194, 1)	3.52737 (195, 1)
50.0 /	6.20217 (69, 1)	6.12129 (95, 1)	4.95391 (95, 1)	3.98441 (117, 1)	3.89903 (233, 1)
40.0 /	3.95571 (116, 1)	6.46721 (186, 1)	5.08784 (196, 1)	4.97858 (299, 1)	4.63135 (299, 1)
30.0 /	4.83426 (69, 1)	6.29659 (186, 1)	4.80342 (186, 1)	3.48709 (144, 1)	3.07117 (144, 1)
20.0 /	4.55418 (363, 1)	5.71041 (186, 1)	4.70104 (186, 1)	4.35543 (363, 1)	3.95703 (363, 1)
10.0 /	4.79579 (32, 1)	5.03765 (152, 1)	4.18672 (299, 1)	4.09848 (299, 1)	3.75801 (299, 1)

*** NRC/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* SECOND HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 8.56561 AND OCCURRED AT (500.0, 180.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
350.0 /	4.20567 (215, 1)	5.54257 (152, 1)	5.09506 (363, 1)	5.12185 (363, 1)	4.66060 (188, 1)
350.0 /	3.43098 (102, 1)	4.53833 (228, 1)	4.32117 (46, 1)	4.17906 (172, 1)	3.50632 (172, 1)
340.0 /	3.32160 (149, 1)	5.40471 (228, 1)	4.19110 (149, 1)	4.13169 (149, 1)	3.88104 (149, 1)
330.0 /	3.61064 (24, 1)	4.48752 (153, 1)	3.86867 (360, 1)	3.90665 (24, 1)	3.26639 (24, 1)
320.0 /	4.59742 (47, 1)	4.95292 (135, 1)	5.17262 (135, 1)	4.86922 (47, 1)	4.34156 (47, 1)
310.0 /	4.15198 (168, 1)	4.75871 (168, 1)	4.86756 (168, 1)	4.66272 (168, 1)	4.42685 (168, 1)
300.0 /	4.15096 (64, 1)	4.12477 (64, 1)	4.18073 (120, 1)	3.92231 (80, 1)	3.60884 (80, 1)
290.0 /	4.03461 (127, 1)	4.96143 (63, 1)	4.19607 (127, 1)	3.99199 (72, 1)	3.64520 (72, 1)
280.0 /	3.17862 (64, 1)	4.86931 (269, 1)	4.45777 (63, 1)	3.79723 (179, 1)	3.34238 (179, 1)
270.0 /	3.35353 (80, 1)	4.50673 (268, 1)	4.17224 (268, 1)	3.56239 (268, 1)	3.08664 (269, 1)
260.0 /	4.53079 (278, 1)	6.56968 (278, 1)	6.12508 (59, 1)	5.28622 (59, 1)	4.43035 (278, 1)
250.0 /	3.81864 (307, 1)	5.75672 (225, 1)	4.92500 (225, 1)	3.67874 (225, 1)	2.86253 (307, 1)
240.0 /	5.07730 (101, 1)	5.75983 (165, 1)	5.64328 (165, 1)	4.64562 (101, 1)	3.99542 (297, 1)
230.0 /	4.09622 (240, 1)	5.99898 (240, 1)	5.28799 (240, 1)	4.99129 (232, 1)	4.55144 (232, 1)
220.0 /	5.27040 (232, 1)	5.34320 (232, 1)	4.34985 (166, 1)	3.46465 (130, 1)	2.92197 (348, 1)
210.0 /	4.55730 (57, 1)	5.16208 (98, 1)	4.78655 (57, 1)	4.46606 (57, 1)	3.97200 (57, 1)
200.0 /	6.39073 (286, 1)	5.76333 (140, 1)	6.42525 (292, 1)	6.16569 (292, 1)	5.63147 (292, 1)
190.0 /	8.35475 (302, 1)	7.05089 (302, 1)	6.88762 (292, 1)	6.66639 (292, 1)	6.13436 (292, 1)
180.0 /	8.56561 (336, 1)	8.26588 (336, 1)	8.55970 (336, 1)	7.93577 (336, 1)	7.01909 (336, 1)
170.0 /	4.52109 (337, 1)	4.95668 (337, 1)	4.90973 (77, 1)	4.68512 (19, 1)	4.73362 (19, 1)
160.0 /	4.10832 (337, 1)	4.43182 (356, 1)	4.75214 (335, 1)	4.87905 (335, 1)	4.58153 (335, 1)
150.0 /	4.36759 (28, 1)	4.74687 (100, 1)	5.04861 (67, 1)	4.47281 (28, 1)	3.92442 (28, 1)
140.0 /	4.42219 (1, 1)	6.00253 (1, 1)	5.69445 (1, 1)	4.90332 (1, 1)	4.16410 (1, 1)
130.0 /	4.87992 (361, 1)	5.10876 (235, 1)	4.41469 (361, 1)	4.44737 (310, 1)	4.29499 (310, 1)
120.0 /	3.70611 (200, 1)	4.33753 (235, 1)	4.70308 (326, 1)	4.92469 (326, 1)	4.68886 (326, 1)
110.0 /	3.49873 (16, 1)	3.76249 (198, 1)	3.84265 (16, 1)	3.90701 (326, 1)	3.80915 (326, 1)
100.0 /	3.96735 (8, 1)	4.24153 (198, 1)	3.89713 (198, 1)	3.74613 (16, 1)	3.29984 (17, 1)
90.0 /	6.02453 (197, 1)	7.70035 (197, 1)	6.57885 (196, 1)	5.38455 (196, 1)	4.43474 (196, 1)
80.0 /	3.82337 (196, 1)	4.10525 (197, 1)	3.74896 (195, 1)	3.24985 (122, 1)	2.69803 (197, 1)
70.0 /	3.26766 (53, 1)	4.12422 (146, 1)	3.66320 (146, 1)	3.15952 (42, 1)	2.90774 (42, 1)
60.0 /	4.72205 (145, 1)	4.75827 (194, 1)	4.38871 (194, 1)	3.58795 (315, 1)	3.14679 (194, 1)
50.0 /	5.93513 (117, 1)	5.35106 (117, 1)	4.65094 (117, 1)	3.94231 (145, 1)	3.49928 (145, 1)
40.0 /	3.87379 (95, 1)	4.96501 (95, 1)	4.91041 (299, 1)	4.77113 (355, 1)	4.48662 (355, 1)
30.0 /	3.79479 (186, 1)	4.39701 (214, 1)	3.92188 (88, 1)	3.35070 (186, 1)	2.95423 (299, 1)
20.0 /	4.29150 (186, 1)	5.25729 (187, 1)	4.60499 (363, 1)	3.55885 (186, 1)	3.04409 (50, 1)
10.0 /	4.22413 (152, 1)	3.74152 (299, 1)	3.40246 (152, 1)	2.71772 (50, 1)	2.53021 (50, 1)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	11.56452	1	302	500.0	180.0	26	7.50153	1	335	2000.0	180.0
2	10.86030	1	302	1000.0	180.0	27	7.46441	1	339	2000.0	180.0
3	10.73517	1	302	1500.0	180.0	28	7.34921	1	18	500.0	140.0
4	9.71076	1	302	2000.0	180.0	29	7.20267	1	136	2000.0	310.0
5	9.10819	1	318	1500.0	190.0	30	7.18974	1	100	500.0	200.0
6	8.62594	1	318	1000.0	190.0	31	7.18556	1	340	2000.0	180.0
7	8.56561	1	336	500.0	180.0	32	7.10628	1	136	2500.0	310.0
8	8.55970	1	336	1500.0	180.0	33	7.07173	1	197	2000.0	90.0
9	8.51921	1	318	2000.0	190.0	34	7.05089	1	302	1000.0	190.0
10	8.48044	1	302	2500.0	180.0	35	7.01909	1	336	2500.0	180.0
11	8.45411	1	18	1500.0	140.0	36	7.01836	1	340	2500.0	180.0
12	8.39582	1	318	500.0	190.0	37	7.00697	1	362	1500.0	130.0
13	8.35475	1	302	500.0	190.0	38	6.92875	1	335	2500.0	180.0
14	8.26588	1	336	1000.0	180.0	39	6.88762	1	292	1500.0	190.0
15	8.16536	1	196	500.0	90.0	40	6.75015	1	18	2500.0	140.0
16	8.15697	1	18	1000.0	140.0	41	6.68639	1	57	2000.0	200.0
17	7.97232	1	339	1500.0	180.0	42	6.67626	1	362	1000.0	130.0
18	7.93577	1	336	2000.0	180.0	43	6.66698	1	339	500.0	180.0
19	7.84660	1	197	1500.0	90.0	44	6.66661	1	101	1000.0	240.0
20	7.80586	1	196	1000.0	90.0	45	6.66639	1	292	2000.0	190.0
21	7.71742	1	18	2000.0	140.0	46	6.65449	1	339	2500.0	180.0
22	7.70035	1	197	1000.0	90.0	47	6.62629	1	340	1500.0	180.0
23	7.57120	1	318	2500.0	190.0	48	6.57085	1	196	1500.0	90.0
24	7.56695	1	339	1000.0	180.0	49	6.57444	1	59	1000.0	260.0
25	7.51366	1	335	1500.0	180.0	50	6.56968	1	278	1000.0	260.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 2
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION) WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 0
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 0
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 2
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(28) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 10
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 36
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK = .10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 76
UPPER AIR STATION NO.	IUS = 12842
YEAR OF UPPER AIR DATA	IUY = 76
ALLOCATED DATA STORAGE	LIMIT = 43500 WORDS

EST-7

1976 - NRG ONLY - SO_2
(Selected Days)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** METEOROLOGICAL DAYS TO BE PROCESSED ***
(IF=1)

0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 1 1 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 1 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 1
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 1 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 1 0 0 0 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 1 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 1 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 1 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0			

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
B	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
C	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00
D	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00
E	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00
F	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

200.0, 300.0, 400.0, 500.0, 700.0, 800.0, 900.0, 1200.0, 1400.0, 1700.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0, 20.0, 30.0, 40.0, 50.0, 60.0, 70.0, 80.0, 90.0, 100.0,
110.0, 120.0, 130.0, 140.0, 150.0, 160.0, 170.0, 180.0, 190.0, 200.0,
210.0, 220.0, 230.0, 240.0, 250.0, 260.0, 270.0, 280.0, 290.0, 300.0,
310.0, 320.0, 330.0, 340.0, 350.0, 360.0,

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K); VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ. DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
101	0	0	0	0.15000E+02	0.0	0.0	0.0	38.10	450.00	20.00	1.83	22.00	38.10	19.80

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	67.57371	6	17	200.0	110.0	26	38.18905	5	319	200.0	180.0
2	66.74905	5	286	200.0	200.0	27	38.01271	1	100	200.0	150.0
3	61.06427	1	302	200.0	180.0	28	37.65272	4	319	200.0	190.0
4	55.68066	6	17	300.0	110.0	29	37.55079	2	100	200.0	150.0
5	55.18454	5	286	300.0	200.0	30	36.73504	1	302	400.0	180.0
6	54.71575	5	17	200.0	100.0	31	36.62931	5	302	200.0	200.0
7	54.10024	5	100	200.0	200.0	32	36.53527	7	302	300.0	180.0
8	52.81154	3	302	200.0	190.0	33	36.44693	6	302	300.0	180.0
9	52.28996	4	286	200.0	200.0	34	36.35989	3	19	200.0	140.0
10	50.19469	1	302	300.0	180.0	35	36.02138	3	286	200.0	180.0
11	49.08342	5	100	300.0	200.0	36	35.67308	6	336	300.0	180.0
12	45.24207	7	302	200.0	180.0	37	34.99133	7	336	200.0	180.0
13	44.65088	5	17	300.0	100.0	38	34.89172	6	196	300.0	90.0
14	44.18292	6	302	200.0	180.0	39	34.76303	2	318	200.0	190.0
15	43.31315	6	336	200.0	180.0	40	34.68403	8	336	200.0	180.0
16	43.22659	3	302	300.0	190.0	41	34.52754	5	17	200.0	90.0
17	42.65503	4	286	300.0	200.0	42	34.35628	4	302	200.0	210.0
18	42.37495	6	196	200.0	90.0	43	34.26497	5	139	300.0	90.0
19	42.25999	6	319	200.0	200.0	44	33.98637	6	319	300.0	200.0
20	41.92215	6	17	400.0	110.0	45	33.95519	5	17	400.0	100.0
21	41.27127	5	286	400.0	200.0	46	33.37597	4	100	300.0	200.0
22	40.00658	6	139	200.0	90.0	47	32.92441	6	139	300.0	90.0
23	39.35655	2	18	200.0	140.0	48	32.72942	2	302	200.0	180.0
24	39.32617	5	100	400.0	200.0	49	32.58770	5	302	200.0	190.0
25	38.71727	4	17	200.0	120.0	50	32.46196	4	139	200.0	60.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	29.00511	1	302	200.0	180.0	26	12.21690	1	302	400.0	190.0
2	23.58575	1	302	300.0	180.0	27	12.04032	1	286	200.0	180.0
3	22.94646	1	318	200.0	190.0	28	11.91354	1	17	200.0	120.0
4	22.76950	1	336	200.0	180.0	29	11.40541	1	17	300.0	100.0
5	20.92275	1	302	200.0	190.0	30	11.31197	1	302	300.0	200.0
6	18.43918	1	318	300.0	190.0	31	11.23217	1	336	200.0	170.0
7	18.32189	1	336	300.0	180.0	32	11.00664	1	302	1200.0	180.0
8	17.18655	1	302	400.0	180.0	33	10.94446	1	100	200.0	210.0
9	16.79954	1	18	200.0	140.0	34	10.87209	1	302	1400.0	180.0
10	16.77360	1	302	300.0	190.0	35	10.78212	1	100	200.0	200.0
11	16.29657	1	17	200.0	110.0	36	10.63631	1	302	900.0	180.0
12	15.94231	1	318	200.0	200.0	37	10.57623	1	18	400.0	140.0
13	15.14085	1	286	200.0	200.0	38	10.52574	1	336	200.0	190.0
14	14.32858	1	17	200.0	100.0	39	10.43273	1	100	300.0	200.0
15	14.21076	1	18	300.0	140.0	40	10.37307	1	302	1700.0	180.0
16	14.16967	1	302	200.0	200.0	41	10.28287	1	302	800.0	180.0
17	13.49360	1	196	200.0	90.0	42	10.26840	1	196	400.0	90.0
18	13.13325	1	318	200.0	180.0	43	10.19351	1	100	300.0	150.0
19	13.09816	1	336	400.0	180.0	44	10.14131	1	286	200.0	190.0
20	13.06520	1	318	400.0	190.0	45	10.07382	1	318	300.0	180.0
21	13.00141	1	17	300.0	110.0	46	9.77734	1	302	700.0	180.0
22	12.58431	1	196	300.0	90.0	47	9.55970	1	100	300.0	210.0
23	12.57746	1	100	200.0	150.0	48	9.41634	1	17	400.0	110.0
24	12.41102	1	286	300.0	200.0	49	9.27353	1	139	200.0	90.0
25	12.33465	1	318	300.0	200.0	50	9.24403	1	17	300.0	120.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 2
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION) WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 1
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 1
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 2
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(28) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 2
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 36
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK = .10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 76
UPPER AIR STATION NO.	IUS = 12842
YEAR OF UPPER AIR DATA	IUY = 76
ALLOCATED DATA STORAGE	LIMIT = 43500 WORDS

IST-5

1976 - NRG ONLY - SO_2
Radius of Influence check

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                          *** METEOROLOGICAL DAYS TO BE PROCESSED ***
                                           (IF=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 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 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 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 0

                   *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                         (METERS/SEC)

                              1.54,   3.09,   5.14,   8.23,  10.80,

                                   *** WIND PROFILE EXPONENTS ***

    STABILITY                                 WIND SPEED CATEGORY
    CATEGORY          1             2             3             4             5             6
       A         .10000E+00    .10000E+00    .10000E+00    .10000E+00    .10000E+00    .10000E+00
       B         .15000E+00    .15000E+00    .15000E+00    .15000E+00    .15000E+00    .15000E+00
       C         .20000E+00    .20000E+00    .20000E+00    .20000E+00    .20000E+00    .20000E+00
       D         .25000E+00    .25000E+00    .25000E+00    .25000E+00    .25000E+00    .25000E+00
       E         .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00
       F         .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00

                        *** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
                                  (DEGREES KELVIN PER METER)

    STABILITY                                 WIND SPEED CATEGORY
    CATEGORY          1             2             3             4             5             6
       A         .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
       B         .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
       C         .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
       D         .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
       E         .20000E-01    .20000E-01    .20000E-01    .20000E-01    .20000E-01    .20000E-01
       F         .35000E-01    .35000E-01    .35000E-01    .35000E-01    .35000E-01    .35000E-01
```

*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

6000.0, 9000.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0,	20.0,	30.0,	40.0,	50.0,	60.0,	70.0,	80.0,	90.0,	100.0,
110.0,	120.0,	130.0,	140.0,	150.0,	160.0,	170.0,	180.0,	190.0,	200.0,
210.0,	220.0,	230.0,	240.0,	250.0,	260.0,	270.0,	280.0,	290.0,	300.0,
310.0,	320.0,	330.0,	340.0,	350.0,	360.0,				

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K); VERT.DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ.DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
101	0	0	0	0.15800E+02	0.0	0.0	0.0	38.10	450.00	20.00	1.83	22.00	38.10	19.80

"N"-DAY
365 DAYS
SGROUP# 1

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 365-DAY AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 0.49648 AND OCCURRED AT (6000.0, 180.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 6000.0	9000.0
360.0 /	0.34725	0.26847
350.0 /	0.19022	0.14468
340.0 /	0.24328	0.18139
330.0 /	0.16668	0.11977
320.0 /	0.20405	0 15258
310.0 /	0.20986	0.15397
300.0 /	0.27921	0.22007
290.0 /	0.19884	0.14574
280.0 /	0.16177	0.11553
270.0 /	0.28036	0.22040
260.0 /	0.19878	0.15301
250.0 /	0.22014	0.17415
240.0 /	0.26654	0.20287
230.0 /	0 30100	0.23141
220.0 /	0.22882	0.17629
210.0 /	0.22848	0.17788
200.0 /	0.28877	0.21797
190.0 /	0.26460	0.19261
180.0 /	0.49648	0.36641
170 0 /	0.28383	0.20659
160.0 /	0.24713	0.18494
150.0 /	0.16286	0.11450
140.0 /	0.16411	0.10913
130.0 /	0.17537	0.11927
120.0 /	0.18952	0.13813
110.0 /	0.16273	0.12445
100.0 /	0.15613	0.11565
90.0 /	0.19684	0.14281
80.0 /	0.11445	0.07856
70.0 /	0.13961	0.10715
60.0 /	0.17559	0.13058
50.0 /	0.17912	0.12809
40.0 /	0.14470	0.10479
30.0 /	0.12116	0.08617
20.0 /	0.16246	0.11384
10.0 /	0.18741	0.13706

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	14.25965	2	311	6000.0	160.0	26	10.52341	7	292	6000.0	190.0
2	13.58739	1	22	6000.0	120.0	27	10.50143	2	182	9000.0	360.0
3	13.45133	1	297	6000.0	180.0	28	10.45674	1	352	6000.0	140.0
4	13.36725	1	60	6000.0	230.0	29	10.44907	6	350	6000.0	70.0
5	12.87045	1	345	6000.0	230.0	30	10.39921	2	294	6000.0	340.0
6	12.65320	3	84	6000.0	230.0	31	10.39526	6	335	6000.0	180.0
7	12.60526	7	93	6000.0	100.0	32	10.39176	5	340	6000.0	180.0
8	12.08048	8	117	6000.0	90.0	33	10.35857	7	365	6000.0	310.0
9	11.96183	7	114	6000.0	270.0	34	10.24155	7	252	6000.0	260.0
10	11.74701	2	311	9000.0	160.0	35	10.23234	2	78	6000.0	180.0
11	11.55616	7	285	6000.0	180.0	36	10.19817	7	296	6000.0	180.0
12	11.43698	2	257	6000.0	230.0	37	10.19242	7	114	9000.0	270.0
13	11.43100	7	361	6000.0	100.0	38	10.17455	1	214	6000.0	360.0
14	11.42082	1	310	6000.0	130.0	39	10.16334	1	87	6000.0	320.0
15	11.21036	1	22	9000.0	120.0	40	10.15709	4	361	6000.0	90.0
16	11.07511	1	124	6000.0	110.0	41	10.15144	2	136	6000.0	310.0
17	11.02542	3	19	6000.0	170.0	42	10.13893	1	293	6000.0	200.0
18	11.02086	1	297	9000.0	180.0	43	10.03929	8	117	9000.0	90.0
19	11.01629	1	345	9000.0	230.0	44	10.00887	1	69	6000.0	360.0
20	10.91674	2	305	6000.0	360.0	45	9.99446	7	93	9000.0	100.0
21	10.84643	1	305	6000.0	360.0	46	9.89294	7	252	9000.0	260.0
22	10.84016	1	257	6000.0	240.0	47	9.88493	2	23	9000.0	160.0
23	10.74021	1	60	9000.0	230.0	48	9.87177	1	306	6000.0	160.0
24	10.73720	6	344	6000.0	230.0	49	9.86861	8	270	9000.0	300.0
25	10.54633	7	234	6000.0	10.0	50	9.86367	2	339	6000.0	170.0

HIGH
24-HR
SGROUP# 1

*** NRC/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 4.64205 AND OCCURRED AT (6000.0, 120.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 6000.0	9000.0
360.0 /	3.57353 (333, 1)	2.71508 (333, 1)
350.0 /	2.16751 (48, 1)	1.67225 (3, 1)
340.0 /	2.42306 (149, 1)	1.96355 (48, 1)
330.0 /	2.05388 (360, 1)	1.31836 (360, 1)
320.0 /	2.79323 (135, 1)	2.17208 (135, 1)
310.0 /	4.39253 (136, 1)	2.88189 (136, 1)
300.0 /	3.34212 (25, 1)	3.06043 (25, 1)
290.0 /	2.21534 (120, 1)	1.50437 (120, 1)
280.0 /	2.17795 (169, 1)	1.61689 (169, 1)
270.0 /	2.50652 (148, 1)	2.03458 (148, 1)
260.0 /	2.29451 (252, 1)	1.99493 (252, 1)
250.0 /	2.13417 (141, 1)	1.87191 (108, 1)
240.0 /	2.89828 (256, 1)	2.29748 (256, 1)
230.0 /	3.22551 (130, 1)	2.31325 (240, 1)
220.0 /	2.03466 (232, 1)	1.45505 (104, 1)
210.0 /	2.77485 (98, 1)	1.83163 (98, 1)
200.0 /	3.56692 (57, 1)	2.31866 (57, 1)
190.0 /	3.45581 (318, 1)	2.14625 (292, 1)
180.0 /	4.26546 (340, 1)	2.79808 (340, 1)
170.0 /	3.30803 (19, 1)	2.35795 (19, 1)
160.0 /	2.79719 (306, 1)	2.42209 (23, 1)
150.0 /	2.34423 (327, 1)	1.54536 (327, 1)
140.0 /	2.99670 (18, 1)	1.82881 (18, 1)
130.0 /	2.53627 (310, 1)	1.66819 (310, 1)
120.0 /	4.64205 (22, 1) ✓	3.51909 (22, 1)
110.0 /	2.79761 (17, 1)	1.95085 (17, 1)
100.0 /	2.50451 (259, 1)	2.09998 (259, 1)
90.0 /	2.98085 (197, 1)	2.06531 (117, 1)
80.0 /	1.74673 (132, 1)	1.38339 (132, 1)
70.0 /	2.68304 (350, 1)	1.84717 (198, 1)
60.0 /	2.83925 (233, 1)	2.09021 (233, 1)
50.0 /	2.46052 (233, 1)	1.64917 (249, 1)
40.0 /	2.46858 (355, 1)	1.58907 (355, 1)
30.0 /	1.60164 (123, 1)	1.58254 (123, 1)
20.0 /	2.04796 (363, 1)	1.53807 (333, 1)
10.0 /	2.21480 (234, 1)	1.95113 (234, 1)

2ND HIGH
24-HR
SGROUP# 1

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* SECOND HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 3.72917 AND OCCURRED AT (6000.0, 180.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 6000.0	9000.0
360.0 /	3.21406 (363, 1)	2.59259 (363, 1)
350.0 /	2.14617 (27, 1)	1.47264 (27, 1)
340.0 /	2.41154 (331, 1)	1.77245 (149, 1)
330.0 /	1.74676 (282, 1)	1.17205 (173, 1)
320.0 /	2.27957 (47, 1)	1.59051 (324, 1)
310.0 /	3.14337 (168, 1)	2.40317 (168, 1)
300.0 /	2.83203 (80, 1)	2.32681 (80, 1)
290.0 /	1.83255 (345, 1)	1.43087 (168, 1)
280.0 /	1.85982 (269, 1)	1.47105 (269, 1)
270.0 /	2.40070 (290, 1)	1.98670 (290, 1)
260.0 /	1.99647 (59, 1)	1.53150 (241, 1)
250.0 /	1.95372 (108, 1)	1.70442 (175, 1)
240.0 /	2.55230 (257, 1)	1.86524 (257, 1)
230.0 /	2.67475 (344, 1)	2.27786 (130, 1)
220.0 /	1.89925 (104, 1)	1.39081 (204, 1)
210.0 /	1.87398 (125, 1)	1.40688 (125, 1)
200.0 /	2.88285 (292, 1)	1.91746 (279, 1)
190.0 /	3.26866 (292, 1)	2.10249 (318, 1)
180.0 /	3.72917 (302, 1)	2.67445 (338, 1)
170.0 /	2.49492 (15, 1)	1.66767 (285, 1)
160.0 /	2.77197 (309, 1)	2.32918 (309, 1)
150.0 /	1.75065 (28, 1)	1.34654 (351, 1)
140.0 /	2.39453 (301, 1)	1.80085 (301, 1)
130.0 /	2.37958 (362, 1)	1.63676 (351, 1)
120.0 /	2.60150 (326, 1)	1.68516 (39, 1)
110.0 /	2.49037 (300, 1)	1.80478 (300, 1)
100.0 /	2.46457 (16, 1)	1.75243 (300, 1)
90.0 /	2.84714 (117, 1)	2.02381 (197, 1)
80.0 /	1.54290 (122, 1)	0.98342 (33, 1)
70.0 /	2.23710 (198, 1)	1.81103 (350, 1)
60.0 /	2.45756 (195, 1)	1.82854 (195, 1)
50.0 /	2.03289 (116, 1)	1.63239 (233, 1)
40.0 /	2.36430 (299, 1)	1.46435 (299, 1)
30.0 /	1.52434 (299, 1)	0.99599 (183, 1)
20.0 /	1.85743 (333, 1)	1.35264 (363, 1)
10.0 /	2.10394 (214, 1)	1.75657 (214, 1)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	4.64205	1	22	6000.0	120.0	26	3.06043	1	25	7000.0	300.0
2	4.39253	1	136	6000.0	310.0	27	3.03810	1	231	6000.0	180.0
3	4.26548	1	340	6000.0	180.0	28	2.99670	1	18	6000.0	140.0
4	3.72917	1	302	6000.0	180.0	29	2.98085	1	197	6000.0	90.0
5	3.71212	1	338	6000.0	180.0	30	2.93445	1	265	6000.0	360.0
6	3.58692	1	57	6000.0	200.0	31	2.90006	1	4	6000.0	180.0
7	3.57353	1	333	6000.0	360.0	32	2.89028	1	256	6000.0	240.0
8	3.53203	1	335	6000.0	180.0	33	2.88285	1	292	6000.0	200.0
9	3.51909	1	22	9000.0	120.0	34	2.88218	1	359	6000.0	180.0
10	3.45581	1	318	6000.0	190.0	35	2.88189	1	136	7000.0	310.0
11	3.37168	1	322	6000.0	180.0	36	2.85734	1	358	6000.0	180.0
12	3.34698	1	285	6000.0	180.0	37	2.84714	1	117	6000.0	90.0
13	3.34212	1	25	6000.0	300.0	38	2.83925	1	233	6000.0	60.0
14	3.30803	1	19	6000.0	170.0	39	2.83203	1	80	6000.0	300.0
15	3.26866	1	292	6000.0	190.0	40	2.83092	1	296	6000.0	180.0
16	3.22551	1	130	6000.0	230.0	41	2.79808	1	340	9000.0	180.0
17	3.21406	1	363	6000.0	360.0	42	2.79761	1	17	6000.0	110.0
18	3.16384	1	336	6000.0	180.0	43	2.79719	1	306	6000.0	160.0
19	3.14337	1	168	6000.0	310.0	44	2.79323	1	135	6000.0	320.0
20	3.12673	1	316	6000.0	180.0	45	2.77913	1	284	6000.0	180.0
21	3.12264	1	339	6000.0	180.0	46	2.77485	1	98	6000.0	210.0
22	3.11840	1	329	6000.0	180.0	47	2.77197	1	309	6000.0	160.0
23	3.11267	1	328	6000.0	180.0	48	2.73548	1	54	6000.0	180.0
24	3.10807	1	214	6000.0	360.0	49	2.72760	1	337	6000.0	160.0
25	3.06727	1	158	6000.0	180.0	50	2.72040	1	305	6000.0	360.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) =	1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) =	4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) =	2
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) =	0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) =	0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) =	1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION)		
WITH THE FOLLOWING TIME PERIODS:		
HOURLY (YES=1, NO=0)	ISW(7) =	0
2-HOUR (YES=1, NO=0)	ISW(8) =	0
3-HOUR (YES=1, NO=0)	ISW(9) =	1
4-HOUR (YES=1, NO=0)	ISW(10) =	0
6-HOUR (YES=1, NO=0)	ISW(11) =	0
8-HOUR (YES=1, NO=0)	ISW(12) =	0
12-HOUR (YES=1, NO=0)	ISW(13) =	0
24-HOUR (YES=1, NO=0)	ISW(14) =	1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) =	1
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE		
SPECIFIED BY ISW(7) THROUGH ISW(14):		
DAILY TABLES (YES=1, NO=0)	ISW(16) =	0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) =	1
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) =	1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) =	1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) =	0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) =	1
VERTICAL POT TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) =	1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) =	0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) =	2
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) =	1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) =	0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) =	0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(28) =	1
NUMBER OF INPUT SOURCES	NSOURC =	1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP =	0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD =	0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS =	5
NUMBER OF Y (THETA) GRID VALUES	NYPNTS =	36
NUMBER OF DISCRETE RECEPTORS	NXWYPT =	0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK =	.10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =	0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =	0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR =	10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET =	9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =	0.000000E+00
SURFACE STATION NO.	ISS =	12815
YEAR OF SURFACE DATA	ISY =	77
UPPER AIR STATION NO.	IUS =	12842
YEAR OF UPPER AIR DATA	IUY =	77
ALLOCATED DATA STORAGE	LIMIT =	43500 WORDS

IST-9

1977 - NRG ONLY - SO_2

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*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09      ***

                    *** METEOROLOGICAL DAYS TO BE PROCESSED ***
                                      (IF=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 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 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 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 0

          *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                  (METERS/SEC)

                       1.54,   3.09,   5.14,   8.23,  10.80,

                          *** WIND PROFILE EXPONENTS ***

STABILITY                               WIND SPEED CATEGORY
CATEGORY         1             2             3             4             5             6
    A       .10000E+00    .10000E+00    .10000E+00    .10000E+00    .10000E+00    .10000E+00
    B       .15000E+00    .15000E+00    .15000E+00    .15000E+00    .15000E+00    .15000E+00
    C       .20000E+00    .20000E+00    .20000E+00    .20000E+00    .20000E+00    .20000E+00
    D       .25000E+00    .25000E+00    .25000E+00    .25000E+00    .25000E+00    .25000E+00
    E       .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00
    F       .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00

                *** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
                           (DEGREES KELVIN PER METER)

STABILITY                               WIND SPEED CATEGORY
CATEGORY         1             2             3             4             5             6
    A       .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
    B       .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
    C       .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
    D       .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
    E       .20000E-01    .20000E-01    .20000E-01    .20000E-01    .20000E-01    .20000E-01
    F       .35000E-01    .35000E-01    .35000E-01    .35000E-01    .35000E-01    .35000E-01
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*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

500.0, 1000.0, 1500.0, 2000.0, 2500.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0,	20.0,	30.0,	40.0,	50.0,	60.0,	70.0,	80.0,	90.0,	100.0,
110.0,	120.0,	130.0,	140.0,	150.0,	160.0,	170.0,	180.0,	190.0,	200.0,
210.0,	220.0,	230.0,	240.0,	250.0,	260.0,	270.0,	280.0,	290.0,	300.0,
310.0,	320.0,	330.0,	340.0,	350.0,	360.0,				

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAK	NUMBER PART. CATS	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG. K); VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ. DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
101	0	0	0	0.15800E+02	0.0	0.0	0.0	38.10	450.00	20.00	1.83	22.00	38.10	19.80

"N"-DAY
365 DAYS
SGROUP# 1

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 365-DAY AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 0.80863 AND OCCURRED AT (1500.0, 360.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	0.57041	0.79631	0.80863	0.74243	0.67011
350.0 /	0.32688	0.44911	0.44161	0.39596	0.35190
340.0 /	0.26722	0.37899	0.38159	0.35052	0.31776
330.0 /	0.22435	0.33517	0.32823	0.29544	0.26438
320.0 /	0.24942	0.37463	0.37610	0.34214	0.30571
310.0 /	0.34686	0.47921	0.47110	0.42287	0.37440
300.0 /	0.44385	0.58850	0.57867	0.51859	0.45822
290.0 /	0.30274	0.39601	0.37729	0.33018	0.28696
280.0 /	0.35365	0.47958	0.47002	0.41796	0.36657
270.0 /	0.53259	0.73821	0.75734	0.69807	0.63033
260.0 /	0.35465	0.48794	0.48162	0.43292	0.38508
250.0 /	0.32956	0.45057	0.45695	0.42131	0.38231
240.0 /	0.39757	0.53890	0.56719	0.53522	0.49262
230.0 /	0.38028	0.51689	0.54953	0.52683	0.49355
220.0 /	0.24146	0.33201	0.35780	0.34553	0.32579
210.0 /	0.22712	0.30195	0.33418	0.33093	0.31695
200.0 /	0.21966	0.28455	0.30942	0.30149	0.28390
190.0 /	0.23817	0.29151	0.30527	0.28880	0.26591
180.0 /	0.41889	0.54610	0.61180	0.60513	0.57374
170.0 /	0.28586	0.41564	0.43340	0.39785	0.35630
160.0 /	0.22458	0.34422	0.34582	0.30742	0.27037
150.0 /	0.24476	0.36354	0.35266	0.30449	0.26032
140.0 /	0.28117	0.40034	0.40159	0.35928	0.31455
130.0 /	0.32557	0.42233	0.41155	0.36166	0.31160
120.0 /	0.33119	0.43622	0.41977	0.36983	0.32301
110.0 /	0.28658	0.37015	0.35405	0.31306	0.27498
100.0 /	0.27082	0.34881	0.33296	0.29347	0.25715
90.0 /	0.32532	0.42423	0.43656	0.40849	0.37436
80.0 /	0.22850	0.29517	0.28597	0.25562	0.22773
70.0 /	0.23420	0.31138	0.29459	0.26191	0.23221
60.0 /	0.28205	0.39474	0.39401	0.36383	0.33033
50.0 /	0.31695	0.43377	0.42961	0.39246	0.35249
40.0 /	0.28276	0.39058	0.37221	0.32958	0.29045
30.0 /	0.20019	0.30947	0.29229	0.25152	0.21530
20.0 /	0.23939	0.35634	0.34846	0.30949	0.27192
10.0 /	0.35626	0.50392	0.46828	0.39466	0.33267

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-05 ***

* HIGHEST 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 32.15228 AND OCCURRED AT (500.0, 340.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	29.04137 (94, 4)	30.80844 (144, 5)	25.95377 (65, 4)	23.30918 (65, 4)	20.29523 (65, 4)
350.0 /	24.02512 (63, 4)	21.30620 (63, 4)	19.67146 (63, 4)	17.06783 (63, 4)	14.52954 (63, 4)
340.0 /	32.15229 (87, 5)	26.80972 (87, 5)	22.17906 (87, 5)	19.02503 (87, 5)	17.17351 (339, 2)
330.0 /	19.41729 (55, 2)	20.97489 (210, 6)	20.14837 (210, 6)	17.89261 (338, 4)	17.33041 (339, 4)
320.0 /	15.29572 (71, 5)	24.78472 (237, 5)	20.86057 (237, 5)	16.20743 (71, 5)	14.50356 (71, 5)
310.0 /	24.55658 (112, 4)	23.72609 (112, 4)	21.68490 (192, 6)	21.73549 (192, 6)	20.20118 (192, 6)
300.0 /	31.83809 (216, 5)	31.17037 (258, 4)	25.50442 (258, 4)	20.58949 (62, 6)	18.50328 (62, 6)
290.0 /	20.59781 (112, 6)	20.36053 (227, 5)	19.13053 (112, 6)	17.14122 (112, 6)	14.89810 (112, 6)
280.0 /	20.02091 (136, 5)	18.53680 (222, 6)	17.66295 (222, 6)	15.79481 (70, 6)	14.57392 (70, 6)
270.0 /	26.99198 (242, 5)	26.65485 (198, 5)	24.66341 (242, 4)	22.46715 (242, 4)	20.36083 (137, 4)
260.0 /	20.86067 (243, 4)	21.72980 (130, 5)	22.04785 (130, 5)	19.87503 (130, 5)	17.33197 (130, 5)
250.0 /	29.14692 (101, 4)	30.41488 (219, 4)	24.66986 (219, 4)	22.03213 (100, 6)	19.19139 (100, 6)
240.0 /	24.97974 (141, 4)	31.18217 (141, 4)	26.83346 (278, 5)	21.93638 (278, 5)	17.79170 (278, 5)
230.0 /	28.67516 (100, 4)	24.52901 (100, 4)	20.87698 (293, 5)	16.94863 (322, 4)	15.22741 (322, 4)
220.0 /	22.32232 (133, 4)	19.07297 (133, 4)	17.80174 (224, 5)	16.34283 (197, 3)	15.42953 (197, 3)
210.0 /	20.52224 (205, 5)	20.00776 (105, 4)	17.01443 (66, 7)	18.73633 (66, 7)	18.32778 (66, 7)
200.0 /	30.04090 (99, 5)	26.60861 (99, 5)	22.24961 (99, 5)	18.15254 (99, 5)	15.00212 (12, 6)
190.0 /	19.54817 (186, 4)	15.56271 (41, 4)	17.65371 (8, 4)	15.30535 (11, 4)	14.15482 (11, 4)
180.0 /	18.57607 (290, 3)	21.59082 (143, 3)	19.05230 (143, 3)	16.06998 (39, 1)	15.46125 (39, 1)
170.0 /	19.48951 (315, 4)	23.89375 (315, 4)	21.35697 (315, 4)	17.22961 (315, 4)	13.80637 (315, 4)
160.0 /	23.12034 (315, 1)	19.34242 (203, 5)	16.87004 (29, 5)	15.62186 (341, 2)	14.14528 (341, 2)
150.0 /	14.52739 (163, 4)	18.46190 (169, 4)	18.45254 (74, 4)	14.78582 (286, 2)	13.36662 (362, 6)
140.0 /	19.49627 (173, 5)	20.23082 (173, 5)	16.60218 (360, 1)	16.60335 (360, 1)	15.71587 (359, 8)
130.0 /	28.57867 (115, 4)	22.62567 (115, 4)	20.50517 (19, 3)	18.26842 (19, 3)	15.80457 (17, 3)
120.0 /	22.45288 (161, 4)	23.95747 (161, 4)	17.92178 (290, 5)	15.55055 (115, 3)	13.77045 (3, 8)
110.0 /	31.62851 (51, 5)	26.98198 (127, 6)	25.66134 (127, 6)	21.41317 (127, 6)	17.52356 (127, 6)
100.0 /	23.84778 (20, 6)	21.96779 (36, 3)	23.36326 (36, 3)	22.03040 (36, 3)	19.72909 (36, 3)
90.0 /	26.35649 (128, 6)	25.92118 (129, 6)	22.91126 (128, 6)	19.30377 (128, 6)	16.14890 (129, 6)
80.0 /	22.76814 (3, 6)	19.48052 (3, 6)	17.76522 (3, 6)	15.35003 (3, 6)	14.00982 (115, 7)
70.0 /	26.34571 (114, 6)	25.34104 (114, 6)	24.86390 (114, 6)	22.39828 (114, 6)	19.53701 (114, 6)
60.0 /	19.80148 (78, 5)	22.47791 (78, 5)	19.82064 (251, 6)	16.09145 (78, 5)	13.13729 (79, 5)
50.0 /	19.29477 (180, 4)	20.10026 (177, 4)	19.44581 (282, 5)	17.83265 (282, 5)	15.66497 (282, 5)
40.0 /	26.44504 (145, 5)	29.40576 (149, 5)	25.88287 (148, 5)	20.70203 (148, 5)	16.50145 (149, 5)
30.0 /	17.38929 (213, 4)	22.62343 (240, 5)	22.16702 (285, 4)	18.94298 (285, 4)	15.22265 (285, 4)
20.0 /	17.69060 (145, 4)	21.31228 (145, 4)	16.54848 (285, 5)	14.65365 (50, 4)	13.72755 (50, 4)
10.0 /	19.04235 (58, 4)	22.11790 (231, 4)	19.34408 (188, 6)	15.91390 (58, 4)	14.31227 (65, 6)

*** NRC/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* SECOND HIGHEST 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 29.72624 AND OCCURRED AT (1000.0, 240.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	27.60012 (65, 4)	27.90824 (262, 4)	23.99381 (207, 6)	20.07619 (95, 2)	17.96294 (95, 2)
350.0 /	17.98421 (94, 5)	16.05504 (250, 4)	15.09655 (250, 4)	13.54323 (114, 3)	12.35341 (114, 3)
340.0 /	18.69943 (113, 4)	20.57181 (206, 6)	19.84732 (206, 6)	17.75315 (339, 2)	15.47450 (343, 4)
330.0 /	15.73496 (93, 5)	20.63866 (188, 5)	15.72704 (63, 2)	16.04125 (210, 6)	13.91873 (63, 2)
320.0 /	12.59862 (181, 4)	21.20892 (313, 5)	18.47571 (313, 5)	15.34069 (237, 5)	13.33859 (54, 8)
310.0 /	23.84764 (111, 5)	23.42277 (237, 5)	19.36129 (237, 5)	16.32060 (57, 3)	15.69071 (57, 3)
300.0 /	27.50332 (111, 5)	29.68845 (136, 4)	23.17764 (136, 4)	19.38588 (122, 6)	17.29687 (122, 6)
290.0 /	15.86168 (227, 5)	19.61931 (112, 6)	15.60030 (281, 6)	14.45969 (281, 6)	12.84268 (281, 6)
280.0 /	13.95100 (109, 5)	17.02587 (228, 4)	15.77792 (70, 6)	15.18784 (222, 6)	12.98606 (222, 6)
270.0 /	24.18479 (242, 4)	26.47962 (217, 4)	23.90987 (239, 6)	22.10931 (239, 6)	19.70836 (242, 4)
260.0 /	16.58709 (130, 5)	20.35930 (222, 5)	15.75020 (222, 5)	15.78299 (245, 5)	14.64197 (245, 5)
250.0 /	25.91101 (100, 6)	25.48275 (101, 4)	24.49679 (100, 6)	18.05941 (219, 4)	14.56582 (279, 5)
240.0 /	21.97601 (278, 5)	29.72624 (278, 5)	24.74457 (141, 4)	18.14262 (141, 4)	14.47628 (293, 6)
230.0 /	24.52841 (133, 4)	24.26457 (293, 5)	19.94913 (100, 4)	15.96656 (303, 6)	14.51456 (303, 6)
220.0 /	20.06878 (276, 6)	18.25528 (276, 6)	17.68244 (103, 4)	16.21296 (103, 4)	14.29058 (103, 4)
210.0 /	16.77449 (67, 4)	17.01449 (205, 5)	15.98329 (105, 4)	14.33895 (39, 7)	12.53286 (39, 7)
200.0 /	18.15523 (99, 6)	20.05990 (154, 4)	17.84472 (154, 4)	16.18598 (12, 6)	14.88847 (99, 5)
190.0 /	15.24440 (41, 4)	15.27862 (8, 4)	16.14220 (41, 4)	14.97062 (41, 4)	13.26456 (41, 4)
180.0 /	17.86790 (315, 3)	19.43173 (341, 5)	17.39697 (345, 4)	15.39469 (315, 3)	13.53551 (315, 3)
170.0 /	15.84193 (98, 5)	20.27705 (98, 5)	17.24550 (317, 4)	15.28896 (317, 4)	13.07560 (66, 6)
160.0 /	14.20978 (341, 2)	18.77391 (315, 1)	16.64808 (315, 1)	14.20268 (305, 4)	13.85145 (305, 4)
150.0 /	13.94567 (286, 2)	17.98426 (74, 4)	15.63492 (286, 2)	14.77364 (74, 4)	13.26348 (286, 2)
140.0 /	19.52553 (117, 4)	19.62737 (117, 4)	16.05049 (355, 3)	16.03011 (359, 8)	15.33455 (360, 1)
130.0 /	24.89178 (19, 3)	21.20373 (19, 3)	16.56057 (175, 5)	14.65272 (66, 5)	13.14516 (66, 5)
120.0 /	20.20136 (19, 4)	21.70875 (178, 5)	17.80721 (161, 4)	14.35503 (3, 8)	13.41095 (115, 3)
110.0 /	17.44344 (127, 6)	25.63994 (51, 5)	22.24989 (51, 5)	18.65184 (51, 5)	16.89569 (128, 3)
100.0 /	21.66762 (36, 3)	20.07012 (20, 6)	18.50504 (20, 6)	16.41264 (47, 6)	14.97969 (47, 6)
90.0 /	19.53115 (81, 5)	22.22058 (176, 5)	19.30557 (81, 5)	17.49388 (81, 5)	15.41951 (81, 6)
80.0 /	17.94836 (20, 5)	17.19198 (176, 5)	16.63705 (20, 5)	15.22714 (20, 5)	13.43458 (20, 5)
70.0 /	22.52863 (3, 5)	21.80680 (127, 4)	20.80350 (3, 5)	19.20111 (3, 5)	17.06908 (3, 5)
60.0 /	17.00076 (190, 5)	20.51876 (251, 6)	19.65060 (78, 5)	15.81321 (251, 6)	12.68373 (72, 6)
50.0 /	18.22238 (282, 5)	19.05733 (282, 5)	15.70216 (231, 5)	13.84936 (145, 3)	12.61748 (145, 3)
40.0 /	22.86809 (148, 5)	27.41063 (252, 4)	20.86315 (145, 5)	16.97976 (145, 5)	13.78010 (145, 5)
30.0 /	17.79612 (251, 5)	22.11123 (175, 6)	21.79986 (175, 6)	17.45586 (175, 6)	14.03122 (251, 4)
20.0 /	14.99847 (95, 3)	18.83980 (248, 5)	14.74841 (72, 5)	14.51631 (285, 5)	12.41444 (72, 5)
10.0 /	16.21357 (339, 5)	20.69577 (188, 6)	18.10842 (231, 4)	15.62813 (65, 6)	13.63972 (58, 4)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER)

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	32.15228	5	87	500.0	340.0	26	26.75454	4	136	500.0	300.0
2	31.83808	5	216	500.0	300.0	27	26.65485	5	198	1000.0	270.0
3	31.62951	5	51	500.0	110.0	28	26.63756	4	231	1000.0	360.0
4	31.18217	4	141	1000.0	240.0	29	26.60861	5	99	1000.0	200.0
5	31.17037	4	258	1000.0	300.0	30	26.56927	4	214	1000.0	360.0
6	30.80844	5	144	1000.0	360.0	31	26.54004	4	65	1000.0	360.0
7	30.41486	4	219	1000.0	250.0	32	26.50814	5	94	500.0	360.0
8	30.04090	5	99	500.0	200.0	33	26.47962	4	217	1000.0	270.0
9	29.72624	5	270	1000.0	240.0	34	26.44504	5	145	500.0	40.0
10	29.68945	4	136	1000.0	300.0	35	26.35549	6	129	500.0	90.0
11	29.40576	5	148	1000.0	40.0	36	26.34571	6	114	500.0	70.0
12	29.14692	4	101	500.0	250.0	37	25.95377	4	65	1500.0	360.0
13	28.68387	5	216	1000.0	300.0	38	25.94137	4	214	500.0	360.0
14	28.67516	4	100	500.0	230.0	39	25.92118	6	128	1000.0	90.0
15	28.57867	4	115	500.0	130.0	40	25.91101	6	100	500.0	250.0
16	28.04137	4	94	500.0	360.0	41	25.88287	5	148	1500.0	40.0
17	27.90824	4	262	1000.0	360.0	42	25.66134	6	127	1500.0	110.0
18	27.60012	4	65	500.0	360.0	43	25.63794	5	51	1000.0	110.0
19	27.50332	5	111	500.0	300.0	44	25.50442	4	258	1500.0	300.0
20	27.41063	4	252	1000.0	40.0	45	25.48275	4	101	1000.0	250.0
21	26.99198	5	242	500.0	270.0	46	25.47883	6	207	1000.0	360.0
22	26.98198	6	127	1000.0	110.0	47	25.46611	5	145	1000.0	40.0
23	26.97033	5	121	500.0	300.0	48	25.34184	6	114	1000.0	70.0
24	26.83346	5	278	1500.0	240.0	49	24.99341	6	100	1000.0	250.0
25	26.80972	5	87	1000.0	340.0	50	24.97974	4	141	500.0	240.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 10.75905 AND OCCURRED AT (1500.0, 180.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	9.62887 (94, 1)	7.74702 (94, 1)	8.30065 (65, 1)	8.37108 (65, 1)	8.02047 (65, 1)
350.0 /	5.56095 (63, 1)	5.16865 (63, 1)	5.22377 (63, 1)	4.93753 (63, 1)	4.48449 (63, 1)
340.0 /	4.15037 (92, 1)	4.43852 (206, 1)	4.36473 (88, 1)	4.25205 (88, 1)	3.88967 (88, 1)
330.0 /	3.47469 (55, 1)	5.82204 (249, 1)	5.08600 (249, 1)	3.71414 (249, 1)	3.31815 (63, 1)
320.0 /	3.13885 (87, 1)	6.28130 (249, 1)	6.08364 (249, 1)	4.90755 (249, 1)	3.96614 (249, 1)
310.0 /	7.17692 (121, 1)	7.33111 (121, 1)	6.80390 (121, 1)	5.96722 (121, 1)	5.13434 (121, 1)
300.0 /	8.32282 (136, 1)	8.71506 (258, 1)	8.77209 (62, 1)	8.61300 (62, 1)	8.00344 (62, 1)
290.0 /	5.92353 (86, 1)	5.64493 (86, 1)	5.38003 (86, 1)	4.84443 (86, 1)	4.28843 (86, 1)
280.0 /	4.12216 (136, 1)	4.99902 (135, 1)	4.72036 (138, 1)	4.21639 (138, 1)	3.69193 (138, 1)
270.0 /	8.51148 (242, 1)	8.67847 (242, 1)	8.06827 (242, 1)	7.12119 (242, 1)	6.26281 (242, 1)
260.0 /	4.69636 (243, 1)	5.15703 (255, 1)	4.19436 (218, 1)	3.81601 (245, 1)	3.76302 (245, 1)
250.0 /	5.49989 (101, 1)	6.29889 (219, 1)	5.47796 (219, 1)	4.25647 (219, 1)	3.43030 (141, 1)
240.0 /	7.94176 (102, 1)	7.88775 (102, 1)	7.48853 (102, 1)	6.51512 (102, 1)	5.53109 (102, 1)
230.0 /	7.09925 (142, 1)	6.94280 (142, 1)	6.36715 (103, 1)	5.20991 (103, 1)	5.72842 (103, 1)
220.0 /	4.61662 (133, 1)	4.68021 (133, 1)	4.47769 (133, 1)	3.96212 (133, 1)	3.41819 (133, 1)
210.0 /	4.97478 (304, 1)	4.76408 (304, 1)	4.92059 (304, 1)	4.75311 (41, 1)	4.42046 (304, 1)
200.0 /	9.13955 (99, 1)	8.25774 (99, 1)	7.55148 (99, 1)	6.52136 (99, 1)	5.53355 (99, 1)
190.0 /	7.05986 (344, 1)	6.72577 (344, 1)	7.34969 (344, 1)	6.91310 (344, 1)	6.16344 (344, 1)
180.0 /	9.95626 (40, 1)	9.94292 (40, 1)	10.75905 (40, 1) ✓	10.31036 (40, 1)	9.35376 (40, 1)
170.0 /	5.62942 (315, 1)	6.98542 (315, 1)	6.53157 (315, 1)	5.46943 (315, 1)	4.54334 (315, 1)
160.0 /	6.52902 (315, 1)	6.87410 (315, 1)	6.50293 (315, 1)	5.66641 (315, 1)	5.07600 (305, 1)
150.0 /	3.76995 (286, 1)	4.64022 (362, 1)	4.69440 (362, 1)	4.20068 (362, 1)	3.90508 (32, 1)
140.0 /	4.44043 (340, 1)	5.40595 (117, 1)	4.88724 (360, 1)	4.64139 (360, 1)	4.11764 (360, 1)
130.0 /	10.46584 (19, 1) ✓	8.66983 (19, 1)	8.22505 (19, 1)	7.25380 (19, 1)	6.23474 (19, 1)
120.0 /	5.15400 (19, 1)	5.22802 (161, 1)	4.48096 (272, 1)	3.71197 (272, 1)	3.14645 (330, 1)
110.0 /	6.78196 (51, 1)	6.40012 (127, 1)	5.88732 (127, 1)	4.82126 (127, 1)	3.90419 (127, 1)
100.0 /	7.30934 (36, 1)	7.31102 (36, 1)	7.76690 (36, 1)	7.31736 (36, 1)	6.54017 (36, 1)
90.0 /	5.90246 (36, 1)	5.71942 (36, 1)	6.03312 (36, 1)	5.77313 (36, 1)	5.31093 (36, 1)
80.0 /	3.55384 (300, 1)	3.92671 (300, 1)	4.19647 (300, 1)	3.91576 (300, 1)	3.50169 (300, 1)
70.0 /	6.53838 (114, 1)	6.09491 (114, 1)	5.86553 (114, 1)	5.29711 (114, 1)	4.64464 (114, 1)
60.0 /	4.46418 (77, 1)	4.45329 (172, 1)	4.65062 (77, 1)	4.61397 (77, 1)	4.40317 (77, 1)
50.0 /	3.94185 (234, 1)	6.05109 (172, 1)	5.57366 (172, 1)	4.63906 (282, 1)	4.25869 (282, 1)
40.0 /	4.31160 (145, 1)	6.65087 (148, 1)	5.80615 (148, 1)	4.52681 (148, 1)	4.07695 (157, 1)
30.0 /	3.68073 (251, 1)	4.92191 (251, 1)	4.85594 (251, 1)	4.39810 (251, 1)	3.96996 (251, 1)
20.0 /	3.35922 (248, 1)	4.44060 (248, 1)	3.75443 (285, 1)	3.37024 (49, 1)	3.31275 (49, 1)
10.0 /	4.46464 (339, 1)	6.64201 (230, 1)	6.38550 (230, 1)	5.05788 (230, 1)	3.92470 (230, 1)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* SECOND HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 8.31162 AND OCCURRED AT (1000.0, 300.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	6.85188 (65, 1)	7.66266 (207, 1)	7.93863 (335, 1)	8.00830 (335, 1)	7.56527 (354, 1)
350.0 /	4.44252 (9, 1)	4.46865 (57, 1)	4.10158 (57, 1)	3.51287 (9, 1)	3.15617 (9, 1)
340.0 /	4.04001 (87, 1)	4.34667 (92, 1)	4.16343 (206, 1)	3.54773 (92, 1)	3.37888 (153, 1)
330.0 /	3.07891 (93, 1)	4.69979 (202, 1)	4.35357 (202, 1)	3.58591 (202, 1)	3.27637 (338, 1)
320.0 /	2.93364 (108, 1)	4.62085 (229, 1)	3.45956 (338, 1)	3.58051 (338, 1)	3.17138 (338, 1)
310.0 /	4.66457 (209, 1)	5.30392 (207, 1)	4.51654 (172, 1)	4.50479 (192, 1)	4.19619 (192, 1)
300.0 /	7.86094 (86, 1)	8.31162 (136, 1)	7.23429 (86, 1)	6.70398 (86, 1)	6.04106 (86, 1)
290.0 /	4.21326 (112, 1)	5.06244 (259, 1)	4.37019 (258, 1)	3.53715 (123, 1)	3.19323 (123, 1)
280.0 /	3.78060 (109, 1)	4.42712 (228, 1)	4.05413 (155, 1)	3.75853 (222, 1)	3.38616 (222, 1)
270.0 /	6.42055 (240, 1)	8.24685 (217, 1)	7.61173 (217, 1)	6.30465 (217, 1)	5.38892 (240, 1)
260.0 /	4.07356 (218, 1)	5.13284 (218, 1)	4.07793 (255, 1)	3.39948 (238, 1)	3.02958 (217, 1)
250.0 /	4.44520 (255, 1)	4.85346 (255, 1)	4.56599 (141, 1)	3.98245 (141, 1)	3.35250 (219, 1)
240.0 /	5.31719 (278, 1)	7.58042 (278, 1)	7.19083 (278, 1)	6.12574 (278, 1)	5.16523 (278, 1)
230.0 /	5.32437 (103, 1)	5.76659 (103, 1)	6.15489 (142, 1)	5.31527 (142, 1)	4.57947 (142, 1)
220.0 /	4.23606 (276, 1)	3.91478 (142, 1)	3.71982 (304, 1)	3.47282 (304, 1)	3.11752 (304, 1)
210.0 /	4.61694 (39, 1)	4.41293 (41, 1)	4.90650 (41, 1)	4.72910 (304, 1)	4.31857 (41, 1)
200.0 /	4.26493 (39, 1)	4.53932 (39, 1)	5.11273 (39, 1)	4.96469 (39, 1)	4.50797 (39, 1)
190.0 /	3.92336 (99, 1)	3.76280 (40, 1)	3.98084 (40, 1)	3.72840 (40, 1)	3.31013 (40, 1)
180.0 /	6.94763 (344, 1)	6.97246 (344, 1)	7.68057 (344, 1)	7.44361 (344, 1)	6.78047 (344, 1)
170.0 /	4.09245 (341, 1)	5.26925 (341, 1)	5.47519 (341, 1)	4.87295 (341, 1)	4.35850 (316, 1)
160.0 /	5.22142 (96, 1)	5.44998 (96, 1)	5.63642 (96, 1)	5.36676 (96, 1)	4.95854 (96, 1)
150.0 /	3.56846 (117, 1)	4.48714 (117, 1)	4.41735 (32, 1)	4.12557 (32, 1)	3.71796 (362, 1)
140.0 /	4.36674 (117, 1)	4.20706 (360, 1)	4.29583 (117, 1)	3.95915 (254, 1)	3.55392 (254, 1)
130.0 /	5.92695 (330, 1)	5.13604 (330, 1)	4.80115 (330, 1)	4.19232 (330, 1)	3.80224 (21, 1)
120.0 /	4.51075 (161, 1)	5.02755 (164, 1)	4.38924 (164, 1)	3.44530 (330, 1)	2.90933 (272, 1)
110.0 /	4.34205 (95, 1)	5.72629 (51, 1)	5.24114 (51, 1)	4.54315 (51, 1)	3.87575 (51, 1)
100.0 /	4.13530 (10, 1)	3.48748 (275, 1)	3.53430 (47, 1)	3.51646 (47, 1)	3.39633 (47, 1)
90.0 /	5.60269 (81, 1)	5.45655 (81, 1)	5.60487 (91, 1)	5.20395 (81, 1)	4.63411 (81, 1)
80.0 /	3.34987 (3, 1)	3.59945 (176, 1)	2.89106 (129, 1)	2.53099 (115, 1)	2.69617 (115, 1)
70.0 /	4.69538 (3, 1)	4.79315 (253, 1)	4.59814 (253, 1)	3.79520 (253, 1)	3.10258 (253, 1)
60.0 /	3.59124 (158, 1)	4.33737 (77, 1)	4.17294 (172, 1)	4.08962 (157, 1)	3.85893 (157, 1)
50.0 /	3.92066 (158, 1)	5.68981 (177, 1)	4.85383 (177, 1)	4.48639 (172, 1)	4.10470 (158, 1)
40.0 /	4.17174 (148, 1)	5.31231 (145, 1)	4.48955 (145, 1)	4.23898 (157, 1)	3.57108 (148, 1)
30.0 /	3.63080 (145, 1)	4.09874 (145, 1)	3.45161 (285, 1)	2.95804 (234, 1)	3.07117 (234, 1)
20.0 /	2.96016 (80, 1)	4.01158 (119, 1)	3.55281 (230, 1)	3.14187 (50, 1)	3.02159 (50, 1)
10.0 /	3.81145 (58, 1)	5.76771 (207, 1)	4.61687 (166, 1)	3.64834 (339, 1)	3.15862 (339, 1)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	10.75905	1	40	1500.0	180.0	26	8.00344	1	62	2500.0	300.0
2	10.46584	1	19	500.0	130.0	27	7.94176	1	102	500.0	240.0
3	10.31036	1	40	2000.0	180.0	28	7.93863	1	335	1500.0	360.0
4	9.98626	1	40	500.0	180.0	29	7.91301	1	62	1000.0	300.0
5	9.94282	1	40	1000.0	180.0	30	7.88775	1	102	1000.0	240.0
6	9.62887	1	94	500.0	360.0	31	7.86094	1	86	500.0	300.0
7	9.35376	1	40	2500.0	180.0	32	7.76690	1	36	1500.0	100.0
8	9.13955	1	99	500.0	200.0	33	7.74702	1	94	1000.0	360.0
9	8.77209	1	62	1500.0	300.0	34	7.73093	1	62	500.0	300.0
10	8.71506	1	259	1000.0	300.0	35	7.68057	1	344	1500.0	180.0
11	8.67847	1	242	1000.0	270.0	36	7.66406	1	354	2000.0	360.0
12	8.66983	1	19	1000.0	130.0	37	7.66266	1	207	1000.0	360.0
13	8.61300	1	62	2000.0	300.0	38	7.64408	1	121	500.0	300.0
14	8.51148	1	242	500.0	270.0	39	7.61173	1	217	1500.0	270.0
15	8.37108	1	65	2000.0	360.0	40	7.58042	1	278	1000.0	240.0
16	8.32282	1	136	500.0	300.0	41	7.56527	1	354	2500.0	360.0
17	8.31162	1	136	1000.0	300.0	42	7.55148	1	99	1500.0	200.0
18	8.30065	1	65	1500.0	360.0	43	7.49741	1	335	2500.0	360.0
19	8.25774	1	99	1000.0	200.0	44	7.48853	1	102	1500.0	240.0
20	8.24685	1	217	1000.0	270.0	45	7.44361	1	344	2000.0	180.0
21	8.22505	1	19	1500.0	130.0	46	7.42665	1	65	1000.0	360.0
22	8.09539	1	121	1000.0	300.0	47	7.34969	1	344	1500.0	190.0
23	8.06827	1	242	1500.0	270.0	48	7.33111	1	121	1000.0	310.0
24	8.02047	1	65	2500.0	360.0	49	7.31736	1	36	2000.0	100.0
25	8.00830	1	335	2000.0	360.0	50	7.31102	1	36	1000.0	100.0

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) =	1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) =	4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) =	2
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) =	0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=2)	ISW(5) =	0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) =	1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION)		
WITH THE FOLLOWING TIME PERIODS:		
HOURLY (YES=1, NO=0)	ISW(7) =	0
2-HOUR (YES=1, NO=0)	ISW(8) =	0
3-HOUR (YES=1, NO=0)	ISW(9) =	1
4-HOUR (YES=1, NO=0)	ISW(10) =	0
6-HOUR (YES=1, NO=0)	ISW(11) =	0
8-HOUR (YES=1, NO=0)	ISW(12) =	0
12-HOUR (YES=1, NO=0)	ISW(13) =	0
24-HOUR (YES=1, NO=0)	ISW(14) =	1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) =	0
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE		
SPECIFIED BY ISW(7) THROUGH ISW(14):		
DAILY TABLES (YES=1, NO=0)	ISW(16) =	0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) =	0
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) =	1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) =	1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) =	0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) =	1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) =	1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) =	0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) =	2
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) =	1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) =	0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) =	0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(28) =	1
NUMBER OF INPUT SOURCES	NSOURC =	1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP =	0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD =	0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS =	10
NUMBER OF Y (THETA) GRID VALUES	NYPNTS =	36
NUMBER OF DISCRETE RECEPTORS	NXWYPT =	0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK =	.10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =	0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =	0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR =	10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET =	9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =	0.000000E+00
SURFACE STATION NO.	ISS =	12815
YEAR OF SURFACE DATA	ISY =	77
UPPER AIR STATION NO.	IUS =	12842
YEAR OF UPPER AIR DATA	IUY =	77
ALLOCATED DATA STORAGE	LIMIT =	43500 WORDS

IST-10

1977 - NRG ONLY - SO_2
(Selected Days)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** METEOROLOGICAL DAYS TO BE PROCESSED ***
(IF=1)

0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 1 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 1	0 0 0 0 0 0 0 0 0 0
1 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1 0 0 0	0 0 0 1 0 0 0 0 1 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 1 0 0 0 0	1 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 1 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 1 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1 0 0	0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0			

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
B	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
C	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00
D	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00
E	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00
F	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

200.0,	300.0,	400.0,	600.0,	700.0,	800.0,	900.0,	1200.0,	1400.0,	1700.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0,	20.0,	30.0,	40.0,	50.0,	60.0,	70.0,	90.0,	90.0,	100.0,
110.0,	120.0,	130.0,	140.0,	150.0,	160.0,	170.0,	190.0,	190.0,	200.0,
210.0,	220.0,	230.0,	240.0,	250.0,	260.0,	270.0,	290.0,	290.0,	300.0,
310.0,	320.0,	330.0,	340.0,	350.0,	360.0,				

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG. K); VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ. DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
101	0	0	0	0.15800E+02	0.0	0.0	0.0	38.10	450.00	20.00	1.83	22.00	38.10	19.80

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	69.59486	5	51	200.0	110.0	26	38.82438	5	99	400.0	200.0
2	59.98905	3	19	200.0	130.0	27	37.57761	4	19	300.0	120.0
3	58.52740	5	87	200.0	340.0	28	37.22967	5	216	400.0	300.0
4	57.56598	5	51	300.0	110.0	29	36.83534	7	99	300.0	200.0
5	52.99155	5	99	200.0	200.0	30	36.59052	4	94	400.0	360.0
6	52.30331	5	87	300.0	340.0	31	36.22225	3	19	400.0	130.0
7	51.61990	4	94	200.0	360.0	32	35.68717	5	94	200.0	350.0
8	51.21322	2	19	200.0	130.0	33	35.23911	6	99	200.0	190.0
9	49.01497	3	19	300.0	130.0	34	34.22540	6	216	200.0	270.0
10	48.19339	5	99	300.0	200.0	35	34.12436	6	99	300.0	200.0
11	46.10723	4	19	200.0	120.0	36	33.77392	4	40	200.0	180.0
12	45.92691	4	94	300.0	360.0	37	33.53215	5	94	400.0	360.0
13	45.47030	7	99	200.0	200.0	38	33.03918	6	19	300.0	110.0
14	44.85070	5	94	200.0	360.0	39	32.72956	5	136	200.0	280.0
15	43.88745	6	19	200.0	110.0	40	32.17449	6	40	300.0	180.0
16	43.80431	5	51	400.0	110.0	41	31.75994	4	19	300.0	130.0
17	42.37231	5	216	300.0	300.0	42	31.50704	6	94	200.0	360.0
18	41.84482	5	87	400.0	340.0	43	31.36153	4	141	900.0	240.0
19	41.56203	2	19	300.0	130.0	44	31.31458	8	94	200.0	360.0
20	41.52353	6	99	200.0	200.0	45	31.03914	5	94	300.0	350.0
21	41.13793	5	94	300.0	360.0	46	30.99044	4	258	900.0	300.0
22	40.67433	5	216	200.0	300.0	47	30.78887	2	19	400.0	130.0
23	39.68136	3	87	200.0	310.0	48	30.76106	6	141	200.0	260.0
24	39.25979	6	40	200.0	180.0	49	30.67477	5	136	300.0	280.0
25	39.22096	4	19	200.0	130.0	50	30.61536	3	87	300.0	310.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	28.01319	1	40	200.0	180.0	26	9.85483	1	136	200.0	300.0
2	25.55253	1	19	200.0	130.0	27	9.68515	1	51	400.0	110.0
3	22.17275	1	40	300.0	180.0	28	9.63031	1	94	200.0	350.0
4	20.93532	1	94	200.0	360.0	29	9.49691	1	40	900.0	180.0
5	20.69506	1	19	300.0	130.0	30	9.48056	1	136	400.0	300.0
6	20.12777	1	99	200.0	200.0	31	9.20192	1	216	300.0	300.0
7	17.37512	1	94	300.0	360.0	32	8.96570	1	40	800.0	180.0
8	16.97798	1	99	300.0	200.0	33	8.74155	1	40	300.0	190.0
9	16.17776	1	51	200.0	110.0	34	8.73005	1	99	200.0	190.0
10	15.49614	1	40	400.0	180.0	35	8.68752	1	258	900.0	300.0
11	15.21967	1	19	400.0	130.0	36	8.63083	1	136	200.0	270.0
12	13.10689	1	51	300.0	110.0	37	8.61989	1	19	1200.0	130.0
13	12.99329	1	94	400.0	360.0	38	8.58907	1	19	900.0	130.0
14	12.84596	1	19	200.0	120.0	39	8.50935	1	136	800.0	300.0
15	12.82954	1	99	400.0	200.0	40	8.49800	1	136	900.0	300.0
16	11.11715	1	40	200.0	190.0	41	8.41309	1	19	800.0	130.0
17	11.10592	1	87	200.0	310.0	42	8.38492	1	19	1400.0	130.0
18	10.73755	1	40	1400.0	180.0	43	8.38445	1	19	600.0	130.0
19	10.66788	1	40	1700.0	180.0	44	8.37957	1	87	300.0	310.0
20	10.53821	1	136	300.0	300.0	45	8.37633	1	258	800.0	300.0
21	10.50810	1	40	1200.0	180.0	46	8.28771	1	40	700.0	180.0
22	10.26288	1	19	300.0	120.0	47	8.26377	1	258	1200.0	300.0
23	10.19945	1	40	200.0	170.0	48	8.25649	1	99	900.0	200.0
24	9.90222	1	216	200.0	300.0	49	8.24797	1	136	700.0	300.0
25	9.87729	1	87	200.0	320.0	50	8.15842	1	99	800.0	200.0

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 2
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION) WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 1
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 1
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0 YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 2
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
UGEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(28) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 2
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 36
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK = .10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 77
UPPER AIR STATION NO.	IUS = 12842
YEAR OF UPPER AIR DATA	IUY = 77
ALLOCATED DATA STORAGE	LIMIT = 49500 WORDS

IST-11

1977 - NRG ONLY - SO_2

Radius of Influence check

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          *** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09        ***


                         *** METEOROLOGICAL DAYS TO BE PROCESSED ***
                                          (IF=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 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 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 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 0

                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                          (METERS/SEC)

                             1.54,   3.09,   5.14,   8.23,   10.80,

                                  *** WIND PROFILE EXPONENTS ***

STABILITY                                   WIND SPEED CATEGORY
CATEGORY          1              2              3              4              5              6
    A        .10000E+00     .10000E+00     .10000E+00     .10000E+00     .10000E+00     .10000E+00
    B        .15000E+00     .15000E+00     .15000E+00     .15000E+00     .15000E+00     .15000E+00
    C        .20000E+00     .20000E+00     .20000E+00     .20000E+00     .20000E+00     .20000E+00
    D        .25000E+00     .25000E+00     .25000E+00     .25000E+00     .25000E+00     .25000E+00
    E        .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00
    F        .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00

                      *** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
                                (DEGREES KELVIN PER METER)

STABILITY                                   WIND SPEED CATEGORY
CATEGORY          1              2              3              4              5              6
    A        .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
    B        .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
    C        .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
    D        .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
    E        .20000E-01     .20000E-01     .20000E-01     .20000E-01     .20000E-01     .20000E-01
    F        .35000E-01     .35000E-01     .35000E-01     .35000E-01     .35000E-01     .35000E-01
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*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

6000.0, 9000.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0,	20.0,	30.0,	40.0,	50.0,	60.0,	70.0,	90.0,	90.0,	100.0,
110.0,	120.0,	130.0,	140.0,	150.0,	160.0,	170.0,	190.0,	190.0,	200.0,
210.0,	220.0,	230.0,	240.0,	250.0,	260.0,	270.0,	290.0,	290.0,	300.0,
310.0,	320.0,	330.0,	340.0,	350.0,	360.0,				

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG. K); VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ. DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
101	0	0	0	0.15800E+02	0.0	0.0	0.0	38.10	450.00	20.00	1.83	22.00	38.10	19.80

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 365-DAY AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 0.40844 AND OCCURRED AT (6000.0, 360.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 6000.0	9000.0
360.0 /	0.40844	0.31027
350.0 /	0.21292	0.16356
340.0 /	0.20980	0.16820
330.0 /	0.16592	0.12708
320.0 /	0.17839	0.13333
310.0 /	0.21567	0.16233
300.0 /	0.26123	0.19857
290.0 /	0.15242	0.10964
280.0 /	0.20330	0.15168
270.0 /	0.38588	0.29219
260.0 /	0.23438	0.18275
250.0 /	0.24464	0.18907
240.0 /	0.32688	0.25813
230.0 /	0.36562	0.30325
220.0 /	0.24903	0.21109
210.0 /	0.23952	0.19483
200.0 /	0.19066	0.14858
190.0 /	0.16696	0.12614
180.0 /	0.38485	0.29658
170.0 /	0.19964	0.14526
160.0 /	0.15425	0.11554
150.0 /	0.12483	0.08612
140.0 /	0.15799	0.10700
130.0 /	0.14607	0.09750
120.0 /	0.17574	0.12893
110.0 /	0.14827	0.10608
100.0 /	0.13379	0.09368
90.0 /	0.23190	0.17332
80.0 /	0.14010	0.10916
70.0 /	0.13393	0.09786
60.0 /	0.20608	0.15891
50.0 /	0.21143	0.16311
40.0 /	0.16738	0.12709
30.0 /	0.10867	0.07811
20.0 /	0.15285	0.11299
10.0 /	0.16356	0.11676

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	13.24128	1	363	6000.0	180.0	26	10.70436	1	277	6000.0	200.0
2	12.34964	1	65	6000.0	360.0	27	10.70103	6	362	6000.0	150.0
3	12.30647	7	348	6000.0	360.0	28	10.68139	6	192	6000.0	310.0
4	12.12723	2	113	6000.0	310.0	29	10.60998	8	177	6000.0	90.0
5	12.02491	8	30	6000.0	200.0	30	10.56925	7	258	6000.0	280.0
6	11.92087	2	232	6000.0	360.0	31	10.56719	2	278	9000.0	220.0
7	11.80747	8	258	6000.0	270.0	32	10.55478	1	304	6000.0	210.0
8	11.79754	7	217	6000.0	260.0	33	10.53723	4	137	6000.0	270.0
9	11.72029	2	71	9000.0	260.0	34	10.49820	7	258	9000.0	280.0
10	11.60291	7	115	6000.0	80.0	35	10.49688	1	205	6000.0	210.0
11	11.53215	2	232	9000.0	360.0	36	10.46495	8	169	9000.0	360.0
12	11.42884	8	169	6000.0	360.0	37	10.45971	2	2	6000.0	180.0
13	11.38942	7	93	6000.0	320.0	38	10.44018	2	69	6000.0	250.0
14	11.38033	8	258	9000.0	270.0	39	10.35293	1	172	6000.0	360.0
15	11.23593	1	290	6000.0	140.0	40	10.33081	7	194	6000.0	230.0
16	11.19431	8	30	9000.0	200.0	41	10.24345	2	278	6000.0	220.0
17	11.17484	8	354	6000.0	360.0	42	10.21492	7	240	6000.0	260.0
18	11.07355	1	115	6000.0	50.0	43	10.17913	3	57	6000.0	310.0
19	11.03877	1	305	6000.0	160.0	44	10.17207	7	292	6000.0	90.0
20	11.01578	7	66	6000.0	210.0	45	10.15751	2	157	6000.0	60.0
21	11.01637	1	197	9000.0	230.0	46	10.00225	2	21	6000.0	90.0
22	11.01349	2	51	6000.0	360.0	47	9.94113	2	339	6000.0	340.0
23	10.95810	2	113	9000.0	310.0	48	9.90943	1	62	6000.0	220.0
24	10.95224	1	363	9000.0	180.0	49	9.87413	2	345	6000.0	160.0
25	10.94841	2	30	6000.0	180.0	50	9.85206	8	157	6000.0	40.0

HIGH
24-HR
SGROUP# 1

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 5.38792 AND OCCURRED AT (6000.0, 360.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 6000.0	9000.0
360.0 /	5.38792 (354, 1)	4.17750 (233, 1)
350.0 /	2.34704 (63, 1)	1.50939 (50, 1)
340.0 /	2.71796 (153, 1)	2.12544 (153, 1)
330.0 /	2.21663 (338, 1)	1.69891 (338, 1)
320.0 /	2.45705 (93, 1)	1.98275 (93, 1)
310.0 /	2.77058 (113, 1)	2.33521 (113, 1)
300.0 /	4.34043 (62, 1)	2.85549 (62, 1)
290.0 /	2.20336 (86, 1)	1.47754 (86, 1)
280.0 /	2.23767 (258, 1)	1.94944 (258, 1)
270.0 /	3.49479 (242, 1)	2.61154 (258, 1)
260.0 /	2.45861 (245, 1)	2.34425 (71, 1)
250.0 /	2.37980 (69, 1)	2.00716 (69, 1)
240.0 /	2.89491 (277, 1)	2.17555 (297, 1)
230.0 /	3.14901 (103, 1)	2.32401 (243, 1)
220.0 /	2.31716 (242, 1)	2.13797 (242, 1)
210.0 /	3.03887 (102, 1)	2.41921 (102, 1)
200.0 /	2.49407 (277, 1)	1.93312 (277, 1)
190.0 /	2.81815 (344, 1)	1.70191 (344, 1)
180.0 /	4.64456 (40, 1)	2.94191 (40, 1)
170.0 /	3.32750 (316, 1)	2.54192 (316, 1)
160.0 /	3.69473 (305, 1)	2.65787 (305, 1)
150.0 /	2.29065 (32, 1)	1.67400 (32, 1)
140.0 /	2.00079 (360, 1)	1.34399 (290, 1)
130.0 /	2.60313 (19, 1)	1.54772 (19, 1)
120.0 /	1.72479 (330, 1)	1.22832 (16, 1)
110.0 /	2.16103 (76, 1)	1.52628 (76, 1)
100.0 /	3.04156 (36, 1)	1.92378 (47, 1)
90.0 /	2.88794 (21, 1)	2.49736 (21, 1)
80.0 /	2.40165 (115, 1)	1.89393 (115, 1)
70.0 /	2.11793 (114, 1)	1.30525 (114, 1)
60.0 /	2.75867 (77, 1)	1.90074 (77, 1)
50.0 /	2.74567 (78, 1)	1.99056 (78, 1)
40.0 /	2.67823 (157, 1)	2.01641 (157, 1)
30.0 /	2.19559 (234, 1)	1.48623 (234, 1)
20.0 /	2.04639 (49, 1)	1.50755 (49, 1)
10.0 /	1.61717 (65, 1)	1.30862 (149, 1)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* SECOND HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 5.37707 AND OCCURRED AT (6000.0, 360.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 6000.0	9000.0
360.0 /	5.37707 (233, 1)	4.07466 (354, 1)
350.0 /	2.03467 (92, 1)	1.50913 (63, 1)
340.0 /	2.57800 (229, 1)	2.02636 (229, 1)
330.0 /	1.99198 (307, 1)	1.68924 (307, 1)
320.0 /	1.89317 (87, 1)	1.35257 (87, 1)
310.0 /	2.43635 (121, 1)	1.74391 (57, 1)
300.0 /	3.12730 (86, 1)	2.77583 (215, 1)
290.0 /	1.72628 (53, 1)	1.40385 (54, 1)
280.0 /	1.87918 (70, 1)	1.38745 (111, 1)
270.0 /	2.87414 (258, 1)	2.49244 (242, 1)
260.0 /	1.98343 (71, 1)	1.65546 (245, 1)
250.0 /	1.95324 (297, 1)	1.45588 (297, 1)
240.0 /	2.61774 (297, 1)	2.07550 (277, 1)
230.0 /	2.59037 (131, 1)	2.24798 (324, 1)
220.0 /	2.29254 (205, 1)	1.79262 (205, 1)
210.0 /	2.66882 (304, 1)	2.00902 (205, 1)
200.0 /	2.23668 (99, 1)	1.78933 (30, 1)
190.0 /	1.48615 (40, 1)	1.25536 (361, 1)
180.0 /	3.52669 (38, 1)	2.63779 (363, 1)
170.0 /	2.49218 (31, 1)	1.69237 (31, 1)
160.0 /	2.82257 (96, 1)	1.95649 (345, 1)
150.0 /	2.01343 (362, 1)	1.42523 (362, 1)
140.0 /	1.91615 (290, 1)	1.34355 (360, 1)
130.0 /	2.12089 (21, 1)	1.50881 (21, 1)
120.0 /	1.59194 (59, 1)	1.18418 (330, 1)
110.0 /	1.94589 (128, 1)	1.36485 (128, 1)
100.0 /	2.43852 (47, 1)	1.85914 (36, 1)
90.0 /	2.88408 (36, 1)	2.04052 (299, 1)
80.0 /	1.89737 (300, 1)	1.40890 (300, 1)
70.0 /	1.65130 (329, 1)	1.29422 (15, 1)
60.0 /	2.37176 (157, 1)	1.78172 (299, 1)
50.0 /	2.57174 (282, 1)	1.94552 (282, 1)
40.0 /	1.59209 (203, 1)	1.44828 (203, 1)
30.0 /	1.87356 (251, 1)	1.18860 (251, 1)
20.0 /	1.87049 (50, 1)	1.31028 (50, 1)
10.0 /	1.60281 (27, 1)	1.20102 (50, 1)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	5.38792	1	354	6000.0	360.0	26	3.03987	1	102	6000.0	210.0
2	5.37707	1	233	6000.0	360.0	27	2.94181	1	40	9000.0	180.0
3	5.06414	1	65	6000.0	360.0	28	2.89491	1	277	6000.0	240.0
4	4.64456	1	40	6000.0	180.0	29	2.88794	1	21	6000.0	90.0
5	4.34043	1	62	6000.0	300.0	30	2.88408	1	36	6000.0	90.0
6	4.17750	1	233	9000.0	360.0	31	2.87414	1	258	6000.0	270.0
7	4.11961	1	172	6000.0	360.0	32	2.86379	1	2	6000.0	180.0
8	4.07466	1	354	9000.0	360.0	33	2.85549	1	62	9000.0	300.0
9	4.02812	1	335	6000.0	360.0	34	2.84946	1	240	6000.0	270.0
10	3.69473	1	305	6000.0	160.0	35	2.82257	1	96	6000.0	160.0
11	3.60265	1	65	9000.0	360.0	36	2.81815	1	344	6000.0	190.0
12	3.52569	1	38	6000.0	180.0	37	2.80464	1	245	6000.0	270.0
13	3.49478	1	242	6000.0	270.0	38	2.77583	1	215	9000.0	300.0
14	3.48819	1	172	9000.0	360.0	39	2.77353	1	355	6000.0	360.0
15	3.42728	1	41	6000.0	180.0	40	2.77058	1	113	6000.0	310.0
16	3.34400	1	344	6000.0	180.0	41	2.76747	1	215	6000.0	300.0
17	3.32750	1	316	6000.0	170.0	42	2.75867	1	77	6000.0	60.0
18	3.31174	1	27	6000.0	360.0	43	2.74567	1	78	6000.0	50.0
19	3.24962	1	363	6000.0	180.0	44	2.71796	1	153	6000.0	340.0
20	3.20340	1	6	6000.0	360.0	45	2.70781	1	348	6000.0	360.0
21	3.17759	1	30	6000.0	180.0	46	2.69999	1	232	6000.0	360.0
22	3.14901	1	103	6000.0	230.0	47	2.68896	1	39	6000.0	180.0
23	3.13716	1	12	6000.0	180.0	48	2.67981	1	64	6000.0	360.0
24	3.12730	1	86	6000.0	300.0	49	2.67823	1	157	6000.0	40.0
25	3.04156	1	36	6000.0	100.0	50	2.66982	1	304	6000.0	210.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 2
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION)	
WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 1
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE	
SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 1
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 2
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(28) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 5
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 36
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK = .10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 78
UPPER AIR STATION NO.	IUS = 12842
YEAR OF UPPER AIR DATA	IUY = 78
ALLOCATED DATA STORAGE	LIMIT = 43500 WORDS

IST-12

1978 - NRG ONLY - SO_2

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         *** NRC/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09      ***


                    *** METEOROLOGICAL DAYS TO BE PROCESSED ***
                                     (IF=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 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 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 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 0

             *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                  (METERS/SEC)

                         1.54,   3.09,   5.14,   8.23,  10.80,

                             *** WIND PROFILE EXPONENTS ***

  STABILITY                            WIND SPEED CATEGORY
  CATEGORY        1            2            3            4            5            6
     A       .10000E+00   .10000E+00   .10000E+00   .10000E+00   .10000E+00   .10000E+00
     B       .15000E+00   .15000E+00   .15000E+00   .15000E+00   .15000E+00   .15000E+00
     C       .20000E+00   .20000E+00   .20000E+00   .20000E+00   .20000E+00   .20000E+00
     D       .25000E+00   .25000E+00   .25000E+00   .25000E+00   .25000E+00   .25000E+00
     E       .30000E+00   .30000E+00   .30000E+00   .30000E+00   .30000E+00   .30000E+00
     F       .30000E+00   .30000E+00   .30000E+00   .30000E+00   .30000E+00   .30000E+00

                  *** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
                            (DEGREES KELVIN PER METER)

  STABILITY                            WIND SPEED CATEGORY
  CATEGORY        1            2            3            4            5            6
     A       .00000E+00   .00000E+00   .00000E+00   .00000E+00   .00000E+00   .00000E+00
     B       .00000E+00   .00000E+00   .00000E+00   .00000E+00   .00000E+00   .00000E+00
     C       .00000E+00   .00000E+00   .00000E+00   .00000E+00   .00000E+00   .00000E+00
     D       .00000E+00   .00000E+00   .00000E+00   .00000E+00   .00000E+00   .00000E+00
     E       .20000E-01   .20000E-01   .20000E-01   .20000E-01   .20000E-01   .20000E-01
     F       .35000E-01   .35000E-01   .35000E-01   .35000E-01   .35000E-01   .35000E-01
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*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

500.0, 1000.0, 1500.0, 2000.0, 2500.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0,	20.0,	30.0,	40.0,	50.0,	60.0,	70.0,	80.0,	90.0,	100.0,
110.0,	120.0,	130.0,	140.0,	150.0,	160.0,	170.0,	180.0,	190.0,	200.0,
210.0,	220.0,	230.0,	240.0,	250.0,	260.0,	270.0,	280.0,	290.0,	300.0,
310.0,	320.0,	330.0,	340.0,	350.0,	360.0,				

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG. K); VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ. DIM TYPE=1, 2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
101	0	0	0	0.15800E+02	0.0	0.0	0.0	38.10	450.00	20.00	1.83	22.00	38.10	19.80

"N"-DAY
365 DAYS
SGROUP# 1

*** NRC/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 365-DAY AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 0.87472 AND OCCURRED AT (1000.0, 270.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	0.47095	0.60725	0.59614	0.53378	0.46856
350.0 /	0.42780	0.57967	0.55405	0.48487	0.42125
340.0 /	0.39913	0.55727	0.54922	0.49778	0.44700
330.0 /	0.35493	0.50376	0.51170	0.47368	0.43161
320.0 /	0.29994	0.45855	0.45506	0.40921	0.36422
310.0 /	0.33483	0.52644	0.52237	0.46754	0.41383
300.0 /	0.37309	0.57559	0.56534	0.50563	0.44824
290.0 /	0.31353	0.48433	0.45660	0.39002	0.32920
280.0 /	0.44287	0.64801	0.63220	0.55888	0.48746
270.0 /	0.61447	0.87472	0.85938	0.76860	0.67795
260.0 /	0.52403	0.76560	0.74052	0.65608	0.57776
250.0 /	0.38444	0.57685	0.55084	0.48563	0.42868
240.0 /	0.42374	0.61213	0.59396	0.52918	0.46817
230.0 /	0.43221	0.61837	0.60945	0.55150	0.49349
220.0 /	0.37287	0.53161	0.53129	0.49591	0.45642
210.0 /	0.34446	0.46712	0.46775	0.43828	0.40313
200.0 /	0.30323	0.40867	0.42225	0.39820	0.36755
190.0 /	0.29895	0.40504	0.43340	0.40802	0.37009
180.0 /	0.41874	0.57492	0.65396	0.64754	0.61160
170.0 /	0.25827	0.35352	0.39040	0.38095	0.35790
160.0 /	0.17974	0.24714	0.26649	0.25301	0.23248
150.0 /	0.19255	0.28021	0.29250	0.26906	0.24093
140.0 /	0.23600	0.32811	0.32475	0.28774	0.24908
130.0 /	0.23170	0.32018	0.31915	0.28457	0.24718
120.0 /	0.23373	0.29930	0.31183	0.29034	0.26228
110.0 /	0.15909	0.19746	0.20410	0.19211	0.17609
100.0 /	0.17811	0.21299	0.21582	0.20408	0.18765
90.0 /	0.26003	0.30733	0.31219	0.29422	0.26999
80.0 /	0.16451	0.20288	0.18882	0.16656	0.14621
70.0 /	0.15200	0.19396	0.18351	0.16568	0.14783
60.0 /	0.21210	0.25617	0.24378	0.21956	0.19538
50.0 /	0.23287	0.28408	0.27880	0.25692	0.23158
40.0 /	0.24642	0.30702	0.30976	0.29072	0.26538
30.0 /	0.19249	0.25174	0.23569	0.20642	0.17847
20.0 /	0.26903	0.34218	0.32358	0.28795	0.25425
10.0 /	0.30711	0.39841	0.37600	0.32887	0.28382

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* HIGHEST 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 37.44953 AND OCCURRED AT (500.0, 360.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	37.44953 (103, 4)	30.14454 (103, 4)	26.23345 (25, 7)	22.18445 (25, 7)	18.66799 (25, 7)
350.0 /	31.50995 (129, 4)	32.77479 (160, 4)	27.47127 (160, 4)	20.64319 (160, 4)	15.90941 (183, 3)
340.0 /	28.70117 (67, 4)	28.06080 (154, 4)	23.85571 (199, 4)	19.51227 (210, 4)	15.85706 (210, 4)
330.0 /	27.96366 (108, 4)	24.79239 (100, 5)	21.00276 (100, 5)	20.57369 (124, 6)	18.96557 (124, 6)
320.0 /	19.06355 (108, 4)	26.51271 (222, 4)	21.89275 (173, 5)	16.41958 (173, 5)	13.49049 (62, 1)
310.0 /	21.59093 (107, 4)	29.99939 (107, 4)	24.77109 (107, 4)	18.46552 (107, 4)	13.94359 (96, 6)
300.0 /	19.94055 (218, 4)	25.58083 (218, 4)	21.11969 (78, 5)	18.43715 (83, 6)	16.41856 (83, 6)
290.0 /	16.98837 (205, 5)	26.16680 (176, 5)	19.97172 (239, 6)	16.06837 (113, 4)	14.47482 (113, 4)
280.0 /	26.04930 (148, 5)	22.34625 (148, 5)	21.86708 (24, 5)	19.73343 (24, 5)	17.19540 (24, 5)
270.0 /	23.42101 (202, 5)	29.12359 (5, 4)	26.30125 (5, 4)	22.25248 (171, 6)	18.78496 (171, 6)
260.0 /	30.46677 (169, 5)	31.56114 (149, 5)	24.29491 (163, 6)	21.55027 (163, 6)	18.42956 (163, 6)
250.0 /	19.68361 (363, 5)	21.73186 (310, 4)	22.04144 (147, 3)	20.73062 (147, 3)	17.58260 (147, 3)
240.0 /	21.23634 (130, 5)	22.91157 (106, 5)	19.69555 (240, 6)	16.41263 (295, 4)	15.01893 (295, 4)
230.0 /	16.21202 (106, 5)	27.19122 (267, 4)	24.93867 (267, 4)	18.88749 (267, 4)	16.73174 (261, 4)
220.0 /	21.55201 (252, 5)	22.03493 (252, 5)	20.09024 (269, 6)	17.43155 (271, 6)	16.48894 (271, 6)
210.0 /	18.50878 (362, 5)	28.34539 (145, 5)	20.58163 (145, 5)	16.12827 (243, 5)	13.73678 (362, 5)
200.0 /	26.21179 (35, 5)	20.10141 (125, 4)	18.39189 (315, 5)	16.12008 (315, 5)	13.65922 (315, 5)
190.0 /	20.70784 (305, 5)	21.44284 (305, 5)	22.33116 (305, 5)	20.77850 (305, 5)	18.44253 (305, 5)
180.0 /	20.12180 (304, 6)	24.01109 (324, 4)	23.85118 (305, 4)	22.94385 (305, 4)	20.77239 (305, 4)
170.0 /	15.45237 (346, 4)	20.68510 (3, 5)	18.35333 (3, 5)	18.26977 (344, 7)	17.36134 (344, 7)
160.0 /	14.59790 (307, 5)	21.75807 (81, 4)	18.13301 (307, 7)	18.45617 (307, 7)	17.27543 (307, 7)
150.0 /	17.49275 (110, 4)	24.25380 (254, 4)	18.74823 (254, 4)	14.11609 (27, 2)	12.96796 (306, 8)
140.0 /	25.62579 (76, 2)	24.72219 (279, 5)	23.69379 (117, 1)	22.90183 (117, 1)	20.80256 (117, 1)
130.0 /	29.51460 (117, 5)	33.05315 (117, 5)	25.29531 (117, 5)	18.29951 (117, 5)	15.95914 (15, 2)
120.0 /	18.99419 (53, 4)	18.02203 (280, 5)	19.11464 (14, 8)	18.28886 (14, 8)	16.49141 (14, 8)
110.0 /	18.69740 (182, 4)	13.17018 (37, 6)	14.22946 (37, 6)	13.49823 (37, 6)	12.10848 (37, 6)
100.0 /	29.02352 (9, 3)	23.04952 (9, 3)	20.22072 (9, 3)	17.06297 (9, 3)	14.31251 (9, 3)
90.0 /	30.75609 (14, 4)	30.74945 (14, 4)	31.25569 (14, 3)	30.30799 (14, 3)	27.62382 (14, 3)
80.0 /	27.35587 (26, 6)	23.39766 (26, 6)	21.41953 (26, 6)	18.53104 (26, 6)	15.78138 (26, 6)
70.0 /	19.43826 (116, 5)	21.63144 (353, 5)	21.46620 (353, 5)	19.30012 (353, 5)	16.78950 (353, 5)
60.0 /	22.54489 (134, 5)	20.12167 (134, 5)	17.58084 (69, 6)	15.66998 (69, 6)	13.54869 (69, 6)
50.0 /	27.00461 (135, 5)	23.98187 (133, 4)	20.90428 (133, 4)	19.83321 (69, 2)	18.51837 (69, 2)
40.0 /	16.96014 (343, 6)	21.27450 (122, 5)	19.30234 (211, 6)	17.29160 (343, 6)	15.34885 (343, 6)
30.0 /	15.36483 (136, 4)	18.34457 (119, 4)	15.87947 (97, 4)	14.68782 (133, 7)	13.43392 (133, 7)
20.0 /	22.69603 (25, 5)	25.73012 (155, 4)	23.51567 (155, 4)	19.65970 (160, 6)	18.23744 (160, 6)
10.0 /	21.49105 (212, 5)	22.67545 (136, 5)	18.50319 (136, 5)	16.85314 (335, 2)	16.52397 (335, 2)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* SECOND HIGHEST 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 35.77426 AND OCCURRED AT (500.0, 360.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	35.77426 (25, 7)	29.86373 (25, 7)	22.59195 (103, 4)	19.40127 (339, 2)	18.06190 (339, 2)
350.0 /	23.87691 (128, 4)	26.56101 (129, 4)	21.70296 (209, 4)	18.99332 (183, 3)	15.56996 (160, 4)
340.0 /	21.90015 (128, 4)	26.19862 (199, 4)	23.21114 (154, 4)	18.44829 (199, 4)	14.51355 (67, 4)
330.0 /	23.99033 (73, 4)	24.46399 (207, 5)	20.82523 (124, 6)	16.73416 (100, 5)	14.16851 (208, 7)
320.0 /	17.35112 (173, 5)	26.31162 (173, 5)	19.27838 (222, 4)	15.00330 (62, 1)	13.12112 (66, 5)
310.0 /	18.67464 (203, 5)	22.47562 (218, 4)	17.60027 (218, 4)	14.52039 (96, 6)	13.85591 (107, 4)
300.0 /	17.27955 (226, 6)	23.32203 (78, 5)	19.66086 (83, 6)	16.35339 (78, 5)	13.30508 (124, 1)
290.0 /	15.70864 (176, 5)	21.76333 (239, 6)	18.06429 (203, 6)	15.61636 (239, 6)	12.60001 (203, 6)
280.0 /	22.52061 (24, 5)	22.11240 (24, 5)	18.75465 (94, 5)	15.89355 (93, 4)	13.82423 (202, 6)
270.0 /	22.65897 (169, 4)	27.68127 (204, 3)	26.19900 (204, 3)	21.69811 (204, 3)	18.53326 (169, 6)
260.0 /	29.44081 (149, 5)	29.18978 (169, 5)	23.50407 (149, 5)	18.04235 (169, 5)	14.29884 (169, 5)
250.0 /	17.89965 (146, 4)	21.23470 (131, 5)	17.20777 (310, 4)	16.03796 (243, 6)	14.56494 (243, 6)
240.0 /	18.08436 (106, 5)	21.52020 (87, 4)	18.79404 (262, 3)	15.54069 (262, 3)	14.69140 (264, 6)
230.0 /	16.08192 (252, 5)	22.85009 (323, 5)	20.11261 (323, 5)	18.51074 (261, 4)	16.39332 (318, 6)
220.0 /	16.59910 (161, 5)	21.27081 (269, [illegible]	17.41081 (64, 4)	16.82749 (269, 6)	13.93786 (269, 6)
210.0 /	18.18969 (258, 4)	24.16530 (258, 4)	19.11567 (258, 4)	15.81183 (362, 5)	13.36299 (289, 4)
200.0 /	16.93779 (35, 4)	19.75914 (35, 5)	17.13925 (125, 4)	15.45487 (344, 5)	13.65828 (344, 5)
190.0 /	17.57305 (304, 4)	21.14047 (304, 4)	21.44532 (304, 4)	19.47917 (304, 4)	17.04256 (304, 4)
180.0 /	18.96327 (305, 4)	22.64371 (281, 4)	20.93482 (324, 4)	18.69160 (344, 3)	16.70563 (344, 3)
170.0 /	13.11914 (3, 5)	17.79844 (322, 5)	17.42680 (344, 7)	15.06952 (291, 6)	14.35053 (291, 6)
160.0 /	12.73738 (308, 5)	19.79949 (308, 5)	18.10226 (81, 4)	14.16253 (361, 6)	13.89463 (361, 6)
150.0 /	14.80307 (27, 2)	18.23591 (110, 4)	15.25261 (359, 4)	13.62525 (307, 6)	12.85353 (307, 6)
140.0 /	19.46937 (117, 1)	21.29819 (117, 1)	20.33238 (279, 5)	16.40855 (76, 2)	13.85326 (76, 2)
130.0 /	18.16185 (255, 5)	24.53806 (249, 4)	19.59733 (359, 5)	17.16721 (15, 2)	13.53559 (117, 5)
120.0 /	18.75292 (53, 1)	17.49487 (14, 8)	17.86474 (116, 8)	17.20661 (116, 8)	15.60700 (116, 8)
110.0 /	12.65993 (37, 6)	11.56946 (328, 4)	11.73030 (15, 6)	11.89161 (15, 6)	11.25292 (15, 6)
100.0 /	14.09389 (75, 6)	15.07927 (57, 4)	15.17939 (75, 6)	14.32843 (75, 6)	12.86955 (75, 6)
90.0 /	23.09727 (14, 3)	28.27552 (14, 3)	28.04441 (14, 4)	24.32839 (14, 4)	20.85316 (14, 4)
80.0 /	17.31566 (110, 5)	18.13328 (111, 6)	15.31245 (111, 6)	12.39599 (339, 5)	11.48266 (339, 5)
70.0 /	17.41640 (353, 5)	18.33103 (121, 6)	15.23844 (121, 6)	13.06208 (199, 6)	11.67433 (50, 8)
60.0 /	20.04561 (69, 6)	18.16549 (69, 6)	16.48668 (134, 5)	14.56321 (110, 6)	13.34123 (110, 6)
50.0 /	16.20815 (343, 5)	21.89733 (353, 4)	19.64567 (353, 4)	15.92730 (133, 4)	12.66535 (343, 5)
40.0 /	16.69690 (122, 5)	20.47173 (211, 6)	18.52708 (343, 6)	15.29124 (243, 4)	14.17808 (355, 7)
30.0 /	14.66048 (73, 6)	15.64268 (136, 4)	14.98080 (133, 7)	12.83605 (73, 6)	11.17868 (73, 6)
20.0 /	21.94656 (25, 6)	20.37306 (184, 5)	17.90274 (160, 6)	19.25942 (155, 4)	15.96506 (69, 1)
10.0 /	18.23502 (44, 5)	21.68046 (212, 5)	16.60122 (212, 5)	14.19597 (335, 1)	14.14126 (335, 1)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	37.44953	4	103	500.0	360.0	26	27.81701	5	143	1000.0	260.0
2	35.77426	7	25	500.0	360.0	27	27.68127	3	204	1000.0	270.0
3	33.05315	5	117	1000.0	130.0	28	27.62382	3	14	2500.0	90.0
4	32.77479	4	160	1000.0	350.0	29	27.47127	4	160	1500.0	350.0
5	31.56114	5	149	1000.0	260.0	30	27.35587	6	26	500.0	80.0
6	31.50995	4	129	500.0	350.0	31	27.19122	4	267	1000.0	230.0
7	31.25569	3	14	1500.0	90.0	32	27.00461	5	135	500.0	50.0
8	30.75609	4	14	500.0	90.0	33	26.56101	4	129	1000.0	350.0
9	30.74945	4	14	1000.0	90.0	34	26.51271	4	222	1000.0	320.0
10	30.46677	5	169	500.0	260.0	35	26.31162	5	173	1000.0	320.0
11	30.30799	3	14	2000.0	90.0	36	26.30125	4	5	1500.0	270.0
12	30.14454	4	103	1000.0	360.0	37	26.23345	7	25	1500.0	360.0
13	29.99939	4	107	1000.0	310.0	38	26.21179	5	35	500.0	200.0
14	29.86373	7	25	1000.0	360.0	39	26.19900	3	204	1500.0	270.0
15	29.51460	5	117	500.0	130.0	40	26.19862	4	199	1000.0	340.0
16	29.44081	5	149	500.0	260.0	41	26.16680	5	176	1000.0	290.0
17	29.18978	5	169	1000.0	260.0	42	26.04930	5	149	500.0	280.0
18	29.12359	4	5	1000.0	270.0	43	25.74158	5	191	1000.0	340.0
19	29.02352	3	9	500.0	100.0	44	25.73012	4	155	1000.0	20.0
20	28.70117	4	67	500.0	340.0	45	25.62579	2	76	500.0	140.0
21	28.34539	5	145	1000.0	210.0	46	25.58083	4	218	1000.0	300.0
22	28.27552	3	14	1000.0	90.0	47	25.29531	5	117	1500.0	130.0
23	28.06080	4	154	1000.0	340.0	48	24.93867	4	267	1500.0	230.0
24	28.04441	4	14	1500.0	90.0	49	24.79239	5	100	1000.0	330.0
25	27.96366	4	108	500.0	330.0	50	24.77109	4	107	1500.0	310.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 10.70997 AND OCCURRED AT (500.0, 120.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	7.59728 (25, 1)	8.01000 (102, 1)	6.59415 (102, 1)	5.98955 (338, 1)	5.43918 (338, 1)
350.0 /	5.96546 (120, 1)	7.08690 (160, 1)	6.10308 (160, 1)	4.93809 (102, 1)	4.14120 (102, 1)
340.0 /	5.13574 (128, 1)	6.20465 (154, 1)	6.18975 (210, 1)	6.27710 (210, 1)	6.13522 (210, 1)
330.0 /	6.26256 (108, 1)	5.38422 (108, 1)	5.78069 (208, 1)	5.81042 (208, 1)	5.39571 (208, 1)
320.0 /	5.27073 (66, 1)	6.15638 (222, 1)	5.47367 (66, 1)	5.00379 (66, 1)	4.45590 (66, 1)
310.0 /	5.75491 (107, 1)	7.25854 (222, 1)	6.17389 (222, 1)	5.68085 (84, 1)	5.17545 (84, 1)
300.0 /	6.69087 (203, 1)	8.89368 (203, 1)	7.44336 (203, 1)	5.73062 (203, 1)	4.66334 (83, 1)
290.0 /	4.27753 (113, 1)	6.10003 (205, 1)	5.37936 (205, 1)	4.89865 (113, 1)	4.37851 (113, 1)
280.0 /	6.02166 (24, 1)	6.56550 (24, 1)	6.52775 (24, 1)	6.22624 (113, 1)	5.69187 (113, 1)
270.0 /	9.20945 (169, 1)	8.98185 (169, 1)	8.48256 (169, 1)	7.56839 (169, 1)	6.63636 (169, 1)
260.0 /	6.20119 (143, 1)	9.23877 (143, 1)	7.35122 (163, 1)	6.32239 (163, 1)	5.75160 (166, 1)
250.0 /	5.90052 (363, 1)	7.29073 (106, 1)	6.16336 (147, 1)	5.54640 (147, 1)	4.71629 (147, 1)
240.0 /	4.43383 (114, 1)	6.38607 (240, 1)	6.02201 (262, 1)	5.15703 (262, 1)	4.29061 (262, 1)
230.0 /	4.17384 (269, 1)	6.61940 (269, 1)	6.02649 (267, 1)	5.49735 (104, 1)	5.19584 (104, 1)
220.0 /	3.75574 (235, 1)	5.73207 (235, 1)	5.69504 (271, 1)	5.15031 (271, 1)	4.48094 (271, 1)
210.0 /	3.58015 (35, 1)	5.31541 (145, 1)	4.40236 (316, 1)	5.08902 (23, 1)	5.16265 (23, 1)
200.0 /	9.80635 (35, 1)	7.83268 (35, 1)	6.93662 (35, 1)	5.86683 (35, 1)	4.95052 (34, 1)
190.0 /	6.17331 (40, 1)	6.32430 (40, 1)	6.82457 (40, 1)	6.47142 (40, 1)	5.79906 (40, 1)
180.0 /	6.41220 (40, 1)	7.35098 (325, 1)	8.71223 (325, 1)	8.67996 (40, 1)	8.03113 (40, 1)
170.0 /	5.15226 (346, 1)	5.98559 (41, 1)	6.40212 (41, 1)	6.01758 (41, 1)	5.39157 (41, 1)
160.0 /	7.21567 (307, 1)	7.65533 (307, 1)	8.83478 (307, 1)	8.84388 (307, 1)	8.27646 (307, 1)
150.0 /	4.90381 (27, 1)	6.01182 (27, 1)	6.12570 (27, 1)	5.40125 (27, 1)	4.58711 (27, 1)
140.0 /	7.12285 (117, 1)	7.70725 (117, 1)	7.24199 (117, 1)	6.30301 (117, 1)	5.37339 (117, 1)
130.0 /	8.34800 (117, 1)	9.08746 (117, 1)	7.88861 (117, 1)	6.47824 (117, 1)	5.31939 (117, 1)
120.0 /	10.70997 (53, 1)	9.30574 (53, 1)	9.06439 (53, 1)	8.18082 (53, 1)	7.18154 (53, 1)
110.0 /	4.27132 (15, 1)	4.76438 (15, 1)	5.13721 (15, 1)	4.90318 (15, 1)	4.49291 (15, 1)
100.0 /	4.78800 (9, 1)	3.95764 (9, 1)	4.13186 (20, 1)	3.89778 (20, 1)	3.51311 (20, 1)
90.0 /	7.71339 (14, 1)	8.81616 (14, 1)	9.43496 (14, 1)	9.08126 (14, 1)	8.28287 (14, 1)
80.0 /	8.50077 (26, 1)	7.43148 (26, 1)	7.05120 (26, 1)	6.23133 (26, 1)	5.36744 (26, 1)
70.0 /	3.00899 (69, 1)	3.78208 (353, 1)	4.00207 (353, 1)	3.76542 (353, 1)	3.37235 (353, 1)
60.0 /	6.66723 (69, 1)	5.67636 (69, 1)	5.31260 (69, 1)	4.69428 (69, 1)	4.08108 (69, 1)
50.0 /	6.50497 (69, 1)	5.98376 (69, 1)	6.01686 (69, 1)	5.52780 (69, 1)	4.87990 (69, 1)
40.0 /	6.14499 (135, 1)	5.96162 (135, 1)	5.53586 (135, 1)	4.81102 (135, 1)	4.29024 (334, 1)
30.0 /	5.66436 (133, 1)	5.89447 (133, 1)	5.76399 (133, 1)	5.21258 (133, 1)	4.56092 (133, 1)
20.0 /	5.58036 (25, 1)	6.91232 (184, 1)	6.08696 (184, 1)	5.79885 (355, 1)	5.41915 (355, 1)
10.0 /	4.71980 (212, 1)	5.14278 (212, 1)	4.40052 (335, 1)	5.09248 (335, 1)	5.14326 (335, 1)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* SECOND HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 8.64737 AND OCCURRED AT (1500.0, 180.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 500.0	1000.0	1500.0	2000.0	2500.0
360.0 /	7.27505 (103, 1)	7.21490 (120, 1)	6.43100 (338, 1)	5.02163 (339, 1)	4.60127 (339, 1)
350.0 /	5.78545 (129, 1)	6.68645 (102, 1)	5.96461 (102, 1)	4.70673 (160, 1)	3.62979 (160, 1)
340.0 /	5.06993 (190, 1)	5.61947 (199, 1)	5.90849 (199, 1)	5.38576 (199, 1)	4.90572 (196, 1)
330.0 /	4.74314 (124, 1)	5.37598 (158, 1)	5.71299 (124, 1)	5.54222 (124, 1)	5.09759 (124, 1)
320.0 /	3.87613 (108, 1)	5.46498 (66, 1)	5.01248 (222, 1)	4.09978 (190, 1)	3.76314 (8, 1)
310.0 /	3.73184 (123, 1)	6.60579 (107, 1)	5.88300 (107, 1)	5.29506 (80, 1)	4.74552 (80, 1)
300.0 /	5.02005 (83, 1)	6.03373 (83, 1)	5.91768 (83, 1)	5.31132 (83, 1)	4.49956 (7, 1)
290.0 /	4.09379 (205, 1)	5.54755 (203, 1)	5.24908 (113, 1)	4.11331 (205, 1)	3.10875 (205, 1)
280.0 /	5.83623 (148, 1)	6.06222 (94, 1)	6.35506 (113, 1)	5.86186 (24, 1)	5.08585 (24, 1)
270.0 /	5.50310 (131, 1)	7.56716 (204, 1)	6.86572 (204, 1)	6.54300 (168, 1)	5.90432 (168, 1)
260.0 /	5.91612 (163, 1)	7.91022 (163, 1)	7.07589 (143, 1)	6.10552 (166, 1)	5.41753 (163, 1)
250.0 /	5.16256 (106, 1)	5.59142 (363, 1)	5.69307 (363, 1)	5.26134 (363, 1)	4.66160 (363, 1)
240.0 /	4.40557 (106, 1)	6.10909 (262, 1)	5.25056 (240, 1)	3.94614 (234, 1)	3.62398 (234, 1)
230.0 /	3.95436 (237, 1)	6.43944 (267, 1)	5.87858 (269, 1)	4.87179 (267, 1)	4.70187 (318, 1)
220.0 /	3.73272 (271, 1)	5.49206 (271, 1)	4.86311 (235, 1)	3.69076 (235, 1)	3.60166 (277, 1)
210.0 /	3.32890 (77, 1)	4.98604 (316, 1)	4.33713 (23, 1)	3.49626 (316, 1)	3.09385 (362, 1)
200.0 /	3.54647 (36, 1)	4.49349 (145, 1)	5.22150 (36, 1)	5.19048 (36, 1)	4.91206 (35, 1)
190.0 /	5.52059 (35, 1)	5.28176 (35, 1)	5.64718 (36, 1)	5.74814 (36, 1)	5.39742 (36, 1)
180.0 /	6.05157 (344, 1)	7.25072 (40, 1)	8.64737 (40, 1)	8.63106 (325, 1)	7.95840 (325, 1)
170.0 /	4.69836 (41, 1)	4.91099 (346, 1)	5.43070 (346, 1)	5.36193 (346, 1)	5.02675 (346, 1)
160.0 /	3.67072 (346, 1)	4.61921 (81, 1)	3.90012 (81, 1)	3.69841 (346, 1)	3.44307 (346, 1)
150.0 /	2.93850 (110, 1)	4.03856 (254, 1)	4.44532 (307, 1)	4.63946 (307, 1)	4.43615 (307, 1)
140.0 /	6.00083 (76, 1)	6.07384 (279, 1)	5.45287 (279, 1)	4.26036 (279, 1)	3.77044 (29, 1)
130.0 /	5.22678 (53, 1)	5.70290 (279, 1)	4.89787 (279, 1)	3.73176 (279, 1)	3.24239 (10, 1)
120.0 /	4.36781 (28, 1)	4.48341 (28, 1)	5.06665 (15, 1)	5.11732 (15, 1)	4.83911 (15, 1)
110.0 /	3.21145 (53, 1)	2.58734 (53, 1)	2.79911 (14, 1)	2.85702 (14, 1)	2.70699 (14, 1)
100.0 /	4.17701 (116, 1)	3.91162 (20, 1)	3.68845 (9, 1)	3.31048 (9, 1)	2.95075 (9, 1)
90.0 /	6.51277 (26, 1)	5.68697 (20, 1)	6.65468 (20, 1)	6.76321 (20, 1)	6.45741 (20, 1)
80.0 /	3.60290 (69, 1)	4.34771 (111, 1)	3.64817 (111, 1)	2.80643 (111, 1)	2.22518 (111, 1)
70.0 /	2.94941 (353, 1)	3.58452 (111, 1)	3.31722 (13, 1)	3.37006 (13, 1)	3.14418 (13, 1)
60.0 /	3.82465 (135, 1)	3.60011 (134, 1)	3.50266 (20, 1)	3.36268 (20, 1)	3.03358 (20, 1)
50.0 /	5.06035 (135, 1)	4.23192 (133, 1)	4.23557 (355, 1)	3.87169 (355, 1)	3.40765 (355, 1)
40.0 /	4.11825 (85, 1)	5.79320 (119, 1)	5.09825 (334, 1)	4.78622 (334, 1)	4.09632 (135, 1)
30.0 /	3.11576 (119, 1)	5.39946 (119, 1)	4.12988 (119, 1)	2.81727 (119, 1)	2.68367 (74, 1)
20.0 /	4.97714 (184, 1)	4.76671 (119, 1)	5.68154 (355, 1)	5.13504 (184, 1)	4.41022 (184, 1)
10.0 /	4.37319 (44, 1)	4.45661 (247, 1)	4.00937 (247, 1)	3.64531 (44, 1)	3.29379 (44, 1)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	10.70997	1	53	500.0	120.0	26	8.01000	1	102	1000.0	360.0
2	9.80635	1	35	500.0	200.0	27	7.95840	1	325	2500.0	180.0
3	9.43496	1	14	1500.0	90.0	28	7.91022	1	163	1000.0	260.0
4	9.30574	1	53	1000.0	120.0	29	7.88861	1	117	1500.0	130.0
5	9.23877	1	143	1000.0	260.0	30	7.83268	1	35	1000.0	200.0
6	9.08746	1	117	1000.0	130.0	31	7.71339	1	14	500.0	90.0
7	9.08126	1	14	2000.0	90.0	32	7.70725	1	117	1000.0	140.0
8	9.06439	1	53	1500.0	120.0	33	7.65533	1	307	1000.0	160.0
9	8.89368	1	203	1000.0	300.0	34	7.59728	1	25	500.0	360.0
10	8.88185	1	169	1000.0	270.0	35	7.56838	1	169	2000.0	270.0
11	8.84388	1	307	2000.0	160.0	36	7.56716	1	204	1000.0	270.0
12	8.83478	1	307	1500.0	160.0	37	7.45771	1	11	1500.0	180.0
13	8.81616	1	14	1000.0	90.0	38	7.44336	1	203	1500.0	300.0
14	8.71223	1	325	1500.0	180.0	39	7.43148	1	25	1000.0	80.0
15	8.67996	1	40	2000.0	180.0	40	7.38475	1	149	1000.0	260.0
16	8.64737	1	40	1500.0	180.0	41	7.35122	1	163	1500.0	260.0
17	8.63106	1	325	2000.0	180.0	42	7.35098	1	325	1000.0	180.0
18	8.50077	1	25	500.0	80.0	43	7.29073	1	106	1000.0	250.0
19	8.48256	1	169	1500.0	270.0	44	7.27505	1	103	500.0	360.0
20	8.34800	1	117	500.0	130.0	45	7.25854	1	222	1000.0	310.0
21	8.28287	1	14	2500.0	90.0	46	7.25072	1	40	1000.0	180.0
22	8.27646	1	307	2500.0	160.0	47	7.24199	1	117	1500.0	140.0
23	8.20946	1	169	500.0	270.0	48	7.21567	1	307	500.0	160.0
24	8.18082	1	53	2000.0	120.0	49	7.21480	1	120	1000.0	360.0
25	8.03113	1	40	2500.0	180.0	50	7.18154	1	53	2500.0	120.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 2
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION) WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 0
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 0
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 2
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(28) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 10
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 36
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK = .10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 78
UPPER AIR STATION NO.	IUS = 12842
YEAR OF UPPER AIR DATA	IUY = 78
ALLOCATED DATA STORAGE	LIMIT = 43500 WORDS

IST-13

1978 - NRG ONLY - SO_2
(Selected Days)

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** METEOROLOGICAL DAYS TO BE PROCESSED ***
(IF=1)

0 0 0 0 0 0 0 0 0 0	0 0 0 1 0 0 0 0 0 0	0 0 0 0 1 0 0 0 0 0	0 0 0 0 1 0 0 0 0 1
0 0 1 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 1 0 0 0 0 0 0 0	0 0 0 0 0 0 1 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 1	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0		

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
B	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
C	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00
D	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00
E	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00
F	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

200.0, 300.0, 400.0, 600.0, 700.0, 800.0, 900.0, 1200.0, 1400.0, 1700.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

10.0, 20.0, 30.0, 40.0, 50.0, 60.0, 70.0, 80.0, 90.0, 100.0,
110.0, 120.0, 130.0, 140.0, 150.0, 160.0, 170.0, 180.0, 190.0, 200.0,
210.0, 220.0, 230.0, 240.0, 250.0, 260.0, 270.0, 280.0, 290.0, 300.0,
310.0, 320.0, 330.0, 340.0, 350.0, 360.0,

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG. K); VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ. DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
101	0	0	0	0.15800E+02	0.0	0.0	0.0	38.10	450.00	20.00	1.83	22.00	38.10	19.80

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	77.82088	7	25	200.0	360.0	26	37.66792	4	14	400.0	90.0
2	64.77444	7	25	300.0	360.0	27	37.17531	6	25	200.0	10.0
3	58.28250	5	35	200.0	200.0	28	37.16309	3	53	200.0	120.0
4	53.37336	3	14	200.0	90.0	29	37.07553	1	53	300.0	120.0
5	52.55439	1	117	200.0	140.0	30	37.05155	4	53	300.0	120.0
6	52.16971	4	14	200.0	90.0	31	36.12422	5	35	400.0	200.0
7	51.37901	5	25	200.0	20.0	32	35.55608	4	25	200.0	350.0
8	51.30612	4	103	300.0	360.0	33	35.30158	7	40	200.0	180.0
9	50.61794	4	103	200.0	360.0	34	33.73544	4	103	700.0	360.0
10	49.47960	7	25	400.0	360.0	35	33.71002	5	117	900.0	130.0
11	48.92204	6	25	200.0	20.0	36	33.42348	5	117	800.0	130.0
12	47.64288	5	35	300.0	200.0	37	33.40190	4	103	600.0	360.0
13	47.08641	8	14	200.0	120.0	38	33.08783	3	25	200.0	340.0
14	45.83849	4	53	200.0	120.0	39	32.99199	4	103	800.0	360.0
15	45.27522	4	14	300.0	90.0	40	32.89828	4	14	300.0	80.0
16	45.00710	1	53	200.0	120.0	41	32.65398	5	149	800.0	260.0
17	44.44321	4	103	400.0	360.0	42	32.65229	3	14	400.0	90.0
18	43.74593	3	14	300.0	90.0	43	32.50929	5	149	900.0	260.0
19	42.76057	1	117	300.0	140.0	44	32.32430	4	160	900.0	350.0
20	42.13093	5	25	300.0	20.0	45	32.18642	2	53	200.0	120.0
21	40.22337	6	25	300.0	20.0	46	32.15305	3	117	200.0	130.0
22	39.11254	3	35	200.0	200.0	47	31.94650	3	35	300.0	200.0
23	38.97272	2	40	200.0	190.0	48	31.88848	4	14	200.0	80.0
24	38.71792	4	35	200.0	200.0	49	31.88504	2	40	300.0	190.0
25	37.99110	8	14	300.0	120.0	50	31.83500	5	149	300.0	260.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	26.92204	1	53	200.0	120.0	26	10.52821	1	14	400.0	90.0
2	23.19058	1	35	200.0	200.0	27	10.29445	1	25	300.0	20.0
3	21.62903	1	53	300.0	120.0	28	10.16100	1	117	400.0	130.0
4	19.89355	1	40	200.0	180.0	29	10.11795	1	103	200.0	360.0
5	18.79836	1	35	300.0	200.0	30	10.09590	1	103	300.0	360.0
6	17.06899	1	40	200.0	190.0	31	9.65639	1	40	400.0	190.0
7	16.77330	1	25	200.0	360.0	32	9.45623	1	117	400.0	140.0
8	16.72649	1	14	200.0	90.0	33	9.41813	1	14	1400.0	90.0
9	15.71473	1	53	400.0	120.0	34	9.36405	1	14	1700.0	90.0
10	15.65991	1	40	300.0	180.0	35	9.35610	1	53	1200.0	120.0
11	15.39277	1	35	200.0	190.0	36	9.34497	1	143	900.0	260.0
12	13.96221	1	35	400.0	200.0	37	9.24237	1	14	1200.0	90.0
13	13.88255	1	25	300.0	360.0	38	9.19522	1	53	1400.0	120.0
14	13.82227	1	14	300.0	90.0	39	9.16302	1	53	900.0	120.0
15	13.68217	1	40	300.0	190.0	40	9.08319	1	143	800.0	260.0
16	13.45715	1	53	200.0	130.0	41	9.08153	1	117	900.0	130.0
17	13.23301	1	117	200.0	140.0	42	9.01025	1	25	200.0	10.0
18	12.53798	1	25	200.0	20.0	43	8.93813	1	53	800.0	120.0
19	12.27805	1	117	200.0	130.0	44	8.86151	1	117	800.0	130.0
20	12.20868	1	35	300.0	190.0	45	8.81713	1	35	200.0	210.0
21	12.07056	1	117	300.0	130.0	46	8.76857	1	40	1700.0	180.0
22	12.01498	1	117	300.0	140.0	47	8.74162	1	53	1700.0	120.0
23	10.67634	1	53	300.0	130.0	48	8.74025	1	117	1200.0	130.0
24	10.64663	1	40	400.0	180.0	49	8.68049	1	103	400.0	360.0
25	10.55255	1	25	400.0	360.0	50	8.65381	1	25	200.0	340.0

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 3
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 1
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION) WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 1
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 0
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 1
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(29) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 3
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 3
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK =.10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 74
UPPER AIR STATION NO.	IUS = 12842

IST-14

1974 - EXISTING SO_2

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                         *** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

                                  *** METEOROLOGICAL DAYS TO BE PROCESSED ***
                                                  (IF=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 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 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 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 0

                           *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                (METERS/SEC)

                                      1.54,    3.09,    5.14,    8.23,   10.80,

                                          *** WIND PROFILE EXPONENTS ***

            STABILITY                              WIND SPEED CATEGORY
            CATEGORY          1             2             3             4             5             6
               A          .10000E+00    .10000E+00    .10000E+00    .10000E+00    .10000E+00    .10000E+00
               B          .15000E+00    .15000E+00    .15000E+00    .15000E+00    .15000E+00    .15000E+00
               C          .20000E+00    .20000E+00    .20000E+00    .20000E+00    .20000E+00    .20000E+00
               D          .25000E+00    .25000E+00    .25000E+00    .25000E+00    .25000E+00    .25000E+00
               E          .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00
               F          .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00

                                 *** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
                                            (DEGREES KELVIN PER METER)

            STABILITY                              WIND SPEED CATEGORY
            CATEGORY          1             2             3             4             5             6
               A          .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
               B          .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
               C          .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
               D          .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
               E          .20000E-01    .20000E-01    .20000E-01    .20000E-01    .20000E-01    .20000E-01
               F          .35000E-01    .35000E-01    .35000E-01    .35000E-01    .35000E-01    .35000E-01
```

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

*** X-COORDINATES OF RECTANGULAR GRID SYSTEM ***
(METERS)

412600.0, 413100.0, 413600.0,

*** Y-COORDINATES OF RECTANGULAR GRID SYSTEM ***
(METERS)

3178800.0, 3179300.0, 3179800.0,

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG. K); VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ. DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
321	0	0	0	0.25200E+01	407100.0	3180900.0	0.0	7.62	347.00	4.60	2.28	0.00	0.00	0.00

"N"-DAY
365 DAYS
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* 365-DAY AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 0.13798 AND OCCURRED AT (412600.0, 3179300.0) *

Y-AXIS (METERS) /	X-AXIS (METERS) 412600.0	413100.0	413600.0
3179800.0 /	0.10368	0.09298	0.08716
3179300.0 /	0.13788	0.11398	0.09601
3178800.0 /	0.13717	0.12231	0.11699

MAX 50
3-HR
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	19.05712	1	123	412600.0	3178800.0	26	9.37227	7	99	412600.0	3178800.0
2	17.04655	7	42	412600.0	3178800.0	27	9.28386	8	76	413600.0	3178800.0
3	13.66376	2	72	412600.0	3179800.0	28	9.27248	2	339	412600.0	3178800.0
4	13.39333	2	72	413100.0	3179800.0	29	9.20109	2	167	412600.0	3178800.0
5	12.96172	7	122	412600.0	3179300.0	30	9.10289	8	363	412600.0	3179300.0
6	12.62529	8	105	412600.0	3178800.0	31	8.97414	8	53	412600.0	3179300.0
7	12.45089	2	72	413600.0	3179800.0	32	8.95339	1	192	412600.0	3179800.0
8	11.81661	1	22	412600.0	3179800.0	33	8.94586	2	197	413100.0	3179300.0
9	11.73769	1	290	413100.0	3178800.0	34	8.71251	7	42	413100.0	3178800.0
10	11.56313	1	290	413600.0	3178800.0	35	8.59277	1	22	413100.0	3179800.0
11	11.49473	7	7	412600.0	3178800.0	36	8.48931	7	76	412600.0	3178800.0
12	11.21153	1	114	412600.0	3179300.0	37	8.44285	1	123	413100.0	3178800.0
13	10.74944	1	155	412600.0	3179300.0	38	8.42083	1	155	413100.0	3179300.0
14	10.68153	8	122	413100.0	3179300.0	39	8.23106	7	343	412600.0	3178800.0
15	10.40887	8	122	412600.0	3179300.0	40	8.21079	1	17	412600.0	3179300.0
16	10.37902	8	122	413600.0	3178800.0	41	8.21034	2	114	412600.0	3179300.0
17	10.36398	8	122	413600.0	3179300.0	42	8.20055	8	16	412600.0	3179300.0
18	10.31273	7	122	413100.0	3179300.0	43	8.09617	8	315	413100.0	3179300.0
19	10.30344	8	315	412600.0	3179300.0	44	7.99526	8	95	413600.0	3179800.0
20	10.04313	2	197	413600.0	3179300.0	45	7.98327	8	337	413600.0	3179300.0
21	10.00814	8	95	412600.0	3179800.0	46	7.92699	8	53	413600.0	3178800.0
22	9.83764	1	125	412600.0	3179800.0	47	7.90606	1	338	413100.0	3178800.0
23	9.78934	8	95	413100.0	3179800.0	48	7.88056	7	90	413600.0	3179300.0
24	9.57186	8	17	413600.0	3178800.0	49	7.82501	8	335	412600.0	3178800.0
25	9.42675	7	76	413100.0	3178800.0	50	7.81500	1	364	413100.0	3178800.0

MAX 50
24-HR
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	3.93649	1	122	412600.0	3179300.0	26	1.76651	1	17	413100.0	3178900.0
2	3.54613	1	122	413100.0	3179300.0	27	1.75282	1	72	413600.0	3179800.0
3	2.98500	1	123	412600.0	3178900.0	28	1.71920	1	351	412600.0	3178900.0
4	2.95024	1	7	412600.0	3178800.0	29	1.69353	1	351	413100.0	3178800.0
5	2.85949	1	42	412600.0	3178900.0	30	1.68875	1	22	412600.0	3179800.0
6	2.77543	1	122	413600.0	3178800.0	31	1.67723	1	95	412600.0	3179800.0
7	2.62075	1	122	413600.0	3179300.0	32	1.63961	1	125	412600.0	3179800.0
8	2.41749	1	76	413100.0	3178800.0	33	1.62338	1	342	412600.0	3178800.0
9	2.39724	1	17	413600.0	3178800.0	34	1.59562	1	351	413100.0	3179300.0
10	2.19351	1	72	412600.0	3179800.0	35	1.58188	1	95	413100.0	3179800.0
11	2.15951	1	76	413600.0	3178800.0	36	1.57908	1	351	413600.0	3178800.0
12	2.10351	1	17	412600.0	3179300.0	37	1.57903	1	351	412600.0	3179800.0
13	1.99393	1	72	413100.0	3179800.0	38	1.56140	1	16	412600.0	3179300.0
14	1.99251	1	338	413100.0	3178800.0	39	1.54660	1	122	413100.0	3178800.0
15	1.93932	1	351	412600.0	3179300.0	40	1.52254	1	17	413100.0	3179800.0
16	1.92091	1	335	412600.0	3178800.0	41	1.51430	1	351	413600.0	3179800.0
17	1.90962	1	7	413100.0	3178800.0	42	1.50408	1	351	413100.0	3179800.0
18	1.90927	1	343	412600.0	3178900.0	43	1.48881	1	123	413100.0	3178900.0
19	1.86493	1	338	413600.0	3178800.0	44	1.48692	1	339	412600.0	3178800.0
20	1.83427	1	17	413600.0	3179800.0	45	1.48019	1	99	412600.0	3178800.0
21	1.83325	1	114	412600.0	3179800.0	46	1.46928	1	53	412600.0	3179300.0
22	1.82226	1	76	412600.0	3178800.0	47	1.45792	1	197	413600.0	3179300.0
23	1.82084	1	290	413100.0	3178900.0	48	1.45541	1	42	413100.0	3178800.0
24	1.81989	1	290	413600.0	3178800.0	49	1.43278	1	76	412600.0	3179300.0
25	1.80361	1	105	412600.0	3178900.0	50	1.41625	1	114	412600.0	3179300.0

```
FORTRAN STOP
$EXIT:
$COST/F

 Username            AT21          Process  BATCH_794
 Buffered I/O         0.02
 Direct I/O           0.30
 Page Faults          0.04
 CPU Time             3.50
 Connect Time         0.00
 Volumes mounted      0.00
 Total Cost:          3.86          BATCH$LOW
$EXIT
  AT21        job terminated at 27-FEB-1986 11:06:38.41
```

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 3
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 1
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION) WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 1
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 0
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES=1)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 1
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(28) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 3
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 3
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK = .10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 75
UPPER AIR STATION NO.	IUS = 12842

IST-15

1975 - EXISTING SO_2

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                  *** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

                              *** METEOROLOGICAL DAYS TO BE PROCESSED ***
                                              (IF=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 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 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 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 0

                    *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                          (METERS/SEC)

                                 1.54,    3.09,    5.14,    8.23,   10.80,

                                   *** WIND PROFILE EXPONENTS ***

     STABILITY                                WIND SPEED CATEGORY
     CATEGORY          1              2              3              4              5              6
         A         .10000E+00     .10000E+00     .10000E+00     .10000E+00     .10000E+00     .10000E+00
         B         .15000E+00     .15000E+00     .15000E+00     .15000E+00     .15000E+00     .15000E+00
         C         .20000E+00     .20000E+00     .20000E+00     .20000E+00     .20000E+00     .20000E+00
         D         .25000E+00     .25000E+00     .25000E+00     .25000E+00     .25000E+00     .25000E+00
         E         .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00
         F         .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00

                          *** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
                                   (DEGREES KELVIN PER METER)

     STABILITY                                WIND SPEED CATEGORY
     CATEGORY          1              2              3              4              5              6
         A         .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
         B         .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
         C         .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
         D         .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
         E         .20000E-01     .20000E-01     .20000E-01     .20000E-01     .20000E-01     .20000E-01
         F         .35000E-01     .35000E-01     .35000E-01     .35000E-01     .35000E-01     .35000E-01
```

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

*** X-COORDINATES OF RECTANGULAR GRID SYSTEM ***
(METERS)

412600.0, 413100.0, 413600.0,

*** Y-COORDINATES OF RECTANGULAR GRID SYSTEM ***
(METERS)

3178800.0, 3179300.0, 3179800.0,

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K); VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ. DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
321	0	0	0	0.25200E+01	407100.0	3180900.0	0.0	7.62	347.00	4.60	2.28	0.00	0.00	0.00

"N"-DAY
365 DAYS
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* 365-DAY AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 0.15908 AND OCCURRED AT (412600.0, 3179300.0) *

Y-AXIS (METERS) /	X-AXIS (METERS) 412600.0	413100.0	413600.0
3179800.0 /	0.08693	0.07984	0.07553
3179300.0 /	0.15908	0.11766	0.08708
3178800.0 /	0.14120	0.14394	0.14356

MAX 50
3-HR
GROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	18.42765	8	163	412600.0	3179300.0	26	8.70412	3	107	412600.0	3179300.0
2	15.52397	8	164	412600.0	3179300.0	27	8.61209	1	299	413100.0	3178800.0
3	13.28538	2	164	413100.0	3179800.0	28	8.56726	7	58	413100.0	3179300.0
4	13.04420	8	164	413600.0	3178800.0	29	8.54014	1	164	413600.0	3178800.0
5	12.71128	2	164	412600.0	3179800.0	30	8.46226	2	163	413100.0	3179300.0
6	12.39017	7	58	412600.0	3179300.0	31	8.40695	7	56	413100.0	3178800.0
7	12.32394	1	327	412600.0	3178800.0	32	8.38410	8	80	412600.0	3179800.0
8	11.73636	8	163	413600.0	3178800.0	33	8.37810	2	130	413600.0	3178800.0
9	11.65553	8	163	413100.0	3179300.0	34	8.37741	2	139	413100.0	3179800.0
10	11.54172	2	164	413600.0	3179800.0	35	8.34074	7	58	413600.0	3178800.0
11	10.80646	2	163	412600.0	3179300.0	36	8.32189	1	255	412600.0	3179300.0
12	10.79095	1	166	412600.0	3178800.0	37	8.31752	1	66	413100.0	3179300.0
13	10.56786	1	327	413100.0	3178800.0	38	8.25415	8	365	412600.0	3179800.0
14	10.51702	1	255	413100.0	3179300.0	39	8.19456	8	361	413600.0	3178800.0
15	9.92553	1	163	413600.0	3178800.0	40	8.17285	1	164	413600.0	3179800.0
16	9.82526	8	224	412600.0	3179800.0	41	8.13180	1	81	412600.0	3178800.0
17	9.57186	1	85	413600.0	3178800.0	42	8.09186	8	361	413100.0	3179800.0
18	9.40480	7	327	413600.0	3179300.0	43	8.00722	7	1	413600.0	3179300.0
19	9.38377	1	66	413600.0	3179300.0	44	7.99272	7	56	413600.0	3178800.0
20	9.30639	2	59	413100.0	3178800.0	45	7.90023	2	117	413100.0	3178800.0
21	9.27730	2	139	412600.0	3179800.0	46	7.84635	8	6	412600.0	3179300.0
22	8.98844	8	361	413100.0	3178800.0	47	7.84477	2	117	412600.0	3178800.0
23	8.88295	2	59	413600.0	3178800.0	48	7.84330	6	318	412600.0	3178800.0
24	8.82498	7	327	413100.0	3179300.0	49	7.77663	1	255	413600.0	3179300.0
25	8.71814	7	1	413100.0	3179300.0	50	7.72330	8	361	413600.0	3179800.0

MAX 50
24-HR
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER)

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	5.73824	1	163	412600.0	3179300.0	26	1.61228	1	59	412600.0	3178800.0
2	4.53194	1	163	413600.0	3178800.0	27	1.58380	1	6	413100.0	3179300.0
3	3.56793	1	163	413100.0	3179300.0	28	1.56626	1	166	412600.0	3178800.0
4	3.44388	1	164	413600.0	3179800.0	29	1.55923	1	327	413600.0	3178800.0
5	3.16683	1	164	413100.0	3179800.0	30	1.54104	1	361	413600.0	3178800.0
6	3.07237	1	164	412600.0	3179300.0	31	1.53749	1	80	412600.0	3179800.0
7	3.02633	1	164	413600.0	3178800.0	32	1.47379	1	224	412600.0	3179800.0
8	2.61946	1	163	413100.0	3178800.0	33	1.47325	1	125	413600.0	3178800.0
9	2.50420	1	164	412600.0	3179800.0	34	1.46107	1	1	413100.0	3179300.0
10	2.22193	1	6	412600.0	3179300.0	35	1.40757	1	66	413600.0	3179300.0
11	2.20752	1	164	413100.0	3178800.0	36	1.40713	1	355	412600.0	3179300.0
12	2.17764	1	361	413100.0	3179300.0	37	1.39952	1	327	412600.0	3179300.0
13	2.17620	1	164	412600.0	3178800.0	38	1.39442	1	79	412600.0	3178800.0
14	2.17320	1	327	413100.0	3178800.0	39	1.38699	1	255	412600.0	3179300.0
15	2.16247	1	59	413100.0	3178800.0	40	1.38167	1	80	413100.0	3179800.0
16	2.15379	1	327	412600.0	3178800.0	41	1.37433	1	107	412600.0	3179300.0
17	1.97971	1	361	412600.0	3178800.0	42	1.36769	1	299	413100.0	3178800.0
18	1.85317	1	59	413600.0	3178800.0	43	1.35849	1	80	413600.0	3179800.0
19	1.84502	1	58	412600.0	3179300.0	44	1.34584	1	1	413600.0	3179300.0
20	1.82216	1	56	412600.0	3178800.0	45	1.33460	1	56	413100.0	3178800.0
21	1.75264	1	255	413100.0	3179300.0	46	1.31028	1	58	413600.0	3178800.0
22	1.75172	1	125	412600.0	3179300.0	47	1.30525	1	85	413600.0	3178800.0
23	1.70723	1	6	413600.0	3178800.0	48	1.30132	1	328	412600.0	3179300.0
24	1.67633	1	164	413100.0	3179300.0	49	1.29610	1	255	413600.0	3179300.0
25	1.64768	1	163	413600.0	3179300.0	50	1.29365	1	139	412600.0	3179800.0

```
FORTRAN STOP
$EXIT:
$COST/F

 Username            AT21            Process  BATCH_991
 Buffered I/O          0.02
 Direct I/O            0.31
 Page Faults           0.04
 CPU Time              3.55
 Connect Time          0.00
 Volumes mounted       0.00
 Total Cost:           3.91            BATCH$LOW
$EXIT
  AT21          job terminated at 27-FEB-1986 11:04:33.89
```

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 3
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 1
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION) WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 1
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 0
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 1
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(29) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 3
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 3
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK = .10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	IGS = 12815
YEAR OF SURFACE DATA	IGY = 76
UPPER AIR STATION NO.	IUS = 12842

IST-16

1976 - EXISTING SO_2

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                     *** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

                                  *** METEOROLOGICAL DAYS TO BE PROCESSED ***
                                                   (IF=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 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 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 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 0

                        *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                              (METERS/SEC)

                                  1.54,    3.09,    5.14,    8.23,   10.80,

                                        *** WIND PROFILE EXPONENTS ***

            STABILITY                             WIND SPEED CATEGORY
            CATEGORY         1              2              3              4              5              6
                A       .10000E+00     .10000E+00     .10000E+00     .10000E+00     .10000E+00     .10000E+00
                B       .15000E+00     .15000E+00     .15000E+00     .15000E+00     .15000E+00     .15000E+00
                C       .20000E+00     .20000E+00     .20000E+00     .20000E+00     .20000E+00     .20000E+00
                D       .25000E+00     .25000E+00     .25000E+00     .25000E+00     .25000E+00     .25000E+00
                E       .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00
                F       .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00

                              *** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
                                        (DEGREES KELVIN PER METER)

            STABILITY                             WIND SPEED CATEGORY
            CATEGORY         1              2              3              4              5              6
                A       .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
                B       .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
                C       .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
                D       .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
                E       .20000E-01     .20000E-01     .20000E-01     .20000E-01     .20000E-01     .20000E-01
                F       .35000E-01     .35000E-01     .35000E-01     .35000E-01     .35000E-01     .35000E-01
```

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

*** X-COORDINATES OF RECTANGULAR GRID SYSTEM ***
(METERS)

412600.0, 413100.0, 413600.0,

*** Y-COORDINATES OF RECTANGULAR GRID SYSTEM ***
(METERS)

3179800.0, 3179300.0, 3179800.0,

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAK	NUMBER PART CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K); VERT.DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ.DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
321	0	0 0	0	0 25200E+01	407100.0	3180900.0	0.0	7.62	347.00	4.60	2.28	0.00	0.00	0.00

"N"-DAY
365 DAYS
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* 365-DAY AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 0.13047 AND OCCURRED AT (412600.0, 3179300.0) *

Y-AXIS (METERS) /	X-AXIS (METERS) 412600.0	413100.0	413600.0
3179800.0 /	0.11054	0.09925	0.09170
3179300.0 /	0.13047	0.11355	0.09916
3178800.0 /	0.11969	0.11372	0.10896

MAX 50
3-HR
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	15.35714	1	41	413100.0	3178800.0	26	8.32706	8	103	413600.0	3178800.0
2	13.30590	7	291	412600.0	3178800.0	27	8.29871	1	41	412600.0	3179300.0
3	12.25856	8	139	413100.0	3179300.0	28	8.29318	2	113	413600.0	3178800.0
4	11.46322	1	41	412600.0	3178800.0	29	8.29158	7	291	413100.0	3178800.0
5	10.77491	8	276	413600.0	3179300.0	30	8.20918	2	4	413100.0	3179800.0
6	10.71945	1	41	413600.0	3178800.0	31	8.18354	7	259	413100.0	3179800.0
7	10.39730	1	88	412600.0	3179300.0	32	8.16457	1	88	413100.0	3179300.0
8	10.39462	7	294	412600.0	3179800.0	33	8.11922	1	235	413600.0	3179800.0
9	10.36553	8	139	412600.0	3179300.0	34	8.04350	2	289	413600.0	3178800.0
10	9.51273	8	103	412600.0	3179300.0	35	7.99202	8	95	412600.0	3178800.0
11	9.46448	2	113	412600.0	3179300.0	36	7.83083	1	314	412600.0	3179800.0
12	9.36413	1	124	412600.0	3179300.0	37	7.76325	2	275	413100.0	3179300.0
13	9.29060	8	139	413600.0	3179300.0	38	7.74778	1	40	413600.0	3179300.0
14	9.23043	8	276	413100.0	3179300.0	39	7.74229	8	17	413100.0	3178800.0
15	9.18274	2	40	412600.0	3178800.0	40	7.73098	7	259	412600.0	3179800.0
16	9.12977	2	289	412600.0	3179300.0	41	7.72436	8	364	413600.0	3178800.0
17	9.04634	8	210	413100.0	3179300.0	42	7.69072	2	353	412600.0	3179300.0
18	8.93865	2	4	412600.0	3179800.0	43	7.67282	1	118	413100.0	3179800.0
19	8.92036	1	124	413600.0	3178800.0	44	7.58794	1	272	412600.0	3179300.0
20	8.77551	2	151	412600.0	3179300.0	45	7.52643	1	30	413600.0	3178800.0
21	8.60202	8	17	413600.0	3178800.0	46	7.52402	1	41	413100.0	3179300.0
22	8.55294	1	353	412600.0	3179300.0	47	7.46998	2	151	413600.0	3178800.0
23	8.54892	2	260	412600.0	3178800.0	48	7.44325	2	235	412600.0	3179800.0
24	8.46884	1	124	413100.0	3178800.0	49	7.44266	2	124	412600.0	3178800.0
25	8.44252	1	30	412600.0	3179300.0	50	7.24366	2	124	413600.0	3179300.0

MAX 50
24-HR
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	2.48033	1	259	412600.0	3179800.0	26	1.56317	1	41	412600.0	3178800.0
2	2.43655	1	353	412600.0	3179300.0	27	1.55425	1	353	413100.0	3179300.0
3	2.38677	1	276	413600.0	3179300.0	28	1.53220	1	300	413100.0	3179800.0
4	2.30337	1	259	413100.0	3179800.0	29	1.52890	1	73	413100.0	3178800.0
5	2.20408	1	276	412600.0	3179800.0	30	1.49699	1	17	413100.0	3178800.0
6	2.09416	1	41	413100.0	3178800.0	31	1.49400	1	300	412600.0	3179800.0
7	2.05812	1	124	412600.0	3178800.0	32	1.49372	1	124	413600.0	3179300.0
8	1.94755	1	259	413600.0	3179800.0	33	1.48911	1	103	412600.0	3179300.0
9	1.82424	1	276	413100.0	3179300.0	34	1.47478	1	17	413600.0	3178800.0
10	1.81296	1	124	412600.0	3179300.0	35	1.47130	1	364	413100.0	3178800.0
11	1.80455	1	300	412600.0	3179300.0	36	1.46557	1	272	413600.0	3178800.0
12	1.78759	1	260	412600.0	3178800.0	37	1.46174	1	41	413600.0	3178800.0
13	1.77934	1	124	413100.0	3179300.0	38	1.45752	1	294	412600.0	3179800.0
14	1.77916	1	235	413100.0	3179800.0	39	1.45576	1	272	412600.0	3179300.0
15	1.72760	1	291	412600.0	3178800.0	40	1.44228	1	73	412600.0	3178800.0
16	1.69912	1	235	413600.0	3179800.0	41	1.44216	1	289	412600.0	3179300.0
17	1.69093	1	364	413600.0	3178800.0	42	1.43851	1	139	412600.0	3179300.0
18	1.66828	1	139	413100.0	3179300.0	43	1.41050	1	151	412600.0	3179300.0
19	1.66159	1	93	412600.0	3179800.0	44	1.40962	1	30	413600.0	3178800.0
20	1.61192	1	235	412600.0	3179800.0	45	1.39430	1	247	412600.0	3179300.0
21	1.60890	1	300	413100.0	3179300.0	46	1.39081	1	124	413600.0	3178800.0
22	1.58281	1	353	413600.0	3178800.0	47	1.36471	1	88	412600.0	3179300.0
23	1.58231	1	95	412600.0	3178800.0	48	1.35999	1	113	412600.0	3179300.0
24	1.56975	1	124	413100.0	3178800.0	49	1.35973	1	276	413100.0	3179800.0
25	1.56594	1	300	413600.0	3179800.0	50	1.35695	1	210	413100.0	3179300.0

```
FORTRAN STOP
$EXIT:
$COST/F

 Username            AT21          Process  BATCH_987
 Buffered I/O          0.02
 Direct I/O            0.28
 Page Faults           0.04
 CPU Time              3.64
 Connect Time          0.00
 Volumes mounted       0.00
 Total Cost:           3.98          BATCH$LOW
$EXIT
  AT21        job terminated at 27-FEB-1986 11:02:21.66
```

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 3
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 1
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION) WITH THE FOLLOWING TIME PERIODS.	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 1
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 0
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 1
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(28) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 3
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 3
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK = .10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 77
UPPER AIR STATION NO.	IUS = 12842

IST-17

1977 - EXISTING SO_2

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                  *** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

                             *** METEOROLOGICAL DAYS TO BE PROCESSED ***
                                                (IF=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 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 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 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 0

                     *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                            (METERS/SEC)

                                1.54,   3.09,   5.14,   8.23,  10.80,

                                     *** WIND PROFILE EXPONENTS ***

   STABILITY                            WIND SPEED CATEGORY
   CATEGORY          1              2              3              4              5              6
      A         .10000E+00     .10000E+00     .10000E+00     .10000E+00     .10000E+00     .10000E+00
      B         .15000E+00     .15000E+00     .15000E+00     .15000E+00     .15000E+00     .15000E+00
      C         .20000E+00     .20000E+00     .20000E+00     .20000E+00     .20000E+00     .20000E+00
      D         .25000E+00     .25000E+00     .25000E+00     .25000E+00     .25000E+00     .25000E+00
      E         .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00
      F         .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00

                          *** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
                                     (DEGREES KELVIN PER METER)

   STABILITY                            WIND SPEED CATEGORY
   CATEGORY          1              2              3              4              5              6
      A         .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
      B         .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
      C         .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
      D         .00000E+00      00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
      E         .20000E-01     .20000E-01     .20000E-01     .20000E-01     .20000E-01     .20000E-01
      F         .35000E-01     .35000E-01     .35000E-01     .35000E-01     .35000E-01     .35000E-01
```

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

*** X-COORDINATES OF RECTANGULAR GRID SYSTEM ***
(METERS)

412600.0, 413100.0, 413600.0,

*** Y-COORDINATES OF RECTANGULAR GRID SYSTEM ***
(METERS)

3178800.0, 3179300.0, 3179800.0,

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K); VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ. DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
321	0	0	0	0.25200E+01	407100.0	3180900.0	0.0	7.62	347.00	4.60	2.28	0.00	0.00	0.00

"N"-DAY
365 DAYS
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* 365-DAY AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 0.08914 AND OCCURRED AT (412600.0, 3178900.0) *

Y-AXIS (METERS) /	X-AXIS (METERS) 412600.0	413100.0	413600.0
3179800.0 /	0.07896	0.07279	0.06916
3179300.0 /	0.08331	0.07295	0.06574
3178800.0 /	0.08914	0.07839	0.07010

MAX 50
3-HR
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	13.31222	1	289	413600.0	3179300.0	26	6.67859	8	46	413100.0	3178800.0
2	10.08451	2	154	412600.0	3179800.0	27	6.65787	8	46	412600.0	3178800.0
3	10.03432	2	134	412600.0	3178800.0	28	6.64912	8	5	412600.0	3179800.0
4	10.02420	1	289	412600.0	3179800.0	29	6.63376	1	164	413600.0	3179300.0
5	9.42478	1	312	412600.0	3179300.0	30	6.51267	2	154	413100.0	3179800.0
6	9.01373	2	164	413100.0	3179800.0	31	6.49393	7	321	413600.0	3178800.0
7	8.93209	8	36	412600.0	3179300.0	32	6.36498	1	29	412600.0	3179300.0
8	8.83588	8	7	412600.0	3178800.0	33	6.29482	8	25	413100.0	3179800.0
9	8.54034	2	164	413600.0	3179800.0	34	6.18469	2	47	413100.0	3179800.0
10	8.46444	8	36	413100.0	3179300.0	35	6.17764	7	21	412600.0	3179300.0
11	8.44996	8	5	413100.0	3179800.0	36	6.16025	1	301	413600.0	3179800.0
12	8.40696	7	311	412600.0	3179300.0	37	6.01997	8	47	413600.0	3179300.0
13	8.26363	1	312	413600.0	3178800.0	38	6.01411	2	312	413600.0	3179800.0
14	8.04226	8	5	413600.0	3179800.0	39	5.94564	8	25	413600.0	3179800.0
15	7.91701	1	289	413100.0	3179300.0	40	5.85783	2	272	413600.0	3178800.0
16	7.66531	2	272	413100.0	3178800.0	41	5.70811	7	282	412600.0	3178800.0
17	7.61547	1	29	413100.0	3179300.0	42	5.69829	1	268	413600.0	3178800.0
18	7.17721	7	311	413600.0	3178800.0	43	5.64135	7	290	412600.0	3178800.0
19	7.13013	2	164	412600.0	3179800.0	44	5.59865	2	134	413100.0	3178800.0
20	7.04357	8	36	413600.0	3179300.0	45	5.52787	1	29	413600.0	3179300.0
21	6.95319	8	287	412600.0	3178800.0	46	5.50300	8	36	413600.0	3178800.0
22	6.90595	2	47	412600.0	3179800.0	47	5.43446	8	47	413100.0	3179300.0
23	6.86779	1	268	412600.0	3179300.0	48	5.31978	2	154	413600.0	3179300.0
24	6.71431	7	300	413100.0	3178800.0	49	5.18068	8	74	413600.0	3179800.0
25	6.68460	8	52	412600.0	3178800.0	50	5.16647	7	21	413100.0	3179300.0

MAX 50
24-HR
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	2.67513	1	47	413600.0	3179300.0	26	1.17142	1	75	412600.0	3179900.0
2	2.52967	1	47	413100.0	3179300.0	27	1.14996	1	7	413100.0	3178900.0
3	2.46776	1	47	412600.0	3179800.0	28	1.13409	1	311	413600.0	3178900.0
4	2.16274	1	289	413600.0	3179300.0	29	1.12135	1	25	413100.0	3179800.0
5	1.84033	1	47	412600.0	3179300.0	30	1.11241	1	36	412600.0	3179900.0
6	1.77813	1	47	413100.0	3179800.0	31	1.08606	1	272	413100.0	3178800.0
7	1.75172	1	7	412600.0	3178900.0	32	1.04282	1	52	412600.0	3178900.0
8	1.67228	1	5	413100.0	3179800.0	33	1.03703	1	25	413600.0	3179800.0
9	1.66618	1	289	412600.0	3179900.0	34	1.02044	1	75	413100.0	3179900.0
10	1.64727	1	134	412600.0	3178800.0	35	1.00853	1	21	413100.0	3179300.0
11	1.59381	1	5	413600.0	3179800.0	36	1.00271	1	290	412600.0	3178800.0
12	1.54021	1	289	413100.0	3179300.0	37	0.99332	1	29	413100.0	3179300.0
13	1.53234	1	164	412600.0	3179800.0	38	0.99303	1	25	412600.0	3179800.0
14	1.51268	1	154	412600.0	3179800.0	39	0.99130	1	76	412600.0	3178800.0
15	1.43834	1	312	412600.0	3179300.0	40	0.97764	1	36	413100.0	3179800.0
16	1.41269	1	164	413100.0	3179800.0	41	0.97690	1	154	413100.0	3179800.0
17	1.40309	1	36	413100.0	3179300.0	42	0.94565	1	287	412600.0	3178800.0
18	1.39110	1	36	412600.0	3179300.0	43	0.94463	1	268	412600.0	3179300.0
19	1.37959	1	5	412600.0	3179800.0	44	0.94087	1	46	413100.0	3178800.0
20	1.33757	1	312	413600.0	3178900.0	45	0.93823	1	45	412600.0	3178800.0
21	1.32793	1	311	412600.0	3179300.0	46	0.93348	1	36	413600.0	3179800.0
22	1.27916	1	36	413600.0	3179300.0	47	0.93000	1	268	412600.0	3178800.0
23	1.27712	1	21	412600.0	3179300.0	48	0.92814	1	10	412600.0	3179800.0
24	1.19011	1	47	413600.0	3179800.0	49	0.92694	1	134	413100.0	3178800.0
25	1.17606	1	164	413600.0	3179800.0	50	0.92093	1	268	413100.0	3178800.0

```
FORTRAN STOP
$EXIT:
$COST/F

 Username              AT21            Process  BATCH_985
 Buffered I/O          0.02
 Direct I/O            0.28
 Page Faults           0.04
 CPU Time              3.54
 Connect Time          0.00
 Volumes mounted       0.00
 Total Cost:           3.89            BATCH$LOW
$EXIT
  AT21          job terminated at 27-FEB-1986 11:00:22.12
```

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 3
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 1
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION) WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 1
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 1
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 1
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(28) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 3
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 3
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK = .10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 78
UPPER AIR STATION NO.	IUS = 12842

IST-18

1978 - EXISTING SO_2

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                    *** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

                              *** METEOROLOGICAL DAYS TO BE PROCESSED ***
                                              (IF=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 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 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 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 0

                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                          (METERS/SEC)

                               1.54,    3.09,    5.14,    8.23,   10.80,

                                    *** WIND PROFILE EXPONENTS ***

    STABILITY                                 WIND SPEED CATEGORY
    CATEGORY           1               2               3               4               5               6
       A          .10000E+00      .10000E+00      .10000E+00      .10000E+00      .10000E+00      .10000E+00
       B          .15000E+00      .15000E+00      .15000E+00      .15000E+00      .15000E+00      .15000E+00
       C          .20000E+00      .20000E+00      .20000E+00      .20000E+00      .20000E+00      .20000E+00
       D          .25000E+00      .25000E+00      .25000E+00      .25000E+00      .25000E+00      .25000E+00
       E          .30000E+00      .30000E+00      .30000E+00      .30000E+00      .30000E+00      .30000E+00
       F          .30000E+00      .30000E+00      .30000E+00      .30000E+00      .30000E+00      .30000E+00

                         *** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
                                    (DEGREES KELVIN PER METER)

    STABILITY                                 WIND SPEED CATEGORY
    CATEGORY           1               2               3               4               5               6
       A          .00000E+00      .00000E+00      .00000E+00      .00000E+00      .00000E+00      .00000E+00
       B          .00000E+00      .00000E+00      .00000E+00      .00000E+00      .00000E+00      .00000E+00
       C          .00000E+00      .00000E+00      .00000E+00      .00000E+00      .00000E+00      .00000E+00
       D          .00000E+00      .00000E+00      .00000E+00      .00000E+00      .00000E+00      .00000E+00
       E          .20000E-01      .20000E-01      .20000E-01      .20000E-01      .20000E-01      .20000E-01
       F          .35000E-01      .35000E-01      .35000E-01      .35000E-01      .35000E-01      .35000E-01
```

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

*** X-COORDINATES OF RECTANGULAR GRID SYSTEM ***
(METERS)

412600.0, 413100.0, 413600.0,

*** Y-COORDINATES OF RECTANGULAR GRID SYSTEM ***
(METERS)

3178800.0, 3179300.0, 3179800.0,

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART. CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG. K); VERT. DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ. DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
321	0	0	0	0.25200E+01	407100.0	3180900.0	0.0	7.62	347.00	4.60	2.28	0.00	0.00	0.00

"N"-DAY
365 DAYS
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* 365-DAY AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 0.08815 AND OCCURRED AT (412600.0, 3178800.0) *

Y-AXIS (METERS) /	X-AXIS (METERS) 412600.0	413100.0	413600.0
3179800.0 /	0.06520	0.06156	0.05773
3179300.0 /	0.06167	0.05314	0.04734
3178800.0 /	0.08815	0.07026	0.05554

HIGH
3-HR
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* HIGHEST 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 13.74659 AND OCCURRED AT (413100.0, 3179300.0) *

Y-AXIS (METERS) /	X-AXIS (METERS) 412600.0	413100.0	413600.0
3179800.0 /	8.95309 (88, 8)	8.10626 (88, 8)	7.85887 (328, 1)
3179300.0 /	12.57872 (256, 3)	13.74659 (256, 3)	10.13215 (256, 3)
3178800.0 /	9.13710 (279, 2)	10.33587 (280, 1)	7.93815 (280, 1)

2ND HIGH
3-HR
GROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* SECOND HIGHEST 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 9.28973 AND OCCURRED AT (413100.0, 3178800.0) *

Y-AXIS (METERS)	412600.0	413100.0	X-AXIS (METERS) 413600.0
3179800.0	8.43192 (279, 8)	6.17256 (320, 1)	6.03212 (81, 2)
3179300.0	8.00485 (323, 1)	6.17319 (323, 1)	6.05212 (279, 8)
3178800.0	8.77784 (308, 2)	9.28973 (279, 2)	6.59699 (55, 8)

MAX 50
3-HR
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	13.74659	3	256	413100.0	3179300.0	26	6.59699	8	55	413600.0	3178800.0
2	12.57872	3	256	412600.0	3179300.0	27	6.58039	2	46	413600.0	3178800.0
3	10.33587	1	280	413100.0	3178800.0	28	6.17319	1	323	413100.0	3179300.0
4	10.13215	3	256	413600.0	3179300.0	29	6.17256	1	328	413100.0	3179800.0
5	9.28973	2	279	413100.0	3178800.0	30	6.12109	8	111	412600.0	3178800.0
6	9.13710	2	279	412600.0	3178800.0	31	6.10171	3	256	413600.0	3178800.0
7	8.95309	8	88	412600.0	3179800.0	32	6.09786	8	111	413100.0	3178800.0
8	8.77784	2	308	412600.0	3178800.0	33	6.06275	1	77	412600.0	3178800.0
9	8.76056	8	231	412600.0	3178800.0	34	6.05212	8	279	413600.0	3179300.0
10	8.71404	7	312	412600.0	3178800.0	35	6.03212	2	81	413600.0	3179800.0
11	8.43192	8	279	412600.0	3179800.0	36	5.92451	1	21	413600.0	3179800.0
12	8.13536	2	231	413100.0	3178800.0	37	5.89485	3	256	412600.0	3178800.0
13	8.10626	8	88	413100.0	3179800.0	38	5.72523	8	88	413600.0	3179800.0
14	8.09579	2	231	412600.0	3178800.0	39	5.68623	7	287	412600.0	3179800.0
15	8.07504	1	143	412600.0	3178800.0	40	5.66606	1	21	413100.0	3179800.0
16	8.00485	1	323	412600.0	3179300.0	41	5.58495	3	256	413100.0	3178800.0
17	7.93815	1	280	413600.0	3178800.0	42	5.50759	8	15	412600.0	3178800.0
18	7.85887	1	328	413600.0	3179800.0	43	5.36537	7	37	413600.0	3178800.0
19	7.62469	2	268	412600.0	3178800.0	44	5.19543	8	279	413100.0	3179800.0
20	7.61234	8	55	412600.0	3179300.0	45	4.78918	2	81	413100.0	3179800.0
21	7.58979	2	46	412600.0	3179300.0	46	4.71879	2	308	413100.0	3178800.0
22	6.97852	7	37	413100.0	3178800.0	47	4.70622	1	21	412600.0	3179800.0
23	6.76133	1	280	412600.0	3178800.0	48	4.69756	2	273	412600.0	3179800.0
24	6.69928	2	86	413100.0	3178800.0	49	4.67938	2	273	413600.0	3179300.0
25	6.68002	2	86	412600.0	3178800.0	50	4.66186	8	279	413100.0	3179300.0

HIGH
24-HR
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 2.59019 AND OCCURRED AT (412600.0, 3178800.0) *

Y-AXIS (METERS) /	X-AXIS (METERS) 412600.0	413100.0	413600.0
3179800.0 /	2.21201 (279, 1)	1.75415 (279, 1)	1.66280 (328, 1)
3179300.0 /	1.91226 (256, 1)	2.07576 (256, 1)	1.52730 (256, 1)
3178900.0 /	2.59019 (231, 1)	1.65820 (231, 1)	1.04419 (279, 1)

2ND HIGH
24-HR
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* SECOND HIGHEST 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *
* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 1.62680 AND OCCURRED AT (413100.0, 3178900.0) *

Y-AXIS (METERS) /	X-AXIS (METERS) 412600.0	413100.0	413600.0
3179800.0 /	1.25353 (328, 1)	1.51295 (328, 1)	1.35123 (279, 1)
3179300.0 /	1.14355 (323, 1)	1.07413 (279, 1)	1.41555 (279, 1)
3178800.0 /	1.49436 (312, 1)	1.62680 (279, 1)	0.99466 (280, 1)

MAX 50
24-HR
SGROUP# 1

*** LAKE COUNTY, FLORIDA EXISTING SO2 EMISSION SOURCE ANALYSIS 1 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	2.58019	1	231	412600.0	3178800.0	26	1.05005	1	15	413100.0	3178800.0
2	2.21201	1	279	412600.0	3179800.0	27	1.04419	1	279	413600.0	3178800.0
3	2.07576	1	256	413100.0	3179300.0	28	1.01328	1	89	413100.0	3179800.0
4	1.91226	1	256	412600.0	3179300.0	29	0.99466	1	280	413600.0	3178800.0
5	1.75415	1	279	413100.0	3179800.0	30	0.98289	1	81	413600.0	3179800.0
6	1.66280	1	328	413600.0	3179800.0	31	0.96987	1	15	412600.0	3179300.0
7	1.65920	1	231	413100.0	3178800.0	32	0.96352	1	351	413600.0	3179800.0
8	1.62680	1	279	413100.0	3178800.0	33	0.95192	1	86	412600.0	3178800.0
9	1.52730	1	256	413600.0	3179300.0	34	0.95139	1	256	412600.0	3178800.0
10	1.51295	1	328	413100.0	3179800.0	35	0.94872	1	46	412600.0	3179300.0
11	1.49436	1	312	412600.0	3178800.0	36	0.94413	1	256	413600.0	3178800.0
12	1.46588	1	279	412600.0	3178800.0	37	0.93950	1	287	412600.0	3179800.0
13	1.41555	1	279	413600.0	3179300.0	38	0.93786	1	20	413600.0	3179800.0
14	1.38262	1	15	412600.0	3178800.0	39	0.93742	1	86	413100.0	3178800.0
15	1.35123	1	279	413600.0	3179800.0	40	0.93091	1	279	412600.0	3179300.0
16	1.29723	1	280	413100.0	3178800.0	41	0.92279	1	351	413100.0	3179800.0
17	1.25353	1	328	412600.0	3179800.0	42	0.92171	1	225	412600.0	3179800.0
18	1.15358	1	143	412600.0	3178800.0	43	0.91699	1	50	412600.0	3179300.0
19	1.14747	1	308	412600.0	3178800.0	44	0.91474	1	351	412600.0	3179300.0
20	1.14355	1	323	412600.0	3179300.0	45	0.90105	1	15	413600.0	3178800.0
21	1.14194	1	55	412600.0	3179300.0	46	0.89172	1	50	413100.0	3178800.0
22	1.11914	1	88	412600.0	3179800.0	47	0.88439	1	21	413600.0	3179800.0
23	1.08924	1	268	412600.0	3178800.0	48	0.88291	1	256	413100.0	3178800.0
24	1.07413	1	279	413100.0	3179300.0	49	0.88278	1	55	413600.0	3178800.0
25	1.05068	1	37	413100.0	3178800.0	50	0.88188	1	323	413100.0	3179300.0

FORTRAN STOP
$EXIT:
$COST/F

Username	AT21	Process	BATCH_112
Buffered I/O	0.02		
Direct I/O	0.33		
Page Faults	0.04		
CPU Time	3.38		
Connect Time	0.00		
Volumes mounted	0.00		
Total Cost:	3.77	BATCH$LOW	

$EXIT
AT21 job terminated at 13-FEB-1986 10:35:45.23

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

CALCULATE (CONCENTRATION=1, DEPOSITION=2)	ISW(1) = 1
RECEPTOR GRID SYSTEM (RECTANGULAR=1 OR 3, POLAR=2 OR 4)	ISW(2) = 4
DISCRETE RECEPTOR SYSTEM (RECTANGULAR=1, POLAR=2)	ISW(3) = 2
TERRAIN ELEVATIONS ARE READ (YES=1, NO=0)	ISW(4) = 0
CALCULATIONS ARE WRITTEN TO TAPE (YES=1, NO=0)	ISW(5) = 0
LIST ALL INPUT DATA (NO=0, YES=1, MET DATA ALSO=2)	ISW(6) = 1
COMPUTE AVERAGE CONCENTRATION (OR TOTAL DEPOSITION)	
WITH THE FOLLOWING TIME PERIODS:	
HOURLY (YES=1, NO=0)	ISW(7) = 0
2-HOUR (YES=1, NO=0)	ISW(8) = 0
3-HOUR (YES=1, NO=0)	ISW(9) = 1
4-HOUR (YES=1, NO=0)	ISW(10) = 0
6-HOUR (YES=1, NO=0)	ISW(11) = 0
8-HOUR (YES=1, NO=0)	ISW(12) = 0
12-HOUR (YES=1, NO=0)	ISW(13) = 0
24-HOUR (YES=1, NO=0)	ISW(14) = 1
PRINT "N"-DAY TABLE(S) (YES=1, NO=0)	ISW(15) = 1
PRINT THE FOLLOWING TYPES OF TABLES WHOSE TIME PERIODS ARE	
SPECIFIED BY ISW(7) THROUGH ISW(14):	
DAILY TABLES (YES=1, NO=0)	ISW(16) = 0
HIGHEST & SECOND HIGHEST TABLES (YES=1, NO=0)	ISW(17) = 1
MAXIMUM 50 TABLES (YES=1, NO=0)	ISW(18) = 1
METEOROLOGICAL DATA INPUT METHOD (PRE-PROCESSED=1, CARD=2)	ISW(19) = 1
RURAL-URBAN OPTION (RURAL=0, URBAN MODE 1=1, URBAN MODE 2=2)	ISW(20) = 0
WIND PROFILE EXPONENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(21) = 1
VERTICAL POT. TEMP. GRADIENT VALUES (DEFAULTS=1, USER ENTERS=2, 3)	ISW(22) = 1
SCALE EMISSION RATES FOR ALL SOURCES (NO=0, YES>0)	ISW(23) = 0
PROGRAM CALCULATES FINAL PLUME RISE ONLY (YES=1, NO=2)	ISW(24) = 2
PROGRAM ADJUSTS ALL STACK HEIGHTS FOR DOWNWASH (YES=2, NO=1)	ISW(25) = 1
INPUT SPECIAL DIRECTION-DEPENDENT BUILDING DIMENSIONS (YES=1, NO=0)	ISW(26) = 0
OMIT TABLES FOR HOURLY CONCENTRATIONS (YES=1, NO=0)	ISW(27) = 0
USEPA ADJUSTMENT FOR CALM HOURS (YES=1, NO=0)	ISW(29) = 1
NUMBER OF INPUT SOURCES	NSOURC = 1
NUMBER OF SOURCE GROUPS (=0, ALL SOURCES)	NGROUP = 0
TIME PERIOD INTERVAL TO BE PRINTED (=0, ALL INTERVALS)	IPERD = 0
NUMBER OF X (RANGE) GRID VALUES	NXPNTS = 1
NUMBER OF Y (THETA) GRID VALUES	NYPNTS = 3
NUMBER OF DISCRETE RECEPTORS	NXWYPT = 0
SOURCE EMISSION RATE UNITS CONVERSION FACTOR	TK = .10000E+07
ENTRAINMENT COEFFICIENT FOR UNSTABLE ATMOSPHERE	BETA1 =0.600
ENTRAINMENT COEFFICIENT FOR STABLE ATMOSPHERE	BETA2 =0.600
HEIGHT ABOVE GROUND AT WHICH WIND SPEED WAS MEASURED	ZR = 10.00 METERS
LOGICAL UNIT NUMBER OF METEOROLOGICAL DATA	IMET = 9
DECAY COEFFICIENT FOR PHYSICAL OR CHEMICAL DEPLETION	DECAY =0.000000E+00
SURFACE STATION NO.	ISS = 12815
YEAR OF SURFACE DATA	ISY = 74
UPPER AIR STATION NO.	IUS = 12842
YEAR OF UPPER AIR DATA	IUY = 74
ALLOCATED DATA STORAGE	LIMIT = 43500 WORDS

IST-19

1974 - NRG ONLY - SO_2
Class I area ANALysis

```
*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09      ***


                    *** METEOROLOGICAL DAYS TO BE PROCESSED ***
                                      (IF=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 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 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 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 0

          *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                   (METERS/SEC)

                        1.54,   3.09,   5.14,   8.23,  10.80,

                           *** WIND PROFILE EXPONENTS ***

    STABILITY                               WIND SPEED CATEGORY
    CATEGORY       1             2             3             4             5             6
       A       .10000E+00    .10000E+00    .10000E+00    .10000E+00    .10000E+00    .10000E+00
       B       .15000E+00    .15000E+00    .15000E+00    .15000E+00    .15000E+00    .15000E+00
       C        20000E+00    .20000E+00    .20000E+00    .20000E+00    .20000E+00    .20000E+00
       D       .25000E+00    .25000E+00    .25000E+00    .25000E+00    .25000E+00    .25000E+00
       E       .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00
       F       .30000E+00     30000E+00    .30000E+00    .30000E+00    .30000E+00    .30000E+00

                   *** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
                            (DEGREES KELVIN PER METER)

    STABILITY                               WIND SPEED CATEGORY
    CATEGORY       1             2             3             4             5             6
       A       .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
       B       .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
       C       .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
       D       .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00    .00000E+00
       E       .20000E-01    .20000E-01    .20000E-01    .20000E-01    .20000E-01    .20000E-01
       F       .35000E-01    .35000E-01    .35000E-01    .35000E-01    .35000E-01    .35000E-01
```

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** RANGES OF POLAR GRID SYSTEM ***
(METERS)

70000.0,

*** RADIAL ANGLES OF POLAR GRID SYSTEM ***

(DEGREES)

260.0, 270.0, 280.0,

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

*** SOURCE DATA ***

SOURCE NUMBER	TYPE	WAKE	NUMBER PART CATS.	EMISSION RATE TYPE=0,1 (GRAMS/SEC) TYPE=2 (GRAMS/SEC) *PER METER**2	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	HEIGHT (METERS)	TEMP. TYPE=0 (DEG.K); VERT.DIM TYPE=1 (METERS)	EXIT VEL. TYPE=0 (M/SEC); HORZ.DIM TYPE=1,2 (METERS)	DIAMETER TYPE=0 (METERS)	BLDG. HEIGHT TYPE=0 (METERS)	BLDG. LENGTH TYPE=0 (METERS)	BLDG. WIDTH TYPE=0 (METERS)
101	0	0	0	0.15800E+02	0.0	0.0	0.0	38.10	450.00	20.00	1.83	22.00	38.10	19.80

"N"-DAY
365 DAYS
SGROUP# 1

*** NRC/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-05 ***

* 365-DAY AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *
* FOR THE RECEPTOR GRID *

* MAXIMUM VALUE EQUALS 0.03711 AND OCCURRED AT (70000.0, 260.0) *

DIRECTION / (DEGREES) /	RANGE (METERS) 70000.0
280.0 /	0.01977
270.0 /	0.03164
260.0 /	0.03711

*** NRC/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 3-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	4.35912	8	111	70000.0	270.0	26	1.82223	8	364	70000.0	270.0
2	4.11209	2	142	70000.0	260.0	27	1.82108	8	301	70000.0	270.0
3	3.79464	2	112	70000.0	270.0	28	1.81021	1	308	70000.0	260.0
4	3.33014	7	67	70000.0	270.0	29	1.80521	2	357	70000.0	260.0
5	3.29230	2	139	70000.0	270.0	30	1.69161	7	255	70000.0	260.0
6	3.08970	7	60	70000.0	280.0	31	1.68629	1	142	70000.0	270.0
7	2.57027	1	160	70000.0	270.0	32	1.55804	7	242	70000.0	260.0
8	2.56101	8	257	70000.0	260.0	33	1.55532	7	288	70000.0	260.0
9	2.55018	2	153	70000.0	260.0	34	1.55474	8	129	70000.0	270.0
10	2.54155	1	112	70000.0	260.0	35	1.50630	7	148	70000.0	280.0
11	2.53730	1	359	70000.0	270.0	36	1.50372	7	163	70000.0	270.0
12	2.53461	1	65	70000.0	280.0	37	1.50299	8	239	70000.0	260.0
13	2.35151	7	238	70000.0	280.0	38	1.50299	8	171	70000.0	260.0
14	2.34405	8	205	70000.0	280.0	39	1.50130	8	225	70000.0	260.0
15	2.10975	7	235	70000.0	260.0	40	1.49910	1	139	70000.0	260.0
16	2.09744	3	242	70000.0	260.0	41	1.49535	2	134	70000.0	260.0
17	2.08601	8	65	70000.0	280.0	42	1.47732	7	119	70000.0	280.0
18	2.01582	2	184	70000.0	260.0	43	1.29706	7	36	70000.0	260.0
19	1.96766	7	67	70000.0	260.0	44	1.28206	7	140	70000.0	260.0
20	1.83069	8	261	70000.0	260.0	45	1.28063	7	244	70000.0	260.0
21	1.82971	1	171	70000.0	270.0	46	1.27766	8	166	70000.0	280.0
22	1.82970	8	188	70000.0	260.0	47	1.27576	3	142	70000.0	280.0
23	1.82968	2	242	70000.0	270.0	48	1.27427	7	300	70000.0	260.0
24	1.82966	8	216	70000.0	270.0	49	1.27216	1	358	70000.0	280.0
25	1.82951	1	187	70000.0	260.0	50	1.14525	7	220	70000.0	260.0

*** NRG/RECOVERY GROUP, LAKE COUNTY, FLORIDA - 14772-001-09 ***

* 50 MAXIMUM 24-HOUR AVERAGE CONCENTRATION (MICROGRAMS/CUBIC METER) *

* FROM ALL SOURCES *

RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)	RANK	CON.	PER.	DAY	X OR RANGE (METERS)	Y(METERS) OR DIRECTION (DEGREES)
1	0.81584	1	65	70000.0	280.0	26	0.29791	1	171	70000.0	270.0
2	0.70925	1	111	70000.0	270.0	27	0.29475	1	308	70000.0	260.0
3	0.66052	1	67	70000.0	270.0	28	0.28991	1	261	70000.0	260.0
4	0.62503	1	112	70000.0	270.0	29	0.28859	1	244	70000.0	260.0
5	0.57932	1	242	70000.0	260.0	30	0.27851	1	239	70000.0	260.0
6	0.51502	1	142	70000.0	260.0	31	0.26691	1	235	70000.0	260.0
7	0.51495	1	60	70000.0	280.0	32	0.26395	1	36	70000.0	260.0
8	0.47421	1	160	70000.0	270.0	33	0.25707	1	148	70000.0	280.0
9	0.44098	1	112	70000.0	260.0	34	0.25376	1	184	70000.0	260.0
10	0.43571	1	139	70000.0	270.0	35	0.24969	1	171	70000.0	260.0
11	0.40076	1	358	70000.0	270.0	36	0.24267	1	225	70000.0	260.0
12	0.39204	1	139	70000.0	260.0	37	0.23866	1	188	70000.0	260.0
13	0.37255	1	300	70000.0	260.0	38	0.23792	1	357	70000.0	260.0
14	0.35167	1	187	70000.0	260.0	39	0.23768	1	364	70000.0	270.0
15	0.34546	1	238	70000.0	280.0	40	0.23576	1	358	70000.0	280.0
16	0.33795	1	140	70000.0	260.0	41	0.22871	1	216	70000.0	270.0
17	0.33690	1	205	70000.0	280.0	42	0.22868	1	260	70000.0	270.0
18	0.33405	1	257	70000.0	260.0	43	0.22314	1	255	70000.0	260.0
19	0.33201	1	288	70000.0	260.0	44	0.22135	1	302	70000.0	260.0
20	0.32977	1	69	70000.0	260.0	45	0.21660	1	134	70000.0	260.0
21	0.31877	1	153	70000.0	260.0	46	0.21617	1	142	70000.0	270.0
22	0.31659	1	242	70000.0	270.0	47	0.21304	1	129	70000.0	270.0
23	0.31670	1	301	70000.0	270.0	48	0.19614	1	163	70000.0	270.0
24	0.31075	1	141	70000.0	260.0	49	0.19432	1	170	70000.0	260.0
25	0.30199	1	119	70000.0	280.0	50	0.18535	1	32	70000.0	280.0

APPENDIX B

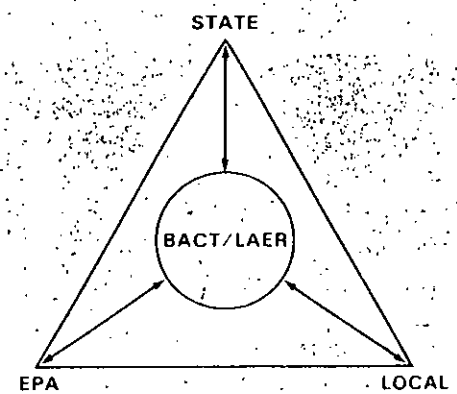
BACT/LAER CLEARINGHOUSE REPORT

EPA-450/3-85-016a

BACT/LAER Clearinghouse—

A Compilation Of Control Technology Determinations

Volume I
Summary Tables and Appendices A-F



June 1985

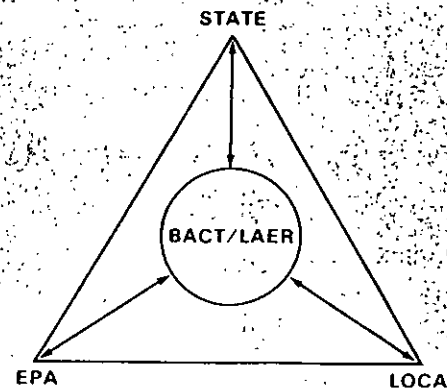
Developed As Part Of A Joint Effort
Between The U.S. Environmental Protection Agency
And State And Local Air Pollution Control Agencies

EPA-450/3-85-016b

BACT/LAER Clearinghouse—

A Compilation Of Control Technology Determinations

Volume IIA
Appendix G
Source Type Codes 1.0 - 4.0



June 1985

Developed As Part Of A Joint Effort
Between The U.S. Environmental Protection Agency
And State And Local Air Pollution Control Agencies

TABLE 1. INDEX (CONTINUED).

REPORT DATE 05/22/1985

SOURCE TYPE/COMPANY NAME	STATE	PERMIT ISSUED	AGENCY	NAME OF CONTACT	TELEPHONE	TABLE 2 INDEX
POWER AUTHORITY STATE OF NEW YORK	NY	02/22 '82	EPA REGION II	DENNIS SANTELLA	(212)-264-9628	1.5
STONE CONTAINER CORP.	LA	06/02/83	LAQD/EPA REGION VI	BHARAT CONTRACTOR	(504)-342-8940	1.5
SOURCE TYPE -- EXTERNAL COMBUSTION - OTHER						
AMERICAN PACKAGING CORP.	PA	12/28/82	PHILADELPHIA AMS	THOMAS ELLIOTT, JR.	(215)-686-7893	1.6
CALIFORNIA POWER & LIGHT	CA	01/01/84	EPA REGION IX	MATT HABER	(415)-974-8209	1.6
CONTINENTAL CARBON CO.	TX	11/04/82	TEXAS ACB	JAMES CROCKER	(512)-451-5711	1.6
HOUSTON LIGHTING & POWER	TX	09/10/81	EPA REGION VI	JOHN BUNYAK	(214)-767-1594	1.6
IMOTEK, INC.	CA	09/01/83	SACRAMENTO APCD	ROBERT KNIGHT	(916)-366-2107	1.6
METROPOLITAN SERVICE DISTRICT	OR		OREGON DEQ	LLOYD KOSTOW	(503)-229-5186	1.6
OCCIDENTAL GEOTHERMAL - OXY #1	CA	05/10/82	EPA REGION IX	MATT HABER	(415)-974-8209	1.6
PACIFIC GAS & ELECTRIC CO., GEYSERS UNI*	CA	07/27/82	EPA REGION IX	MATT HABER	(415)-974-8209	1.6
TEXAS UTILITIES GEN CO.	TX	09/22/77	EPA REGION VI	JOHN BUNYAK	(214)-767-1594	1.6
TEXAS UTILITIES SERVICE, INC.	TX	02/09/78	EPA REGION VI	JOHN BUNYAK	(214)-767-1594	1.6
TEXAS UTILITIES SERVICE, INC.	TX	01/17/78	EPA REGION VI	JOE WINKLER	(214)-767-1594	1.6
U.S. SUGAR CORP.	FL	01/11/85	FLORIDA DER	WILLARD HANKS	(904)-488-1344	1.6
WESTCHESTER COUNTY RESOURCE RECOVERY	NY	02/22/82	EPA REGION II	BARRY TORNICK	(212)-264-9579	1.6
SOURCE TYPE -- REFUSE INCINERATION						
ARLINGTON/ALEXANDRIA WASTE-TO-ENERGY PLT	VA	10/04/84	VIRGINIA APCB	KATHERINE MILLER	(804)-786-4867	2.1
CE - RESOURCE RECOVERY SYSTEMS	MI	11/09/84	MICHIGAN DNR	RANDAL TELESZ	(517)-322-1333	2.1
CITY OF CLEBURNE	TX	02/27/85	TEXAS ACB	JAMES RANDALL	(512)-451-5711	2.1
COMMERCE REFUSE-TO-ENERGY	CA	05/08/84	SOUTH COAST AQMD	T. HUNT	(818)-572-6203	2.1
DUTCHESS COUNTY RESOURCE RECOVERY	NY	10/14/83	NEW YORK DEC	JAMES HARRINGTON	(518)-457-2018	2.1
ENERGY ANSWERS CORP.	MA	03/15/82	EPA REGION I	JOHN COURCIER	(617)-223-4448	2.1
HOOKER ENERGY CORP.	NY	07/23/81	EPA REGION II	BARRY TORNICK	(212)-264-9579	2.1
KATY SEGHERS	UT	02/24/84	UTAH BAQ	DAVID KOPTA	(801)-533-6108	2.1
MCKAY BAY REFUSE-TO-ENERGY PROJECT	FL	04/25/82	FLORIDA DER	JOHN SVEC	(904)-488-1344	2.1
MCKAY BAY REFUSE-TO-ENERGY PROJECT	FL	07/02/82	FLORIDA DER	JOHN SVEC	(904)-488-1344	2.1
MUNICIPAL INCINERATOR PULASKI HWY	MD	01/25/80	EPA REGION III	ED VOLLBERG	(215)-597-8990	2.1
NESHC RESOURCE RECOVERY FACILITY	MA	05/27/82	EPA REGION I	JOHN COURCIER	(617)-223-4448	2.1
NOFOLK NAVAL SHIPYARD	VA	03/26/84	VIRGINIA APCB	JAMES LEHAN	(804)-786-4867	2.1

* INDICATES DATUM IS TRUNCATED FOR THIS TABLE. SEE FULL LISTING IN APPENDIX.

TABLE 1. INDEX (CONTINUED).

REPORT DATE 05/22/1985

SOURCE TYPE/COMPANY NAME	STATE	PERMIT ISSUED	AGENCY	NAME OF CONTACT	TELEPHONE	TABLE 2 INDEX
N.E. MARYLAND WASTE DISPOSAL AUTHORITY	MD	09/10/81	EPA REGION III	BOB BLASZCZAK	(215)-597-8186	2.1
OGDEN PROJECTS, INC.	OK	06/21/84	TULSA CITY-COUNTY *	J. VAN SANDT	(918)-744-1000	2.1
PUBLIC WORKS & UTILITIES	FL	01/27/84	FLORIDA DER	BOB KING	(904)-488-1344	2.1
REDDY CREEK IMPROVEMENT DIST	FL	02/11/81	FLORIDA DER	ED PALAGYI	(904)-488-1344	2.1
REFUSE FUELS, INC.	MA	03/23/81	EPA REGION I	JOHN COURCIER	(617)-223-4448	2.1
RESOURCE RECOVERY DEVELOPMENT AUTHORITY*	GA	04/05/84	GEORGIA EPD	PAUL IZANT	(404)-656-4867	2.1
RESOURCES AUTHORITY	TN	08/01/80	TENNESSEE APCD	MERVAT AHMED	(615)-741-3651	2.1
TRANS ENERGY	OR	12/19/83	OREGON DEQ	WENDY SIMS	(503)-229-5259	2.1
VICON RECOVERY SYSTEMS	VT	03/20/84	ENVIRONMENTAL CONS*	LARRY MILLER	(802)-828-3395	2.1
SOURCE TYPE -- SEWAGE SLUDGE INCINERATION						
CITY OF L.A., HYPERION, BUREAU OF ENGIN*	CA	09/30/82	EPA REGION IX	RICK SUGAREK	(415)-974-8224	2.2
COUNTY SANITATION DISTRICTS OF L.A. COU*	CA	02/13/84	EPA REGION IX	JOE SLAMOVICH	(415)-974-8235	2.2
SOURCE TYPE -- OTHER SOLID WASTE DISPOSAL						
CREMATION SERVICES, INC.	OH		CLEVELAND DAPC	IKE HABIB	(216)-664-3508	2.3
DELAWARE SOLID WASTE AUTHORITY	DE	03/14/80	EPA REGION III	BOB BLASZCZAK	(215)-597-8186	2.3
DELAWARE SOLID WASTE II	DE	03/14/80	EPA REGION III	BOB BLASZCZAK	(215)-597-8186	2.3
GABRIEL POWER CO.	CA	04/18/84	FRESNO COUNTY APCD	C.E. MASKALL	(209)-445-3258	2.3
LUBBOCK FEEDLOTS, INC.	TX	02/16/83	TEXAS ACB	RALPH BOWLER	(512)-451-5711	2.3
RACK PROCESSING CO.	OH		DAYTON RAPCA	DONNA GORBYLEE	(513)-225-5926	2.3
WATSON ENERGY SYS, INC.	CA	01/03/80	EPA REGION IX	BOB BAKER	(415)-974-8220	2.3
SOURCE TYPE -- NATURAL GAS TURBINES						
AMCO CHEMICALS CORP.	TX	03/01/84	TEXAS ACB	RANDY HAMILTON	(512)-451-5711	3.1
ANCHORAGE MUNICIPAL LIGHT & POWER	AK	10/15/84	ALASKA DEC	DAVE ESTES	(907)-465-2666	3.1
APPLIED ENERGY SERVICES	LA		LAQD/EPA REGION VI	NAN KILLEEN	(504)-342-8940	3.1
BASF WYANDOTTE CO.	LA	09/13/84	LAQD/EPA REGION VI	BHARAT CONTRACTOR	(504)-342-8940	3.1
CARDINAL COGEN	CA	06/29/83	EPA REGION IX	RICK SUGARECK	(415)-974-7631	3.1
CHUGACH ELECTRIC ASSOCIATION, UNIT #4	AK	08/06/82	EPA REGION X	PAUL BOYS	(206)-442-1567	3.1

* INDICATES DATUM IS TRUNCATED FOR THIS TABLE. SEE FULL LISTING IN APPENDIX.

TABLE 2. CONTROL TECHNOLOGY DETERMINATIONS BY TYPE OF SOURCE

SOURCE TYPE CODE: 1.6 EXTERNAL COMBUSTION - OTHER — REPORT DATE 05/22/1985

COMPANY NAME	STATE & PERMIT	SOURCE SIZE	NEW/ MOD	PROCESS DESCRIPTION	EMISSION LIMITATIONS	& BASIS
TEXAS UTILITIES SERVICE,* (CONTINUED)						
					SO2 1.20LB/MMBTU	
U.S. SUGAR CORP.	FL AC 26-80930	545.50MMBTU HEA*	N	BOILER		
					PM .15STU/MMBTU INPU*	
					.10BTU/MMBTU INPU*	
					SO2 .25BTU/MMBTU INPU*	
					1.50% S OIL MAX	
					VE 20.00% OPACITY MAX	
WESTCHESTER COUNTY RESOU*	NY	2250.00T/D	N	INCINERATORS, REFUSE FIRED, *		
					AS* .03GR/DSCF	B*
					BE .03GR/DSCF	B*
					CO .62LB/T REFUSE	B*
					HG .03GR/DSCF	B*
					NOX 3.00LB/T REFUSE	B*
					PB .03GR/DSCF	B*
					PM .03GR/DSCF	B*
SOURCE TYPE CODE -- 2.1 REFUSE INCINERATION						
ARLINGTON/ALEXANDRIA WAS*	VA 71895	975.00T/D		INCINERATOR, 3		
					PM .03GR/DSCF AT 12%*	B*
					SO2 .12% S CONTENT OF*	B*
					VE 20.00% OPACITY	
CE - RESOURCE RECOVERY S*	MI 468-83	2200.00T/D	N	BOILER, 3, WATER WALL		
					CD .09LB/H	B*
					CH* 3.50LB/H	B*
					CH* .02LB/H	B*
					CO 249.00LB/H	L*
					DI* 4.30EE-3 LB/H	B*
					F 3.75LB/H	B*
					HCL 294.00LB/H	B*
					HG .07LB/H	B*
					NOX 226.00LB/H	B*
					PB 1.37LB/H	B*

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(R) INDICATES EPA REGION FILE NUMBER IN LIEU OF STATE/LOCAL PERMIT NUMBER. FOR EMISSION LIMITS ROUNDED TO 0.00 , SEE APPENDIX.

TABLE 2. CONTROL TECHNOLOGY DETERMINATIONS BY TYPE OF SOURCE

SOURCE TYPE CODE: 2.1 REFUSE INCINERATION — REPORT DATE 05/22/1985

COMPANY NAME	STATE & PERMIT	SOURCE SIZE	NEW/ MOD	PROCESS DESCRIPTION	EMISSION LIMITATIONS		& BASIS
CE - RESOURCE RECOVERY S* (CONTINUED)							
					PM	.03GR/DSCF AT 12%*	L*
						40.30LB/H	L*
					SO2	457.10LB/H, NOTE #2	B*
					VE	20.00% OPACITY	B*
					VOC	20.50LB/H	B*
CITY OF CLEBURNE	TX 9521	4.80T/H	N	INCINERATOR, 3 EA			
					CO	29.00T/YR	B*
					HCL	4.20T/YR	B*
					NOX	17.08T/YR	B*
					PB	.48T/YR	B*
					PM	22.21T/YR	B*
					SO2	5.21T/YR	B*
					VOC	7.05T/YR	B*
COMMERCE REFUSE-TO-ENERGY	CA 103650	330.00T/D		INCINERATOR, MASS BURN, WATE*			
					NOX	40.00LB/H	L*
						966.00LB/D	L*
					PM	6.00LB/H	L*
						74.00LB/D	L*
					SOX	11.00LB/H	L*
						249.00LB/D	L*
DUTCHESS COUNTY RESOURCE*	NY 134601 0024		N	ROTARY COMBUSTORS, 2, TOTAL			
					CO	26.00LB/H	B*
					HCL	6.67LB/H, NOTE	
					NOX	50.00LB/H	B*
					PM	.02GR/DSCF, NOTE	B*
					SO2	50.00LB/H	B*
ENERGY ANSWERS CORP.	MA 025-120MA14	1600.00T/D RDF	N	BOILER,WATER-COOLED, 3 EA.			
					NOX	.50LB/MMBTU	B*
					PM	.05GR/DSCF 12% CO2	B*
					SO2	.34LB/MMBTU	B*
						.30% S BY WT, OIL	B*
HOOKER ENERGY CORP.	NY NONE	2360.00T/D	N	RDF/COAL FIRED BOILERS			
					NOX	.70LB/MMBTU COAL	
						.30LB/MMBTU OIL	

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TABLE 2. CONTROL TECHNOLOGY DETERMINATIONS BY TYPE OF SOURCE

SOURCE TYPE CODE: 2.1 REFUSE INCINERATION — REPORT DATE 05/22/1985

COMPANY NAME	STATE & PERMIT	SOURCE SIZE	NEW/MOD	PROCESS DESCRIPTION	EMISSION LIMITATIONS	& BASIS
HOOKER ENERGY CORP.	(CONTINUED)					
					PM .10LB/MMBTU COAL	
					.07LB/MMBTU OIL	
					PM .03GR/DSCF REFUSE	
					SO2 1.20LB/MMBTU COAL	
					.80LB/MMBTU OIL	
					VE 20.00% OPACITY COAL	B*
					20.00% OPACITY OIL	B*
					VE 20.00% OPACITY REFU*	B*
KATY SEGHERS	UT		N	INCINERATOR & BOILER, WASTE *		
					CO 35.50LB/H	B*
					F 1.10LB/H	B*
					HCL 31.80LB/H	B*
					HG .12LB/H	B*
					NOX 29.90LB/H	B*
					PB .22LB/H	B*
					PM .03GR/DSCF AT 12%*	B*
					SO2 22.40LB/H	B*
					VE 20.00% OPACITY	B*
MCKAY BAY REFUSE-TO-ENER*	FL AC 29-47277	1000.00T/D	N	MASS BURN FURNACES		
					PM .03GR/DSCF AT 12%*	L*
MCKAY BAY REFUSE-TO-ENER*	FL (R)PSD FL-086	1000.00T/D	N	MASS BURN FURNACES		
					BE 5.00G/D	
					F 6.00LB/H	
					HG .60LB/H	
					NOX 300.00LB/H	
					PB 3.10LB/H	
					SO2 170.00LB/H	
					VOC 9.00LB/H	
MUNICIPAL INCINERATOR PU*	MD 78MD-09	600.00T/D	N	MUNICIPAL INCINERATOR		
					CO 30.00PPH	B*
					127.00T/YR	B*
					NOX 2.60PPH	B*
					11.40T/YR	B*
					PM .03GR/DSCF	S*
					61.60T/YR	S*

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TABLE 2. CONTROL TECHNOLOGY DETERMINATIONS BY TYPE OF SOURCE

SOURCE TYPE CODE: 2.1 REFUSE INCINERATION — REPORT DATE 05/22/1985

COMPANY NAME	STATE & PERMIT	SOURCE SIZE	NEW/ MOD	PROCESS DESCRIPTION	EMISSION LIMITATIONS		& BASIS
MUNICIPAL INCINERATOR PU* (CONTINUED)							
					SO2	35.10PPH	B*
						154.00T/YR	B*
					VOC	1.30PPH	B*
						5.50T/YR	B*
NESHC RESOURCE RECOVERY *	MA 029-121MA16	62.50T/H WASTE	N	AUXILIARY BOILER, 1			
					CO	.04LB/MMBTU	B*
					NOX	.16LB/MMBTU	B*
					PM	.10LB/MMBTU	B*
					SOX	.02LB/MMBTU	B*
					SO2	.34LB/MMBTU	B*
				STEAM GENERATING UNITS, 2 IN*			
					CO	.07LB/MMBTU	B*
					NOX	.32LB/MMBTU	B*
					PM	.05GR/DSCF AT 12%*	B*
					SOX	.02LB/MMBTU	B*
					SO2	.34LB/MMBTU	B*
NOFOLK NAVAL SHIPYARD	VA 60326	180000.00LB/D		BOILER, 4			
					CO	.53LB/MMBTU	P*
					HCL	3.30LB/MMBTU	P*
					HFL	1.10LB/MMBTU	P*
					NOX	.70LB/MMBTU	N*
					PM	.07LB/MMBTU	P*
					SO2	1.20LB/MMBTU	N*
					VOC	.07LB/MMBTU	P*
N.E. MARYLAND WASTE DISP*	MD 81MD01	2010.00T/D 3 UNI*	M	WATER WALL, 3 EA INCINERATOR			
					CO	109.00LB/H	B*
						406.00T/YR	B*
					F	4.20LB/H	B*
						15.70T/YR	B*
					NOX	227.00LB/H	B*
						999.00T/YR	B*
					SO2	335.00LB/H	B*
						1259.00T/YR	B*
OGDEN PROJECTS, INC.	OK T84-23			INCINERATOR, SOLID WASTE, 2 *			
					CO	41.60LB/H	B*

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TABLE 2. CONTROL TECHNOLOGY DETERMINATIONS BY TYPE OF SOURCE

SOURCE TYPE CODE: 2.1 REFUSE INCINERATION — REPORT DATE 05/22/1985

COMPANY NAME	STATE & PERMIT	SOURCE SIZE	NEW/ MOD	PROCESS DESCRIPTION	EMISSION LIMITATIONS	& BASIS
OGDEN PROJECTS, INC.	(CONTINUED)					
					HF 3.30LB/H	B*
					HG .06LB/H	B*
					NOX 103.10LB/H	B*
					PM 34.20LB/H	B*
					SO2 100.90LB/H	B*
					VOC 4.60LB/H	B*
PUBLIC WORKS & UTILITIES	FL PA 83-18	1050.00T/D	M	COMBUSTION SYS., MASS BURN, *		
					CO 66.00LB/H	
					NOX 132.00LB/H	
					PB 1.30LB/H	
					PM .03GR/DSCF CORR. *	
					SO2 83.00LB/H	
					VE 10.00% OPACITY	
REDDY CREEK IMPROVEMENT *	FL PSD-FL-044	100.00T/D SOLID*	M	SLAGGING PYROLYSIS INCIN.		
					CO 2.26LB/MMBTU	B*
					91.20LB/H	B*
REFUSE FUELS, INC.	MA 023-121MA12	960.00T/D RDF	M	FURNACE,WATER WALL, BALANCED*		
					NOX .70LB/MMBTU RDF	B*
					.30LB/MMBTU OIL	B*
					PM .03GR/DSCF	L*
					S 1.00% S OIL	B*
					1.20LB/MMBTU RDF	B*
RESOURCE RECOVERY DEVELO*	GA 4953-025-8751	200.00MMBTU/H	N	INCINERATOR, 2 EA		
					CO 37.80LB/H	N*
					HF 1.20LB/H	N*
					HG .13LB/H	N*
					NOX 32.00LB/H	N*
					PB .20LB/H	N*
					PM .05GR/DSCF AT 12%*	T*
					SO2 48.00LB/H	N*
RESOURCES AUTHORITY	TN	75.00T/D 2 EA	N	BOILERS, 2 MUNICIPAL REFUSE *		
					PM .04GR/SCF	N*
TRANS ENERGY	OR 24-5398	624.00T/D	N			

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TABLE 2. CONTROL TECHNOLOGY DETERMINATIONS BY TYPE OF SOURCE

SOURCE TYPE CODE: 2.1 REFUSE INCINERATION

REPORT DATE 05/22/1985

COMPANY NAME	STATE & PERMIT	SOURCE SIZE	NEW/ MOD	PROCESS DESCRIPTION	EMISSION LIMITATIONS	& BASIS
TRANS ENERGY	(CONTINUED)			INCINERATOR, SOLID WASTE, 2 *	BE 2.90EE-6 LB/H 8.80EE-6 T/YR	
					CO 55.00LB/H 170.00T/YR	
					FL* 1.60LB/H 4.80T/YR	
					HCL 23.00LB/H 69.00T/YR	
					HG .17LB/H .51T/YR	
					NOX 94.00LB/H 290.00T/YR	
					PB .52LB/H 1.60T/YR	
					PM .03GR/DSCF AT 12%* 61.00T/YR	
					SO2 73.00LB/H 220.00T/YR	
					TC* 1.70EE-6 LB/H 5.10EE-6 T/YR	
					VE 10.00% OPACITY SEE *	
					VOC 3.10LB/H 9.60T/YR	
VICON RECOVERY SYSTEMS	VT			INCINERATOR, MUNICIPLE SOILD*		
					AS* 2.70EE-4 LB/T	B*
					BE 2.10EE-5 LB/T	B*
					HCL 7.00LB/T	
					HG .02LB/T	
					NOX 3.60LB/T	
					PB .05LB/T	B*
					PM .02GR/DSCF	B*
					SO2 2.40LB/T	

SOURCE TYPE CODE -- 2.2 SEWAGE SLUDGE INCINERATION

CITY OF L.A., HYPERION, * CA (R)NSR-4-4-9 * M

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(R) INDICATES EPA REGION FILE NUMBER IN LIEU OF STATE/LOCAL PERMIT NUMBER. FOR EMISSION LIMITS ROUNDED TO 0.00 , SEE APPENDIX.

SOURCE TYPE/SIZE: EXTERNAL COMBUSTION - OTHER — 2250.00 T/D

COMPANY NAME/SITE LOCATION: WESTCHESTER COUNTY RESOURCE RECOVERY — PECKSKILL, NY

DETERMINATION IS BACT FOR A NEW SOURCE.
PERMIT NO.
DETERMINATION MADE BY: EPA REGION II (AGENCY) — BARRY TORNICK (AGENCY CONTACT PERSON) — (212)-264-9579 (PHONE)

DATE OF PERMIT ISSUANCE-- 02/22/82
ESTIMATED DATE OF START-UP-- 1985

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
INCINERATORS, REFUSE FIRED, MAT*	750.00 T/D				
		PM	0.0300 GR/DSCF	ESP AT 12% CO	BACT 98.50
		CO	0.6200 LB/T REFUSE	DESIGN, HIGH XS AIR, GOOD COMBUSTION	BACT
		NOX	3.0000 LB/T REFUSE	DESIGN, PROPER OPERATION	BACT
		SO2			BACT
		PB	0.0300 GR/DSCF	ESP AT 12% CO	BACT 95.50
		HG	0.0300 GR/DSCF	ESP AT 12% CO	BACT 98.50
		BE	0.0300 GR/DSCF	ESP AT 12% CO	BACT 98.50
		ASB*	0.0300 GR/DSCF	ESP AT 12% CO	BACT 98.50

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW POST STARTUP
REVIEW STATUS: 04/01/1923

SOURCE TYPE/SIZE: REFUSE INCINERATION — 975.00 T/D

COMPANY NAME/SITE LOCATION: ARLINGTON/ALEXANDRIA WASTE-TO-ENERGY PLT — ALEXANDRIA, VA

DETERMINATION IS
PERMIT NO. 71695
DETERMINATION MADE BY: VIRGINIA APCB (AGENCY) — KATHERINE MILLER (AGENCY CONTACT PERSON) — (804)-786-4367 (PHONE)

DATE OF PERMIT ISSUANCE-- 10/04/84
ESTIMATED DATE OF START-UP-- 1987

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
INCINERATOR, 3	975.00 T/D				
		PM	0.0350 GR/DSCF AT 12% CO	ESP	BACT 99.00
		VE	20.0000 % OPACITY		
		SO2	0.1200 % S CONTENT OF WASTE	#6 FUEL OIL AS AN AUX. FUEL	BACT
		VOC		NOTE #1	LAER
		CO		NOTE #1	LAER
		NOX		NOTE #2	BACT
		PB		ESP	BACT 99.00

NOTES ---------
NOTE #1 - COMBUSTION PARAMETERS - EXCESS AIR 85%, COMBUSTION TEMPERATURE 1830F. NOTE #2 - EACH INCINERATOR IS RATED AT 121.8 M MBTU/H - COMBINED TEMPERATURE BETWEEN 1500 - 2000F.

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW POST STARTUP
REVIEW STATUS:

SOURCE TYPE/SIZE: REFUSE INCINERATION — 4.80 T/H

COMPANY NAME/SITE LOCATION: CITY OF CLEBURNE — CLEBURNE, TX — JOHNSON COUNTY

DETERMINATION IS BACT FOR A NEW SOURCE.
PERMIT NO. 9521
DETERMINATION MADE BY: TEXAS ACB (AGENCY) — JAMES RANDALL (AGENCY CONTACT PERSON) — (512)-451-5711 (PHONE)

DATE OF PERMIT ISSUANCE-- 02/27/85
ESTIMATED DATE OF START-UP-- 1985

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
INCINERATOR, 3 EA	1.60 T/H				
		PM	22.2100 T/YR		BACT
				ESP(S)	95.00
		NOX	17.0500 T/YR		BACT
		CO	29.0000 T/YR		BACT
		SO2	5.2100 T/YR		BACT
		HCL	4.2000 T/YR		BACT
		FB	0.4800 T/YR		BACT
		VOC	7.0500 T/YR		BACT

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW POST STARTUP
REVIEW STATUS:

SOURCE TYPE/SIZE: REFUSE INCINERATION — 330.00 T/D

COMPANY NAME/SITE LOCATION: COMMERCE REFUSE-TO-ENERGY — , CA

DETERMINATION IS
PERMIT NO. 103650
DETERMINATION MADE BY: SOUTH COAST AQMD (AGENCY) — T. HUNT (AGENCY CONTACT PERSON) — (818)-572-6293 (PHONE)

DATE OF PERMIT ISSUANCE-- 05/08/84
ESTIMATED DATE OF START-UP-- 1985

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
INCINERATOR, MASS BURN, WATER W*	330.00 T/D				
		SOX	11.0000 LB/H		LAER
			249.0000 LB/D		
				SPRAY DRYER	80.00
		NOX	40.0000 LB/H		LAER
			966.0000 LB/D		
				THERMAL DE-NOX & COMBUSTION MOD.	50.00
		PM	6.0000 LB/H		LAER
			74.0000 LB/D		
				BAGHOUSE	
				COMBUSTION CONTROL	

NOTES ---------
OPERATES 24 H/D, 365 D/YR

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW POST STARTUP
REVIEW STATUS:

SOURCE TYPE/SIZE: REFUSE INCINERATION

COMPANY NAME/SITE LOCATION: DUTCHESS COUNTY RESOURCE RECOVERY — POUGHKEEPSIE, NY

DETERMINATION IS BACT FOR A NEW SOURCE.
PERMIT NO. 134601 0024
DETERMINATION MADE BY: NEW YORK DEC (AGENCY) — JAMES HARRINGTON (AGENCY CONTACT PERSON) — (518)-457-2018 (PHONE)

DATE OF PERMIT ISSUANCE-- 10/14/83
ESTIMATED DATE OF START-UP-- 1987

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
ROTARY COMBUSTORS, 2, TOTAL	400.00 T/D				
		PM	0.0150	GR/DSCF, NOTE	BACT
				FABRIC FILTER	99.50
		SO2	50.0000	LB/H	BACT
				LOW S FUEL	
		NOX	50.0000	LB/H	BACT
				PROPER BOILER DESIGN	
		CO	26.0000	LB/H	BACT
				GOOD COMBUSTION CONTROL	
		HCL	6.6700	LB/H, NOTE	
				DRY VENTURI INJECTION	90.00
				LIME COATING FOR BAGHOUSE	

NOTES --------
APPLICANTS ORIGINAL PROPOSAL FOR ESP AT 0.03 GR/DSCF WAS PRELIMINARILY ACCEPTED AS BACT. HOWEVER, DECISION TO USE DRY SCRUBBER /BAGHOUSE FOR ACID GAS CONTROL YIELDED ADDITIONAL PARTICULATE CONTROL. ACID GAS CONTROL WAS NOT A REQUIREMENT OF NYS DEC. PSD PERMIT WAS HELD UP BY ADMINISTRATIVE APPEAL. APPEAL WAS DENIED 12/4/84.

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW POST STARTUP
REVIEW STATUS: 01/17/1985

SOURCE TYPE/SIZE: REFUSE INCINERATION — 1800.00 T/D RDF

COMPANY NAME/SITE LOCATION: ENERGY ANSWERS CORP. SEMASS PROJECT — ROCHESTER, MA

DETERMINATION IS BACT FOR A NEW SOURCE.
PERMIT NO. 025-120MA14
DETERMINATION MADE BY: EPA REGION I (AGENCY) — JOHN COURCIER (AGENCY CONTACT PERSON) — (617)-223-4448 (PHONE)

DATE OF PERMIT ISSUANCE-- 03/15/82
ESTIMATED DATE OF START-UP--

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
BOILER,WATER-COOLED, 3 EA.	600.00 T/D RDF EA				
		PM	0.0500	GR/DSCF 12% CO2	BACT
				ESP,3-STAGE	96.00
		SO2	0.3400	LB/MMBTU	BACT
			0.3000	% S BY WT, OIL	
				LOW S #2 FUEL OIL/LOW S RDF	
		NOX	0.5000	LB/MMBTU	BACT
				BOILER DESIGN	

NOTES --------
ALL BACT LIMITS WERE DETERMINED SIMPLY BY TECHNOLOGY AVAILABLE AND THE ECONOMIC IMPACTS OF OTHER CONTROLS.

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW POST STARTUP
REVIEW STATUS: 04/01/1983

SOURCE TYPE/SIZE: REFUSE INCINERATION 2360.00 T/D

COMPANY NAME/SITE LOCATION: HOOKER ENERGY CORP. NIAGARA FALLS, NY NIAGARA COUNTY

DETERMINATION IS BACT FOR A NEW SOURCE.
PERMIT NO. NONE
DETERMINATION MADE BY: EPA REGION II (AGENCY) BARRY TORNICK (AGENCY CONTACT PERSON) (212)-264-9579 (PHONE)
DATE OF PERMIT ISSUANCE-- 07/23/81
ESTIMATED DATE OF START-UP-- 1982

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
RDF/COAL FIRED BOILERS	2360.00 T/D REFUSE				
		SO2	1.2000 LB/MMBTU COAL		
			0.8000 LB/MMBTU OIL		
				CONTRL METHOD: FUEL S CONTENT	
		NOX	0.7000 LB/MMBTU COAL		
			0.3000 LB/MMBTU OIL		
				CONTRL METHOD: TEMP & E.A.	
		PM	0.1000 LB/MMBTU COAL		
			0.0700 LB/MMBTU OIL		
		PM	0.0300 GR/DSCF REFUSE		
		VE	20.0000 % OPACITY COAL		BACT
			20.0000 % OPACITY OIL		
		VE	20.0000 % OPACITY REFUSE		BACT

NOTES ---------
COAL USE LIMITED TO 30 DAYS PER YEAR. COMBUSTION FUEL EMISSION LIMITS INTERPOLATED BASED ON FUEL MIXTURE RATIO.

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.
INITIAL REVIEW POST STARTUP
REVIEW STATUS: 04/01/1983

SOURCE TYPE/SIZE: REFUSE INCINERATION

COMPANY NAME/SITE LOCATION: KATY SEGHERS CLEARFIELD, UT

DETERMINATION IS BACT FOR A NEW SOURCE.
PERMIT NO.
DETERMINATION MADE BY: UTAH BAQ (AGENCY) DAVID KOPTA (AGENCY CONTACT PERSON) (801)-533-6108 (PHONE)
DATE OF PERMIT ISSUANCE-- 02/24/84
ESTIMATED DATE OF START-UP-- 1985

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
INCINERATOR & BOILER, WASTE HEAT	500.00 T/D				
		PM	0.0250 GR/DSCF AT 12% CO2		BACT
				ESP	98.00
		VE	20.0000 % OPACITY		BACT
				ESP	
		SO2	22.4000 LB/H		BACT
				LIME SCRUBBER/INJECTION	50.00
		HCL	31.8000 LB/H		BACT
				LIME SCRUBBER/INJECTION	50.00
		NOX	29.9000 LB/H		BACT
				COMBUSTION CONTROL	
		CO	35.5000 LB/H		BACT
				COMBUSTION CONTROL	
		F	1.1000 LB/H		BACT
				ESP	
		HG	0.1200 LB/H		BACT
		PB	0.2200 LB/H		BACT
				ESP	

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.
INITIAL REVIEW POST STARTUP
REVIEW STATUS:

SOURCE TYPE/SIZE: REFUSE INCINERATION — 1000.00 T/D

COMPANY NAME/SITE LOCATION: MCKAY BAY REFUSE-TO-ENERGY PROJECT — TAMPA, FL 33602

DETERMINATION IS LAER FOR A NEW SOURCE.
PERMIT NO. AC 29-47277
DETERMINATION MADE BY: FLORIDA DER (AGENCY); JOHN SVEC (AGENCY CONTACT PERSON); (904)-488-1344 (PHONE)
DATE OF PERMIT ISSUANCE-- 04/23/82
ESTIMATED DATE OF START-UP-- 1984

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
MASS BURN FURNACES	1000.00 T/D WASTE				
		PM	0.0250 GR/DSCF AT 12% O2		LAER
				ESP	99.00
		VE			
				CONTINUOUS OPACITY MONITOR	

NOTES --------
CONTINUOUS OPACITY MONITOR LIMITS TO BE DETERMINED DURING PERFORMANCE TESTING. FACILITY TO INCLUDE WASTE HEAT BOILERS AND TURB
INE ELECTRICAL GENERATORS.

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW POST STARTUP
REVIEW STATUS: 04/01/1983

SOURCE TYPE/SIZE: REFUSE INCINERATION — 1000.00 T/D

COMPANY NAME/SITE LOCATION: MCKAY BAY REFUSE-TO-ENERGY PROJECT — TAMPA, FL 33602

DETERMINATION IS BACT FOR A NEW SOURCE.
PERMIT NO. (REGION FILE NO.) PSD FL-086
DETERMINATION MADE BY: FLORIDA DER (AGENCY); JOHN SVEC (AGENCY CONTACT PERSON); (904)-488-1344 (PHONE)
DATE OF PERMIT ISSUANCE-- 07/02/82
ESTIMATED DATE OF START-UP-- 1984

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
MASS BURN FURNACES	1000.00 T/D WASTE				
		SO2	170.0000 LB/H		
				LOW SULFUR FUEL	
		NOX	300.0000 LB/H		
				COMBUSTION TECHNIQUE	
		VOC	9.0000 LB/H		
				COMBUSTION TECHNIQUE	
		PB	3.1000 LB/H		
				ESP	98.00
		F	6.0000 LB/H		
				NONE	
		HG	0.6000 LB/H		
				ESP	98.00
		BE	5.0000 G/D		
				ESP	

NOTES --------
FACILITY DESIGN ALLOWS FOR FUTURE INSTALLATION OF A SCRUBBER SYSTEM; NSPS APPLIES TO THIS FACILITY. FURNACES-FOUR 250 TPD USIN
G VOLUND TECHNOLOGY. WASTE HEAT BOILERS & TURBINE GENERATORS.

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW POST STARTUP
REVIEW STATUS: 04/01/1983

SOURCE TYPE/SIZE: REFUSE INCINERATION — 600.00 T/D

COMPANY NAME/SITE LOCATION: MUNICIPAL INCINERATOR PULASKI HWY, PULASKI HIGHWAY — BALTIMORE, MD 21237 — BALTIMORE CITY COUNTY

DETERMINATION IS BACT FOR A NEW SOURCE.
PERMIT NO. 78MD-09
DETERMINATION MADE BY: EPA REGION III (AGENCY) — ED VOLLBERG (AGENCY CONTACT PERSON) — (215)-597-9990 (PHONE)
DATE OF PERMIT ISSUANCE-- 01/25/80
ESTIMATED DATE OF START-UP-- 1981

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
MUNICIPAL INCINERATOR	600.00 T/D MSW				
		PM	0.0300 GR/DSCF 81.6000 T/YR		SIP
				ESP	98.00
		SO2	35.1000 PPH 154.0000 T/YR		BACT
				PROPER COMBUSTION TECHNIQUES	
		CO	30.0000 PPH 127.0000 T/YR		BACT
				PROPER COMBUSTION TECHNIQUES	
		VOC	1.3000 PPH 5.5000 T/YR		BACT
				PROPER COMBUSTION TECHNIQUES	
		NOX	2.6000 PPH 11.4000 T/YR		BACT
				PROPER COMBUSTION TECHNIQUES	

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW POST STARTUP
REVIEW STATUS: 04/01/1983

SOURCE TYPE/SIZE: REFUSE INCINERATION — 62.50 T/H WASTE

COMPANY NAME/SITE LOCATION: NESHC RESOURCE RECOVERY FACILITY — NORTH ANDOVER, MA

DETERMINATION IS BACT FOR A NEW SOURCE.
PERMIT NO. 029-121MA16
DETERMINATION MADE BY: EPA REGION I (AGENCY) — JOHN COURCIER (AGENCY CONTACT PERSON) — (617)-223-4448 (PHONE)
DATE OF PERMIT ISSUANCE-- 05/27/82
ESTIMATED DATE OF START-UP-- 1983

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
STEAM GENERATING UNITS, 2 INCIN*	750.00 T/D EA, WAS*				
		PM	0.0500 GR/DSCF AT 12% CO2		B/S
				ESP	98.66
		SO2	0.3400 LB/MMBTU		BACT
				LOW S FUEL - 0.3% S #2 OIL	
		NOX	0.3200 LB/MMBTU		BACT
				INCINERATOR DESIGN	
		CO	0.0700 LB/MMBTU		BACT
				INCINERATOR DESIGN	99.00
		SOX	0.0200 LB/MMBTU		BACT
				INCINERATOR DESIGN	
AUXILIARY BOILER, 1	19.60 MMBTU/H				
		NOX	0.1550 LB/MMBTU		BACT
				BOILER DESIGN	
		CO	0.0350 LB/MMBTU		BACT
				BOILER DESIGN	98.00
		SOX	0.0200 LB/MMBTU		BACT
				BOILER DESIGN	
		PM	0.1000 LB/MMBTU		B/S
		SO2	0.3400 LB/MMBTU		BACT
				LOW S FUEL - 0.3% S #2 OIL	

NOTES ---------
LIMITS APE REDUCTION OVER AP-42 EMISSIONS

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW POST STARTUP
REVIEW STATUS: 04/01/1983

SOURCE TYPE/SIZE: REFUSE INCINERATION — 180000.00 LB/D

COMPANY NAME/SITE LOCATION: NORFOLK NAVAL SHIPYARD — NORFOLK, VA

DETERMINATION IS BACT
PERMIT NO. 60326
DETERMINATION MADE BY: VIRGINIA APCB (AGENCY) — JAMES LEHAN (AGENCY CONTACT PERSON) (804)-786-4867 (PHONE)
DATE OF PERMIT ISSUANCE-- 03/26/84
ESTIMATED DATE OF START-UP--

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
BOILER, 4	180000.00 LB/D				
		PM	0.0700 LB/MMBTU	NOTE #1	PSD 99.00
		SO2	1.2000 LB/MMBTU	0.83% SULFUR IN COAL	NSPS
		NOX	0.7000 LB/MMBTU	NOTE #2	NSPS
		CO	0.5300 LB/MMBTU	NOTE #3	PSD
		VOC	0.0700 LB/MMBTU	COMBUSTION PARAMETERS	PSD
		HFL	1.1000 LB/MMBTU		PSD
		HCL	3.3000 LB/MMBTU		PSD

NOTES --------
NOTE #1 - CYCLONE & BAGHOUSE IN SERIES FOR A SYSTEM GRAIN LOADING OF 0.015 GR/CU FT. NOTE #2 - RDF HAS LOW SULFUR CONTENT, EAC
H UNIT IS DESIGNED TO MEET NSPS LIMITS WHEN BURNING COAL. NOTE #3 - EACH UNIT IS DESIGNED FOR LOW CO EMISSIONS.

(*) INDICATES DATUM HAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW POST STARTUP
REVIEW STATUS:

SOURCE TYPE/SIZE: REFUSE INCINERATION — 2010.00 T/D 3 UNITS

COMPANY NAME/SITE LOCATION: N.E. MARYLAND WASTE DISPOSAL AUTHORITY, 1801 OLD ANNAPOLIS ROAD — BALTIMORE, MD 21230, BALTIMORE CITY COUNTY

DETERMINATION IS BACT FOR A MODIFIED SOURCE.
PERMIT NO. 81MD01
DETERMINATION MADE BY: EPA REGION III (AGENCY) — BOB BLASZCZAK (AGENCY CONTACT PERSON) (215)-597-8166 (PHONE)
DATE OF PERMIT ISSUANCE-- 09/10/81
ESTIMATED DATE OF START-UP-- 1984

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
WATER WALL, 3 EA INCINERATOR	2010.00 T/D				
		SO2	335.0000 LB/H 1259.0000 T/YR		BACT
		CO	109.0000 LB/H 406.0000 T/YR		BACT
		NOX	227.0000 LB/H 999.0000 T/YR		BACT
		F	4.2000 LB/H 15.7000 T/YR		BACT

NOTES --------
MARYLAND DEPT. OF HEALTH AND MENTAL HYGIENE PERFORMED LAER ANALYSIS FOR PARTICULATE MATTER. 0.019 GR/DSCF CORRECTED TO 12% CO IS BEING CONSIDERED (ESP).
EMISSION RATES BASED ON REFUSE CHARACTERISTICS. PERMITTEE IS TO PROVIDE PROCEDURES TO ENSURE ACCEPTABLE WASTE BEFORE OPERATION

(*) INDICATES DATUM HAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW POST STARTUP
REVIEW STATUS: 04/01/1983

SOURCE TYPE/SIZE: REFUSE INCINERATION

COMPANY NAME/SITE LOCATION: OGDEN PROJECTS, INC. , OK

DETERMINATION IS BACT
PERMIT NO. T84-23
DETERMINATION MADE BY: TULSA CITY-COUNTY HEALTH DEPT (AGENCY) J. VAN SANDT (AGENCY CONTACT PERSON) (918)-744-1620 (PHONE)

DATE OF PERMIT ISSUANCE-- 06/21/84
ESTIMATED DATE OF START-UP-- 1985

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
INCINERATOR, SOLID WASTE, 2 EA	375.00 T/YR				
		PM	34.2000 LB/H		BACT
				2 ESPS, SEE NOTE 2	98.00
		SO2	103.9000 LB/H		BACT
		NOX	103.1000 LB/H		BACT
		VOC	4.6000 LB/H		BACT
		CO	41.6000 LB/H		BACT
		HG	3.0600 LB/H		BACT
		HF	3.3000 LB/H		BACT

NOTES --------
NOTE 1 - SIC CODES 4931 & 4961 ARE ALSO INVOLVED BECAUSE STEAM & ELECTRICITY WILL BE SOLD TO INDUSTRY. NOTE 2 - PERFORMANCE ST ANDARDS OF 10% AVG. OPACITY PER CLOCK HOUR & 0.06 GR/DSCF CORRECTED TO 12% CO HAS BEEN IMPOSED.
NOTE - - UNITS SHOWN ARE FOR TWO INCINERATORS.

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW POST STARTUP
REVIEW STATUS: 05/15/1984

SOURCE TYPE/SIZE: REFUSE INCINERATION 1050.00 T/D

COMPANY NAME/SITE LOCATION: PUBLIC WORKS & UTILITIES , FL
PINELLAS COUNTY

DETERMINATION IS BACT FOR A MODIFIED SOURCE.
PERMIT NO. PA 83-18
DETERMINATION MADE BY: FLORIDA DER (AGENCY) BOB KING (AGENCY CONTACT PERSON) (904)-488-1344 (PHONE)

DATE OF PERMIT ISSUANCE-- 01/27/84
ESTIMATED DATE OF START-UP-- 1986

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
COMBUSTION SYS., MASS BURN, MAR*	1050.00 T/D				
		PM	0.0300 GR/DSCF CORR. TO 12% CO2	ESP	99.00
		SO2	83.0000 LB/H	MSW SULFUR CONTENT	
		NOX	132.0000 LB/H	DESIGN	
		CO	66.0000 LB/H	DESIGN	
		PB	1.3000 LB/H	ESP	99.00
		VE	10.0000 % OPACITY		

NOTES --------
THIS IS A NEW UNIT ADDED TO TWO EXISTING UNITS. TOTAL NOW 3150 T/D. SOURCE IS LOCATED IN THE INFLUENCE OF, BUT DOES NOT IMPACT , A PARTICULATE NONATTAINMENT AREA.

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW POST STARTUP
REVIEW STATUS:

SOURCE TYPE/SIZE: REFUSE INCINERATION — 100.00 T/D SOLID WASTE

COMPANY NAME/SITE LOCATION: REEDY CREEK IMPROVEMENT DIST, P.O. BOX 36 — LAKE BUENA VISTA, FL 32830, ORANGE COUNTY

DETERMINATION IS BACT FOR A MODIFIED SOURCE.
PERMIT NO. PSD-FL-044
DETERMINATION MADE BY: FLORIDA DER (AGENCY); ED PALAGYI (AGENCY CONTACT PERSON); (904)-488-1344 (PHONE)

DATE OF PERMIT ISSUANCE-- 03/11/81
ESTIMATED DATE OF START-UP-- 1982

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
SLAGGING PYROLYSIS INCIN.	100.00 T/D				
		CO	2.2600 LB/MMBTU 91.2000 LB/H	FLUE GAS MONITORING SYS.	BACT

NOTES --------
SOURCE SHUT-DOWN 01/01/83 INDEFINITELY DUE TO OPERATIONAL ECONOMICS.

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW / POST STARTUP
REVIEW STATUS: 04/01/1983 / 01/25/1984

SOURCE TYPE/SIZE: REFUSE INCINERATION — 960.00 T/D RDF

COMPANY NAME/SITE LOCATION: REFUSE FUELS, INC. — LAWRENCE, MA

DETERMINATION IS BACT FOR A MODIFIED SOURCE.
PERMIT NO. 823-121MA12
DETERMINATION MADE BY: EPA REGION I (AGENCY); JOHN COURCIER (AGENCY CONTACT PERSON); (617)-223-4448 (PHONE)

DATE OF PERMIT ISSUANCE-- 03/27/81
ESTIMATED DATE OF START-UP-- 1982

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
FURNACE,WATER WALL, BALANCED CR*	960.00 T/D RDF				
		PM	0.0250 GR/DSCF	ESP,5-FIELD,IN SERIES	LAER 98.00
		S	1.0000 % S OIL 1.2000 LB/MMBTU RDF	LOW S #6 OIL/LOW S RDF	BACT
		NOX	0.7000 LB/MMBTU RDF 0.3000 LB/MMBTU OIL	BOILER DESIGN	BACT

NOTES --------
LAER REQUIRED ON TSP FOR NONATTAINMENT AREA IN LAWENCE. BACT ON SO2 DETERMINED BY TECHNOLOGY AND ECONOMICS. BACT ON NOX DETERMINED BY MEETING NSPS LIMITS FOR FOSSIL FUEL BOILERS.
1.2 LB/MMBTU EQUIV. TO 1.0 % S OIL.

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW / POST STARTUP
REVIEW STATUS: 04/01/1983

SOURCE TYPE/SIZE: REFUSE INCINERATION — 200.00 MMBTU/H

COMPANY NAME/SITE LOCATION: RESOURCE RECOVERY DEVELOPMENT AUTHORITY* — SAVANNAH, GA

DETERMINATION IS BACT FOR A NEW SOURCE.
PERMIT NO. 4953-025-8751
DETERMINATION MADE BY: GEORGIA EPD (AGENCY) — PAUL IZANT (AGENCY CONTACT PERSON) — (404)-656-4867 (PHONE)
DATE OF PERMIT ISSUANCE-- 04/05/84
ESTIMATED DATE OF START-UP-- 1987

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
INCINERATOR, 2 EA	100.00 MMBTU/H				
		PM	0.0500 GR/DSCF AT 12% CO2	ESP	TECH 99.00
		SO2	46.0000 LB/H	WITHOUT CONTROL	NOTE
		NOX	32.0000 LB/H	FURNACE DESIGN, OPER. PROCEDURES	NOTE
		CO	37.8000 LB/H	FURNACE DESIGN, OPER. PROCEDURES	NOTE
		PB	0.2000 LB/H	ESP	NOTE
		HG	0.1280 LB/H	ESP	NOTE
		HF	1.2000 LB/H	WITHOUT CONTROL	NOTE

NOTES ---------
NOTE - BASED ON MUNICIPAL SOLID WASTE (MSW) CHARACTERISTICS.

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.
INITIAL REVIEW POST STARTUP
REVIEW STATUS: 03/31/1984

SOURCE TYPE/SIZE: REFUSE INCINERATION — 75.00 T/D 2 EA

COMPANY NAME/SITE LOCATION: RESOURCES AUTHORITY — GALLATIN, TN — SUMNER COUNTY

DETERMINATION IS BACT FOR A NEW SOURCE.
PERMIT NO.
DETERMINATION MADE BY: TENNESSEE APCD (AGENCY) — MERVAT AHMED (AGENCY CONTACT PERSON) — (615)-741-3651 (PHONE)
DATE OF PERMIT ISSUANCE-- 08/01/80
ESTIMATED DATE OF START-UP--

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
BOILERS, 2 MUNICIPAL REFUSE BUR*	75.00 T/D EA				
		PM	0.0400 GR/SCF	SCRUB..& FABRIC FILTERS	NSPS 99.00

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.
INITIAL REVIEW POST STARTUP
REVIEW STATUS: 04/01/1983

SOURCE TYPE/SIZE: REFUSE INCINERATION — 624.00 T/D

COMPANY NAME/SITE LOCATION: TRANS ENERGY — BROOKS, OR

DETERMINATION IS BACT FOR A NEW SOURCE.
PERMIT NO. 24-5393
DETERMINATION MADE BY: OREGON DEQ (AGENCY) — WENDY SIMS (AGENCY CONTACT PERSON) (503)-229-5259 (PHONE)
DATE OF PERMIT ISSUANCE-- 12/19/83
ESTIMATED DATE OF START-UP-- 1987

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
INCINERATOR, SOLID WASTE, 2 EA	312.00 T/D				
		FM	0.0300 GR/DSCF AT 12% CO2		
			61.0000 T/YR		
				BAGHOUSE, OR ESP	
		NOX	94.0000 LB/H		
			290.0000 T/YR		
				EQUIPMENT DESIGN & OPERATION	
		HCL	23.0000 LB/H		
			69.0000 T/YR		
				SCRUBBER	80.00
		SO2	73.0000 LB/H		
			220.0000 T/YR		
				EQUIPMENT DESIGN & OPERATION	
		VE	10.0000 % OPACITY SEE NOTE		
		CO	55.0000 LB/H		
			170.0000 T/YR		
				EQUIPMENT DESIGN & OPERATION	
		HG	0.1700 LB/H		
			0.5100 T/YR		
				EQUIPMENT DESIGN & OPERATION	
		VOC	3.1000 LB/H		
			9.6000 T/YR		
				EQUIPMENT DESIGN & OPERATION	
		PB	0.5200 LB/H		
			1.6000 T/YR		
				EQUIPMENT DESIGN & OPERATION	

INITIAL REVIEW POST STARTUP
(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE. REVIEW STATUS: 04/19/1984

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
SAME PROCESS (CONTINUED)					
		FLU*	1.6000 LB/H		
			4.8000 T/YR		
				EQUIPMENT DESIGN & OPERATION	
		BE	2.9000 EE-6 LB/H		
			8.8000 EE-6 T/YR		
				EQUIPMENT DESIGN & OPERATION	
		TCDD	1.7000 EE-6 LB/H		
			5.1000 EE-6 T/YR		
				TEMPERATURE CONTROL	

NOTES --------
NOT TO BE EXCEEDED FOR MORE THAN 3 MINUTES IN ANY ONE HOUR PERIOD.

INITIAL REVIEW POST STARTUP
(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE. REVIEW STATUS: 04/19/1984

SOURCE TYPE/SIZE: REFUSE INCINERATION

COMPANY NAME/SITE LOCATION: VICON RECOVERY SYSTEMS — RUTLAND, VT

DETERMINATION IS
PERMIT NO.
DETERMINATION MADE BY: ENVIRONMENTAL CONSERVATION (AGENCY) — LARRY MILLER (AGENCY CONTACT PERSON) — (802)-828-3395 (PHONE)

DATE OF PERMIT ISSUANCE-- 03/20/84
ESTIMATED DATE OF START-UP-- 1987

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
INCINERATOR, MUNICIPLE SOILD WA*	240.00 T/D				
		PM	0.0200 GR/DSCF		BACT
				ESP	99.50
		PB	0.0540 LD/T		BACT
				ESP	99.50
		BE	2.1000 EE-5 LB/T		BACT
				ESP	99.50
		ASB*	2.7000 EE-4 LB/T		BACT
				ESP	99.50
		HCL	7.0000 LB/T		
		SO2	2.4000 LB/T		
		NOX	3.6000 LB/T		
		HG	0.0150 LB/T		

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW POST STARTUP
REVIEW STATUS:

SOURCE TYPE/SIZE: SEWAGE SLUDGE INCINERATION

COMPANY NAME/SITE LOCATION: CITY OF L.A., HYPERION, BUREAU OF ENGIN* CITY HALL — LOS ANGLES, CA

DETERMINATION IS BACT FOR A MODIFIED SOURCE.
PERMIT NO. (REGION FILE NO.) N59-4-4-9 LA-82-02
DETERMINATION MADE BY: EPA REGION IX (AGENCY) — RICK SUGAREK (AGENCY CONTACT PERSON) — (415)-974-8224 (PHONE)

DATE OF PERMIT ISSUANCE-- 09/30/82
ESTIMATED DATE OF START-UP--

PROCESSES SUBJECT TO THIS PERMIT	THROUGHPUT CAPACITY	POLLUTANT EMITTED	EMISSION LIMITS	CONTROL EQUIPMENT OR PROCESS MODIFICATION	... & BASIS ... PCT EFF
GAS TURBINE, 4, DIGESTER GAS FI*	6.00 MW EA				
		SO2	20.0000 PPM DRY BASIS		BACT
				WET SCRUBBER	90.00
THERMAL PROCESSING WASTE HEAT R*					
		SO2	20.0000 PPM DRY BASIS		BACT
			9.2000 LB/H		
				2 STAGE WET SCRUBBER/VENTURI SCRUB	
				COUNTER CURRENT TRAY TOWER	
		HG	0.2890 LB/H		BACT
				2 STAGE WET SCRUBBER	
		BE	0.0000 LB/H		BACT
				FABRIC FILTER/2 STAGE WET SCRUBBER	

(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.

INITIAL REVIEW POST STARTUP
REVIEW STATUS: 04/01/1983 04/04/1984